Town of Paradise
Town Council Adjourned Agenda
6:00 PM – November 07, 2022

Town of Paradise Council Chamber – 5555 Skyway, Paradise, CA

Mayor, Steve Crowder
Vice Mayor, Greg Bolin
Council Member, Steve "Woody" Culleton
Council Member, Jody Jones
Council Member, Rose Tryon

Town Manager, Kevin Phillips
Town Attorney, Scott E. Huber
Town Clerk/Elections Official, Dina Volenski
CDD, Planning & Onsite, Susan Hartman
CDD, Building & Code Enforcement, Tony Lindsey
Finance Director/Town Treasurer – Ross Gilb
Public Works Director/Town Engineer, Marc Mattox
Division Chief, CAL FIRE/Paradise Fire, Patrick Purvis
Chief of Police, Eric Reinbold
Recovery & Economic Development Director, Colette Curtis
Human Resources & Risk Management Director, Crystal Peters
Information Systems Director, Luis Marquez

Meeting Procedures

I. The Mayor is the Presiding Chair and is responsible for maintaining an orderly meeting. The Mayor calls the meeting to order and introduces each item on the agenda.

II. The Town staff then provides a report to Council and answers questions from the Council.

III. Citizens are encouraged to participate in the meeting process and are provided several opportunities to address Council. Any speaker addressing the Council is limited to three minutes per speaker - fifteen minutes per agenda item

A. If you wish to address the Council regarding a specific agenda item, please complete a "Request to Address Council" card and give it to the Town Clerk prior to the beginning of the meeting. This process is voluntary and allows for citizens to be called to the speaker podium in alphabetical order. Comments and questions from the public must be directed to the Presiding Chair and Town Council Members (please do not address staff.) Town staff is available to address citizen concerns Monday through Thursday at Town Hall between the hours of 8am and 5pm.

B. If you wish to address Council regarding an item not on the agenda, you may do so under Item 4, "Public Communication." Again, please fill out a card and give it to the Town Clerk before the meeting. State Law prohibits Council action on items not listed on a public agenda.

In compliance with the Americans with Disabilities Act (ADA) Compliance, persons who need special accommodations to participate in the Town Council meeting may contact the Town Clerk at least three business days prior to the date of the meeting to provide time for any such accommodation.

1. OPENING

1a. Call to Order
1b. Pledge of Allegiance to the Flag of the United States of America
1c. Invocation
1d. Roll Call

1e. A moment of silence acknowledging the fourth anniversary of the November 8, 2018 Camp Fire.

1f. p6 Proclamation - Recognizing retiring VIP David Saul for 19 years of service.

1g. p7 Proclamation recognizing November as Homeless and Runaway Youth Awareness Month.

1h. Presentation - Camp Fire Recovery Update - Colette Curtis

1i. Camp Fire Recovery Updates - Written reports are included in the agenda packet.

p8 Colette Curtis, Recovery and Economic Development Director - Recovery projects, Advocacy, Economic Recovery and Development, Communications and Emergency Operations.

p11 Marc Mattox, Public Works Director/Town Engineer - Infrastructure and Sewer Update

p13 Tony Lindsey, CDD-Building and Code Enforcement - Code Enforcement Update

p19 Kate Anderson, Business and Housing Manager - Business and Housing Update

2. CONSENT CALENDAR

One roll call vote is taken for all items. Consent items are considered to be routine business that does not call for discussion.

2a. p21 Approve minutes of the October 11, 2022 Regular Council meeting.

2b. p27 Approve October 2022 Cash Disbursements in the amount of $4,585,759.74.

2c. p35 Adopt Resolution No. 2022-74, "A Resolution of the Town Council of the Town of Paradise Accepting Contract No. 7302.CON, On-System Hardscape Replacement Project, performed by Franklin Construction, Inc., Chico, CA."

2d. p38 Adopt Resolution No. 2022-75, "A Resolution of the Town Council of the Town of Paradise Accepting Contract No. 8403.CON, Skyway and Pearson Road Traffic Signal Repair Project, Performed by Bear Electrical Solutions, Inc., Alviso, CA."

2e. p41 Waive the second reading of the entire Town Ordinance No. 622 and approve reading by title only; and, Adopt Town Ordinance No. 622. " An Ordinance Of The Town Of Paradise Repealing Paradise Municipal Code Chapters 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09,

15.10, 15.11, 15.12, 15.13 And Adopting New Chapters 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13, 15.14, And 15.15 And Making Findings Of Facts Relating To Local Climatic, Geological, And Topographic Conditions, All Relating To The Amendments And Adoption Of The 2022 California Building Standards Code."

2f. p74 Review and file the 1st Quarter Investment Report for the Fiscal Year ending June 30, 2023.

3. ITEMS REMOVED FROM CONSENT CALENDAR

4. PUBLIC COMMUNICATION

For matters that are not on the Council business agenda, speakers are allowed three (3) minutes to address the Council. The Town Council is prohibited from taking action on matters that are not listed on the public agenda. The Council may briefly respond for clarification and may refer the matter to the Town staff.

5. PUBLIC HEARINGS

For items that require a published legal notice and/or a mailed notice.

Public Hearing Procedure:

A. Staff Report
B. Mayor opens the hearing for public comment in the following order:
    i. Project proponents (in favor of proposal)
    ii. Project opponents (against proposal)
    iii. Rebuttals – if requested
C. Mayor closes the hearing
D. Council discussion and vote

5a. p97 1. Conduct the duly noticed and scheduled public hearing to solicit comments and/or suggestions regarding the Draft 2019-2023 Permanent Local Housing Allocation (PLHA) Plan; and, 2. Adopt the Draft 2019-2023 Permanent Local Housing Allocation (PLHA) Plan as submitted; or, 1. Revise the Draft 2019-2023 Permanent Local Housing Allocation (PLHA) Plan as submitted; and, 2. Adopt Resolution No. 2022-____ “A Resolution of the Town Council of the Town of Paradise Authorizing the Application and Adopting The PLHA Plan For The Permanent Local Housing Allocation Program”. (ROLL CALL VOTE)

5b. p109 Upon conclusion of the duly noticed and scheduled public hearing of the Paradise Sewer Project, consisting of the design, right of way acquisition and construction for the core collection system, extended collection system, export pipeline and connection to the City of Chico Water Pollution Control Plant, consider adopting a resolution, or an alternative action:

a) Consider adopting Town of Paradise Resolution No. 2022-___, “A Resolution of the Town Council of the Town of Paradise Certifying the Final Programmatic Environmental Impact Report with CEQA findings for significant environmental impacts, and adoption of Mitigation, Monitoring and Reporting Program for the Paradise Sewer Project"; and

b) Consider adopting the Final Programmatic Environmental Impact Report

(Final PEIR) for use in conjunction with the Paradise Sewer Project, or other action; or

c) Provide alternative action (ROLL CALL VOTE)

Due to the size of the document, the Paradise Sewer Project PEIR can also be found at https://paradisesewer.com/virtual-room/. A public view copy is also available for review at the Town Clerk's window at Town Hall, at 5555 Skyway, Paradise, CA 95969.

6. COUNCIL CONSIDERATION

Action items are presented by staff and the vote of each Council Member must be announced. A roll call vote is taken for each item on the action calendar. Citizens are allowed three (3) minutes to comment on agenda items.

6a. p1783 Consider adopting Resolution No. 2022-___, "A Resolution of the Town Council of the Town of Paradise Authorizing a Financial Assistance Application to the State Water Resources Control Board for the Paradise Sewer Project and Designating the Town Manager or Designee to Sign and Submit the Application." (ROLL CALL VOTE)

6b. p1787 Consider adopting Resolution No. 2022-___, "A Resolution of the Town Council of the Town of Paradise Authorizing and Approving Execution of a Grant Agreement to Receive an Allocation of Funding from the 2018 CDBG-DR Infrastructure Program and any Forthcoming Amendments, Thereto." (ROLL CALL VOTE)

6c. p1792 After presentation, review and file the financial information provided by staff concerning the FY 2022-23 operating and capital budgets; and, Approve staff recommended budget adjustments. (ROLL CALL VOTE)

6d. p1865 Consider adopting Resolution No. 2022-___, "A Resolution of the Town Council of the Town of Paradise Approving the Plans and Specifications for the 2023 On-System Road Rehabilitation Project and Authorizing Advertisement for Bids on the Project." (ROLL CALL VOTE)

6e. p1872 Consider directing staff to submit a formal request to FEMA designating FEMA-4407-DR-CA PA ID: 007-55520-00 PW 363 as an Improved Project. (ROLL CALL VOTE)

6f. p1881 Consider adopting Resolution No.2022-___, "A Resolution of the Town Council of the Town of Paradise Approving the Plans and Specifications for the Off-System Road Rehabilitation Project and Authorizing Advertisement for Bids on the Project." (ROLL CALL VOTE)

6g. p1888 Upon conclusion of public discussion of the findings of the Transportation Master Plan supplemental Honey Run Road analysis, relating to the Honey Run Road reopening, consider a resolution, or an alternative action:

Consider adopting Town of Paradise Resolution No. 2022-____, "A Resolution of the Town Council of the Town of Paradise Expressing a Desire to Reopen Honey Run Road between Town Limits and Honey View Terrace as a Historical Community Route with Vehicular Speed, Weight,

and Length Restrictions"; or, Provide alternative action. (ROLL CALL VOTE)

6h. p1905 Consider awarding Contracts 9419.TH, 9419.FD, and 9419.PD for various improvements to Town Hall, Station 81 and Police Department buildings to the lowest, responsible, responsive bidder (actual bid results to be presented at Council meeting). (ROLL CALL VOTE)

6i. p1907 Consider reviewing and adopting the Long-Term Recovery Plan Update, prepared by Urban Design Associates. (ROLL CALL VOTE)

6j. p2094 Consider approving the guidelines for the Commercial Sign Removal Program; and the Business Investment Grant Program; or give alternate direction to staff. (ROLL CALL VOTE)

6k. p2100 Consider discussion and providing staff with consensus on proposed standards for an Ordinance relating to the creation of short-term rental zoning regulations to present for adoption at a future council meeting; or, provide alternative direction to Town staff.

7. COUNCIL INITIATED ITEMS AND REPORTS

7a. Council initiated agenda items
7b. Council reports on committee representation
7c. Future Agenda Items

8. STAFF COMMUNICATION

8a. Town Manager Report
- Community Development Director

9. CLOSED SESSION - None

10. ADJOURNMENT

STATE OF CALIFORNIA) SS.
COUNTY OF BUTTE)

I declare under penalty of perjury that I am employed by the Town of Paradise in the Town Clerk's Department and that I posted this Agenda on the bulletin Board both inside and outside of Town Hall on the following date:

_____

_____
TOWN/ASSISTANT TOWN CLERK SIGNATURE

Town of Paradise, California
PROCLAMATION

WHEREAS, David Saul was appointed a Volunteer in Police Service (VIPS) by Police Chief Jerry Carrigan in 2003; and,

WHEREAS, David Saul is retiring from serving the community of Paradise as a member of the VIPS after 19 years of service; and,

WHEREAS, David Saul has served on the VIPS Patrol, Traffic and Disaster and Special Events details; and

WHEREAS, David Saul has volunteered for over 6000 hours of VIPS service; and

WHEREAS, The Town Council of the Town of Paradise recognizes the valuable contribution to the betterment of the community from VIPS members who spend numerous hours in the service of the Town with no compensation.

WHEREAS, David Saul has generously donated his time and energy for the public good and performed his duties as a VIPS member with thoughtfulness and professionalism.

NOW, THEREFORE, I, Steve Crowder, Mayor of the Town of Paradise, do hereby recognize and express appreciation to David Saul for his dedicated service to the Town of Paradise.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the official seal of the Town of Paradise to be affixed hereto this 7th day of November, 2022.

_____

Steve Crowder, Mayor

Town of Paradise, California
PROCLAMATION

WHEREAS, California has an estimated 200,000 homeless youth, including some 2,000 K-12 students in Butte County; and,

WHEREAS, Approximately 25% of youth exiting foster care will experience homelessness; and,

WHEREAS, Natural disaster and lack of affordable housing have exacerbated youth homelessness across rural California; and,

WHEREAS, A high percentage of homeless youth have been physically, sexually and/or emotionally abused by their guardians and are frequently re-victimized and exploited while living on the streets and in shelters; and,

WHEREAS, due to the lack of stable housing, homeless youth face great difficulty in accessing stabilizing, and succeeding in school, reducing the likely hood of successful graduation; and,

WHEREAS, the citizens of Paradise, California are the key to preventing youth homelessness by acting as mentors and role models for youth, guiding them towards available resources, productive choices and creating opportunities for youth to successfully transition to adulthood; and,

NOW, THEREFORE, I, Steve Crowder Mayor of the Town of Paradise on behalf of the Town of Paradise and the citizens of Paradise, California, by virtue of the authority vested in me, do hereby proclaim November 2021 as Homeless and Runaway Youth Awareness Month in the Town of Paradise

IN WITNESS WHEREOF, I have hereunto set my hand and caused the official seal of the Town of Paradise to be affixed hereto this 7th day of November, 2021.

_____

Steve Crowder, Mayor

Town of Paradise

Council Agenda Summary

Date: November 7, 2022

Agenda Item: 1(i)

ORIGINATED BY:	Colette Curtis, Recovery and Economic Development Director
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	Monthly Recovery Update
LONG TERM RECOVERY PLAN:	Yes

COUNCIL ACTION REQUESTED:

1. None

Background:

This report continues the Monthly Updates provided to keep the Town Council apprised of important developments related to the recovery of the Town of Paradise from the Camp Fire. Included in this update are items related to recovery projects, advocacy economic recovery and development, communications and emergency operations.

Analysis:

ECONOMC DEVELOPMENT

Business Assistance Programs

- Following Council approval in the 2022-23 Fiscal Year budget, a stakeholder committee drafted guidelines for two business assistance programs:
  - A sign removal/replacement program.
  - A program to incentivize commercial investment in Paradise, whether the business is new, returning, or existing.
- Councilmembers Jones and Culleton were appointed to the committee.
- The draft program guidelines are on tonight's Council agenda as item 6j.

Business Retention and Attraction

- Big Lots is still moving forward in the old Rite Aid building. Opening November 2022.
- A national clothing retailer is planning to occupy the other side of the old Kmart building, next to Tractor Supply. We expect to receive their permit applications very soon.
- Paradise Brew Werks, a local microbrewery, is moving forward with plans to establish themselves in Town. They have acquired property on Skyway (old Big 5 Property).

CDBG-DR Economic Development

- The Butte County allocation for CDBG DR Economic Development has been announced at $18.7 million.
- The Notice of Funding Availability (NOFA) is expected to be released in January 2023,

and we will have more information on what projects will be eligible.
- In preparation, the Town is working with our regional workforce partners on potential projects.

RECOVERY

Category 4 Tree Removal Program

- We opened the program to applicants on July 25th and received over 577 applicants. This represents 1,014 acres of private property across the Town.
- As of October 24, 2022, our arborists have assessed 421 of the properties and marked 5,132 trees for submission to FEMA/CalOES for removal. 156 Parcels remain in the assessment process.
- Undergoing Federal Environmental Review of Removal Phase of Project. We anticipate this process will be complete this Fall.
- Tree cutting process would commence after full phase 2 approval of submitted tree inventory.

Early Warning System

- The Early Warning System was fully approved in April 2022 and a contract was awarded in July 2022.
- Our contractor has ordered long lead-time materials and is working on coordinating utilities for each of the 21 sites.
- We will be working with Police and Fire Departments to determine which towers (if any) would benefit from having internal video camera access to view major intersections and/or horizon lines for fire detection.

Residential Ignition Resistant Retrofit Program

- Undergoing Federal Environmental Review. We anticipate this process will be complete this Fall.
- All other Town required action items are complete
- Phase 1 process of enrollment is being formalized with the intent to open to applicants this Winter.

Hazardous Fuels Reduction Program

- Undergoing Federal Environmental Review. We anticipate this process will be complete this Fall.
- All other Town required action items are complete.

Defensible Space Code Enforcement

- Undergoing Federal Environmental Review. We anticipate this process will be complete this Fall.
- All other Town required action items are complete.

Abatement Update

- 11 property owners enrolled in the private program and have not removed their hazardous trees. (3 have enrolled in CAT4 Program)

- 91 property owners who have not removed their hazardous trees. (-13 from October Council Report)
- There are currently 102 non-compliant properties. This is down from 1500 in July 2020 and 850 in January of 2021.
- We continue to move properties forward with a complaint driven legal abatement process.

COMMUNICATIONS

- Paradise Rotary Vocational Committee Career Expo November 18th
    - Career expo planned for Paradise students in 5th-12th grades
    - Local businesses and agencies participating to promote vocational opportunities within our community.
- 4th Anniversary of the Camp Fire
    - Town staff will give a full update on recovery to date at the November Council meeting.
    - A press packet with up-to-date recovery information will be supplied to any media looking for information on recovery.

EMERGENCY MANAGEMENT

- Monthly training sessions for each EOC section have begun.
- A table top EOC exercise is being planned later this month.
- A full scale EOC exercise is in the initial planning stages for Spring 2023
    - The exercise will involve the community and cooperator agencies
    - A months long information and education campaign will precede the exercise
    - The Early Warning System will be utilized as part of the exercise

Financial Impact:

None.

TOWN OF PARADISE
Council Agenda Summary
Date: October 11, 2022

Agenda No. 1(i)

ORIGINATED BY: Marc Mattox, Public Works Director / Town Engineer

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Camp Fire Recovery Updates - Infrastructure

COUNCIL ACTION REQUESTED:

1. None, written monthly update only.

Background:

This report continues the Monthly Disaster Recovery Updates provided to keep the Town Council apprised of important developments related to the recovery of the Town of Paradise from the Camp Fire.

Analysis:

Road Rehabilitation

As previously covered in related Agenda Summaries and Updates, the Town of Paradise has secured funding from both FEMA and Federal Highways Administration for the purposes of road rehabilitation associated with Camp Fire damages from the fire itself, debris removal and tree removal operations. These projects cover all Town of Paradise publicly owned and maintained roadways.

A revised paving plan has been published here:

https://www.google.com/maps/d/u/0/viewer?mid=1w-PjuvtL5rmmOj_EM-4lFaj7sV-YVRs&ll=39.763511840651375%2C-121.61120815000001&z=13

This paving plan informs residents of which roads are expected to be paved in which calendar year. The plan will be updated frequently as actual field conditions change.

The first project in this series, Skyway between Crossroads and Westchester Way has started construction with minor road work during daytime hours and major work during evening hours in late August and September. Overall project completion is anticipated in November with only final striping remaining to be completed.

Further, staff is requesting approval for Plans, Specifications and Estimates and advertisement of 2023 planned paving projects.

Paradise Sewer Project

Efforts for Past Month:

- Previous Updates: *The Central Valley Regional Water Quality Control Board (Regional Board) hosts meetings of the Sewer Regionalization Project Advisory Committee (SRPAC). The SRPAC last met on March 21, 2022 at the City of Chico council chambers and*

finalized the first draft of the Principles of Agreement (POA). The POA will serve as a starting point for drafting an inter-municipal agreement (IMA) between Paradise and Chico to address treatment of Paradise wastewater at the Chico Water Pollution Control Plant. Information about SRPAC meetings, including agendas and meeting minutes, are at www.paradisesewer.com.

- Preparing the Final EIR. Worked on responses to Draft EIR comments, including comments received from the Butte County Department of Public Works.
- Continued to update the project's public website (www.paradisesewer.com).
- Completed first draft of the IMA, and conveyed to City of Chico staff for review.
- Continued funding application efforts.

Efforts for Next Month:

- Complete work on the Final EIR, including responses to the Draft EIR comments. **A public hearing on the Final EIR will be held November 7th at 6:00 pm at the Paradise Town Hall Council chambers (see www.paradisesewer.com and attached for further information).**
- Work on the second draft of the IMA, obtaining input from City of Chico staff.
- Continue funding application efforts.

Town of Paradise

Council Agenda Summary **Agenda Item: 1(i)**

Date: November 7th, 2022

ORIGINATED BY:	Tony Lindsey, Community Development Director, Building & Code Enforcement
REVIEWED BY:	Kevin Philips, Town Manager
SUBJECT:	Camp Fire Recovery Updates – Code Enforcement
LONG-TERM RECOVERY PLAN:	No

COUNCIL ACTION REQUESTED:

1. Code Enforcement Update

Background:

The mission of the Code Enforcement Division is to promote and maintain a safe and desirable living and working environment. We help maintain and improve the quality of our community by administering a fair and unbiased enforcement program to correct violations of municipal codes and land use requirements. We work with residents, neighborhood associations, public service agencies, and other Town departments to:

- Facilitate voluntary compliance with Town codes.
- Empower community self-help programs.
- Develop public outreach programs.
- Establish community priorities for enforcement programs.

Analysis:

Code Enforcement receives complaints of violations from staff and general community members. Each complaint is investigated and verified by our Officers.

Total Temporary Use Permits (TUPs) issued under Urgency Ordinance 612 were 264 (39 Storage/225 Occupied). As of 10/26/2022 (Exhibit A):

- Storage only – 39
- 225 – Authorized to be Occupied (Only 128 are currently occupied)
- 6-Months in advance of Ordinance 612 expiration, informational notifications were distributed by certified and first-class mail to the current owners and emailed to all applicants. Information was also delivered to each site, either hand-delivered or posted. Notice attached. (Exhibit C)

RV Code Enforcement activity for the reporting period (Sept. 30th- Oct. 28th)(Exhibit B) :

- Occupied sites without TUPs – 38 (53 in Oct.)
- Occupied sites with TUP Violations – 2 (2 in Oct.)
- Compliance gained/RV cases closed – 8 (13 in Oct.)
    - 4 RVs removed
    - 4 Violations resolved (1 building permit issued)

- Civil Abatement Cases have been forwarded to Town Attorney – 32. Town Attorney gained compliance on 21 cases, and 11 remain eligible for abatement.

The Community Enhancement Outreach Team, consisting of Fire Prevention, Police, Housing, Disaster Case Managers (DCMs), and Code Enforcement staff, visited 52 RV sites (44 with TUPs). The team contacted 28 community members in September:

- 8 were tenants and did not own property
- 20 owner-occupied
- 2 purchased the property post-Camp Fire
- 18 supplied contact information to DCM staff

Other Code Enforcement Items:

- Abandoned Vehicle Authority abatements – 6
    - Five voluntarily self abated
    - One towed (1 Pickup)

- Complaints regarding waste and refuse, zoning, building without a permit, camping, fire hazards, cannabis, vehicles, substandard housing, etc.

Fire Prevention is built upon the philosophy of three main objectives: Education, Engineering, and Enforcement. Fire Prevention is a vital function in the community and our continued economic development. Our defensible space and hazardous fuel management ordinance require property owners to keep their parcels fire-safe, whether they live in Town or not. The Fire Prevention staff is tasked with performing weed abatement inspections on 11,081 parcels within our community.

Beginning April 1st, 2022, the Town started requiring property title transfers to obtain a Certificate of Compliance with our Defensible Space regulations. During October:

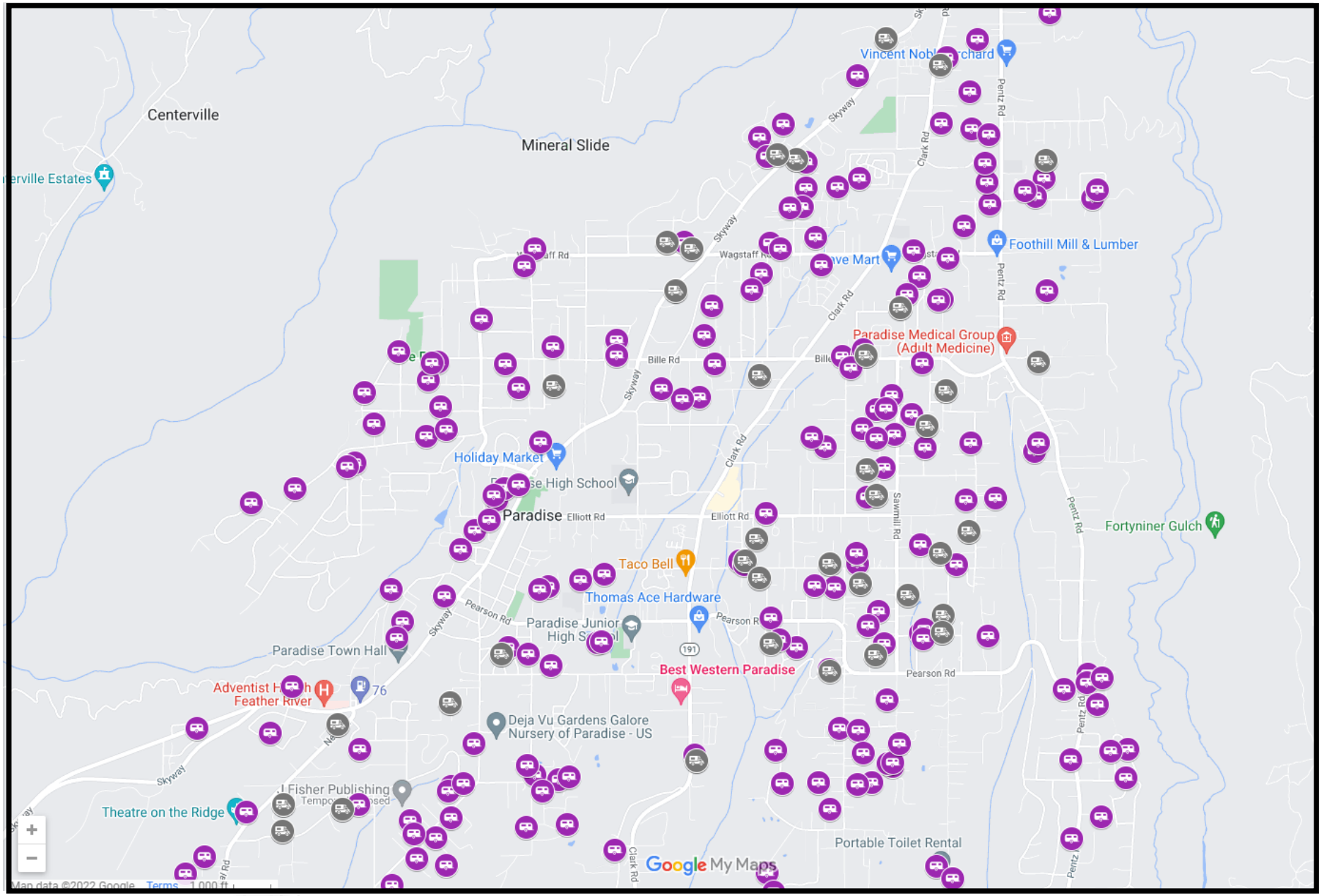
- Clearance requests received – 64 (67 in Sept.)
- First inspection compliance rate – 83% (87% in Sept.)
- Certificates issued – 53 (58 in Sept.)
- Land Surveyor's Certifications on file – 13 (12 in Sept.)

The following is the number of town-wide Defensible Space Program inspections completed as of 10/27/2022:

- Compliant – 7,346 (approx. 66%)
- Non-compliant – 3,256
- Code Enforcement Referrals for citation – 486 Active Code Cases
    - 44 – Commercial parcels, 442 – Residential parcels

EXHIBIT A

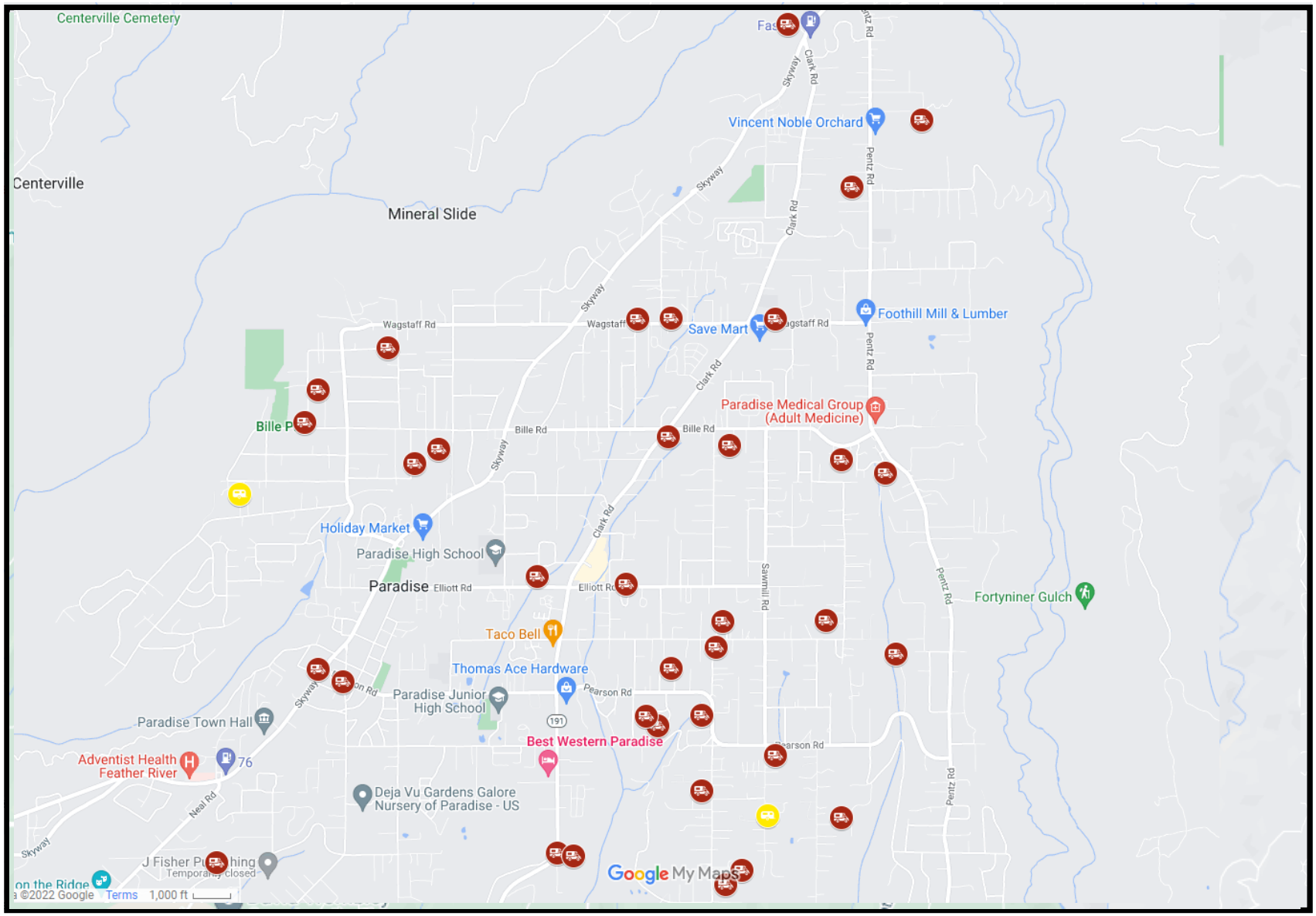
TUPs under ORD 612 10/26/2022



RV TUP STORAGE ONLY 39

RV TUP OCCUPIED 225

EXHIBIT B TUP Violations 10/26/2022



Violations w/ TUP 2

RV no TUP 38

EXHIBIT C

IMPORTANT INFORMATION

RV TEMPORARY USE PERMIT - TOWN OF PARADISE URGENCY ORDINANCE NO. 612

We are reaching out to you today because a permit for a temporary recreational vehicle (RV) was issued following the 2018 Camp Fire for your property referenced above. With the expiration of the Urgency Ordinance scheduled for **April 2023**, we wanted to make sure that each permit holder was aware of the following important dates:

- **August 10, 2021** – **Paradise Town Council extended the deadline of the Urgency Ordinance, and the RV permits, until April 30, 2023.**

- **January 1, 2023** – **The new 2022 California Building Codes will be in effect statewide. If you are currently having rebuild plans designed, we will be accepting building permit applications under the older 2019 California Building Codes through Friday, January 6, 2023. Submittals after that date will need to comply with the new 2022 building codes.**

- **April 30, 2023** – **The Urgency Ordinance and temporary RV permits will expire. To continue to keep an RV on the property beyond that date, a rebuild permit for a permanent dwelling must be issued.**

On the back side of this notice are rebuilding resources if you need assistance to rebuild. If you would like to speak to someone in person, our Business & Housing Division staff at Town Hall (5555 Skyway) are available Monday-Thursday to help explain different rebuilding programs that you may be eligible for. In addition, we are coordinating with the State's ReCoverCA rebuild grant program to have a representative available at the Building Resiliency Center (6295 Skyway) to meet with residents interested in their grant program.

We understand recovery after the fire is complex, and we are here to assist in any way we can in connecting you with the tools and resources you need to transition to permanent housing. If you have any questions about this notice, please feel free to reach out to our Planning Division staff at (530) 872-6291 ext. 411 or planning@townofparadise.com.

Sincerely,

Susan Hartman
Community Development Director, Planning & Wastewater

REBUILDING RESOURCES

Help Central
http://helpcentral.org/ or call 211 or text your zip code to 898211

- Get connected with area resources
- If you are a Camp Fire survivor, connect with a Disaster Case Manager for long-term recovery help

USDA Section 502 Direct Loan
https://eligibility.sc.egov.usda.gov/ or (530) 534-0112

- Income-limits apply
- Value-limits apply
- Available to former renters or homeowners

CalVet
https://www.calvet.ca.gov/HomeLoans or 866-653-2510

- Available to veterans
- No minimum credit scores
- No income limits
- Available to former renters or homeowners

Town of Paradise First-Time Home Buyer Program
https://www.townofparadise.com/housing/page/first-time-home-buyer-program

- Down payment assistance to purchase a standing home in Paradise
- Income-limits apply
- Value-limits apply
- Available to former renters or homeowners

Town of Paradise Owner-Occupied Rehabilitation Loan
https://www.townofparadise.com/housing/page/owner-occupied-housing-rehabilitation-and-reconstruction

- Up to $150,000, deferred loan, for rebuilding or repairing a home in Paradise
- Income-limits apply
- Value-limits apply
- Available to homeowners (must have been on title at the time of the fire)

Rebuild Paradise Foundation
https://www.rebuildparadise.org/

- Grants to reimburse costs for survey, architecture/engineering fees, water expenses
- Grants up to $7,500 to repair or replace septic
- Income-limits apply
- Available to homeowners and former renters in Paradise
- Pre-approved building plans

Community Housing Improvement Program (CHIP)
https://chiphousing.org/ or call (530)891-6931

- Self-help rebuild program, and waiting list for Paradise Community Village apartments

Habitat For Humanity
https://www.buttehabitat.org/
(530) 332-0821 or info@buttehabitat.org

- Self-help build program, available to former homeowners and people who were renting

Town of Paradise

Council Agenda Summary

Date: November 7, 2022

Agenda Item: 1(i)

ORIGINATED BY: Kate Anderson, Housing Program Manager

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Housing Recovery Update

LONG TERM RECOVERY PLAN: No

COUNCIL ACTION REQUESTED:

1. None

Background:

This report provide the Town Council with an update of Housing activities. A summary of the programs, with overall interest and change from the last month, follows.

Analysis:

We have 28.28% (+0.62) of our pre-disaster housing stock to-date (1,377 surviving units + 2,021 new CofOs to-date -- +75 from last month = 3,398 habitable dwellings / 12,015 housing units before the Camp Fire). An additional 806 permits have been issued but have not received their CofO yet.

Rebuild Advocate Program ($99,345)

- Rebuild Advocates help residents overcome the challenges of rebuilding; this program moved to the Housing Dept. at Town Hall.

Town of Paradise Owner-Occupied Rehabilitation/Reconstruction Program ($21 million)

- This program helps homeowners rehabilitate or reconstruct their home.
- **To-date 25 (+0) homes rebuilt, 21 (+0) under construction and 32 (-1) in the application process.**

State of California/ReCoverCA: Owner-Occupied Rehabilitation/Reconstruction Program ($47 million across state)

- Grants of up to $500,000 for property owners.
- **To-date 2 (+1) home rebuilt, 8 (+0) permits issued, 2 (+0) have been submitted for plan review, 1,231 (+0) surveys received.**

Town of Paradise First-Time Homebuyer Program ($2 million)

- Helping to make home ownership more affordable by providing assistance toward the purchase price and closing costs of an owner-occupied, affordable housing unit.
- **To-date 6 (+0) homes purchased and 11 (+0) applications in process. Lots of interest from local lenders and realtors.**

Town of Paradise Septic Grant Program ($570,000)

- Grants up to $17,000 to assist Camp Fire survivors to repair or replace septic systems damaged or destroyed during the Camp Fire or subsequent clean-up efforts.
- **To-date 37 (+1), applications in process, 15 (+0) applications approved, 5 (+0) completed.**

CDBG-DR Multifamily Rental Housing Program ($55 million)

- Goal is to create affordable rental housing
- Large projects (8+ units): **1 (+1) 43-unit project approved, 4 (+1) projects under review totaling 156 units, 1 (+0) 21-unit project preparing application, 12 (+4) projects in-the-works. Over-the-counter funding cancelled to reserve funding for small project program.**
- Small projects (1-7 units) program State should have policies and procedures by end of October.

HOME Infill New Construction ($2,700,000)

- Create affordable housing for first-time homebuyers.
- **HCD has suspended this program and these funds.**

Financial Impact:
None.

TOWN COUNCIL
Meeting Minutes

6:00 PM – October 11, 2022

1. OPENING

The Regular meeting of the Paradise Town Council was called to order by Mayor Crowder at 6:03 p.m. in the Town Council Chamber located at 5555 Skyway, Paradise, California. The Boy Scouts of America Troop 16-Durham, CA led the Pledge of Allegiance to the Flag of the United States of America. An Invocation was offered by Council Member Culleton.

COUNCIL MEMBERS PRESENT: Greg Bolin, Steve "Woody" Culleton, Jody Jones, Rose Tryon and Steve Crowder, Mayor

COUNCIL MEMBERS ABSENT: None

STAFF PRESENT: Town Manager Kevin Phillips, Town Attorney Scott E. Huber, Town Clerk Dina Volenski, Finance Director/Town Treasurer Ross Gilb, Public Works Director/Town Engineer Marc Mattox, Community Development Director Susan Hartman, Community Development Director Tony Lindsey, Recovery and Economic Development Director Colette Curtis, Business and Housing Manager Kate Anderson, Police Chief Eric Reinbold, Police Lieutenant Anthony Borgman, Fire Chief Patrick Purvis, Senior Supervising Code Enforcement Officer Roy Wallis, Code Enforcement Admin Cindy Crounse, and Recovery and Economic Development Project Manager Brian Solecki.

1a. Charles Anderson from the League of California Cities presented the Helen Putnam Award to the Town Council.

1b. Mayor Crowder presented a proclamation to the Town's Code Enforcement division recognizing the 2nd week of October as Code Enforcement Officer Appreciation Week. (180-40-027)

1c. Elizabeth Brewster presented on the Paradise Little League.

1d. Jim McCourt from Meeder Investments provided a financial update.

1e. Camp Fire Recovery Updates - Written reports are included in the agenda packet. (110-60-061)

Colette Curtis, Recovery and Economic Development Director - Recovery projects, Advocacy, Economic Recovery and Development, Communications and Emergency Operations.

Marc Mattox, Public Works Director/Town Engineer - Infrastructure and Sewer Update

Public Works Director/Town Engineer Marc Mattox answered questions regarding the repaving projects in Town.

Tony Lindsey, CDD-Building and Code Enforcement - Code Enforcement Update

Kate Anderson, Business and Housing Manager - Business and Housing Update

2. CONSENT CALENDAR

MOTION by Bolin, seconded by Tryon, approved consent calendar items 2a through 2k. Roll call vote was unanimous.

2a. Approved minutes of the September 13, 2022 Regular Council meeting and September 15, 2022 Special Council meeting.

2b. Approved September 2022 Cash Disbursements in the amount of $3,904,576.57. (310-10-034)

2c. Authorized the Town Manager to execute an agreement with the California Department of Forestry and Fire Protection (CAL FIRE) for acceptance of the USDA 2022 Volunteer Fire Capacity Grant award to purchase new structural and wildland personal protective equipment (PPE) and adopted Resolution 2022-70. (510-20-362, 440-91-001)

2d. Authorized the Town Council to sign a letter of endorsement for Paradise Little League to move forward with applying for grants and other available funding options. (180-30-100)

2e. 1. Authorized the Town Manager to enter into a contract with Aviat Networks, Incorporated, for the installation of an extension of Butte County's BRICS radio network to the Town of Paradise radio networks, and related equipment; and, 2. Approved staff recommended budget adjustments. (510-20-359, 340-40-016)

2f. 1. Declared furniture from the Community Development Department as surplus property; and, 2. Adopted Resolution No. 2022-71, "A Resolution of the Town Council of the Town of Paradise Declaring Certain Town property to be Surplus and Authorizing Disposal Thereof". (380-10-003)

2g. Authorized the Town Manager to execute an agreement for professional services with Management Partners for a not-to-exceed amount of $35,000. (510-20-288)

2h. Authorized the Town Manager to enter into a contract with Tashjian Towers Corporation, for an engineering evaluation and report on the capacity of the Bloomer Hill Tower to accept the installation of required microwave equipment. (510-20-360)

2i. Authorized the Town Manager to enter into a contract with Sutter Buttes Communications, for the removal, cleanup and reconfiguration of existing Dispatch radio equipment to be carried over into new Dispatch radio system; and, approved staff recommended budget adjustments. (510-20-344, 340-40-016)

2j. 1. Concurred with the recommended approvals provided by Exceptions Committee Members Culleton and Jones; and, 2. Authorized staff to accept and process a Temporary Use Permit application from applicant, Kimberly Omiela. (540-10-021)

2k. Accepted the $5,000.00 California for All Animals Welcome Grant awarded to the Town of Paradise Animal Control/Shelter. (410-10-008)

3. ITEMS REMOVED FROM CONSENT CALENDAR - None

4. PUBLIC COMMUNICATION

1. Town Clerk Dina Volenski read a comment, summitted via email, from Ward Habriel thanking Council for the efforts to get the green waste facility reopened.

2. Rich Gowins announced that a Vote Center will be open in Paradise from October 29 through November 8 and thanked staff and Council for their continued efforts on private roads in Paradise and stopping unnecessary road work in his neighborhood and the identification of evacuation routes.

5. PUBLIC HEARINGS - None

6. COUNCIL CONSIDERATION

6a. Barry Long from Urban Design Associates presented the Long-Term Recovery Plan Update and requested comments from the Town Council to be included in the update.

Council Member Jones stated that the Town Council did not determine that a new Civic Center should be retired from the document, and requested it remain on the list but be moved to a lower-level priority. Town Manager Phillips suggested that the item be moved into the superseded facility project. (420-25-010)

6b. Community Development Director Tony Lindsey presented on the recommended changes to the 2022 Building Code Standards. If the Town does not make any changes, then the Standards recommended by the State would become effective on January 1, 2023.

Mr. Lindsey explained that carports are exempted, Electrical charging stations are included and the language regarding grading permits has been cleaned up.

MOTION by Bolin, seconded by Culleton, 1. Waived the first reading of Town Ordinance No. 622 and read by title only; and, 2. Introduced Town Ordinance No. 622, " An Ordinance of the Town of Paradise Repealing

Paradise Municipal Code Chapters 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13 and Adopting New Chapters 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13, 15.14, and 15.15 and Making Findings of Facts Relating to Local Climatic, Geological, and Topographic Conditions, All Relating to the Amendments and Adoption of the 2022 California Building Standards Code." Roll call vote was unanimous. If approved at the November 7, 2022 meeting, the building code standards will go into effect January 1, 2023. (540-16-191)

6c. Public Works Director/Town Engineer Marc Mattox provided an update on the analysis to re-open Honey Run Road which has been closed since the Camp Fire in November 2018 due to Hazardous Tree Removal, Narrow Roadway sections and limited access.

Council discussed the potential liability issues associated with the road if no changes or updates were made to the road.

Attorney Scott E. Huber stated that there is no vehicle code for a Town regarding unimproved conditions of a road, but the Town may be able to limit liability with signage or ask the County to also designate the road a Historical Community Route.

1. Jon Remalia suggested Honey Run be used as a fire access and could promote access to Covered Bridge as tourist attraction.
2. Cynthia Binyon, resident of Honey Run Road, asked about access to the road and maintenance from the Town of Paradise
3. Kurt Klackle, resident of Honey Run Road, stated that Honey Run is not closed, people are still traveling too fast and it is a dangerous road, not in favor of closing the road.
4. Ray Varlinsky, resident of Honey Run Road, stated that Honey Run Road is used as an alternative to Skyway making it a dangerous road and suggested closing the road after Honey Run Terrace.

Attorney Scott E. Huber shared that Gov't Code 57329 has nothing stating that an unimproved county road needs to be brought up to standards.

MOTION by Jones, seconded by Bolin, to approve staff recommendation to continue forward with permitting the 2023 Wildflower with safety precautions and providing that Butte County adopt the entire corridor between Merlin Lane and Honey View Terrace as a Historical Community Route and the proposed paving project provide robust signage advising people about the limitation of the road and that they are proceeding at their own risk. Roll call vote was unanimous. (950-40-063)

6d. **MOTION by Jones, seconded by Bolin,** to award Contract No. 9417.CON, 2022 CDBG Sidewalk Infill Project to All American Construction, Inc. of Live Oak, CA in the amount of their base bid, $456,862.00; and, 2. Authorized the Town Manager to execute an agreement with All American

Construction, Inc. relating to Contract No. 9417.CON and approved contingency expenditures not exceeding 25%. Roll call vote was unanimous. (510-20-361, 950-40-068)

6e. **MOTION by Bolin, seconded by Tryon,** adopted Resolution No. 2022-72, "A Resolution of the Town Council of the Town of Paradise Authorizing and Approving Execution of a Grant Agreement to Receive an Allocation of Funding from the 2018 CDBG-DR Infrastructure Program and any Forthcoming Amendments, Thereto." Roll call vote was unanimous. (710-10-099)

6f. Public Works Director/Town Engineer Mattox provided an overview of the facilities conditions and building losses from the Camp Fire. Mr. Mattox requested the money for the proposed improvements for Town Hall, Paradise Police Department and Fire Station 81 come from unallocated ARPA funding.

MOTION by Bolin, seconded by Culleton, approved requested budget adjustments for various repairs and improvements for Town Hall, Paradise Police Department and Fire Station 81. Roll call vote was unanimous. (280-05-006, 280-50-001, 280-60-005)

6g. Town Clerk Volenski read a comment from Ward Habriel stating the repair/replacement of the culvert under Stearns at Dry Creek; wow: really great action, decisions and results! Marc and staff, mega kudos to you all.

MOTION by Bolin, seconded by Jones, adopted Resolution No. 2022-73, "A Resolution of the Town Council of the Town of Paradise accepting Contract No. 9418.CON, Stearns Rd Dry Creek Culvert Emergency Repairs, performed by Visinoni Brothers, Inc." Roll call vote was unanimous. (950-40-067, 510-20-348)

6h. Recovery and Economic Development Director Colette Curtis provided an overview of the requested additional funding for the Category 4 Arborist Services which is being asked to be funded from unallocated ARPA funds.

MOTION by Tryon, seconded by Culleton 1. Approved Amendment to Agreement between the Town of Paradise and P31, increasing the Not to Exceed amount for Category 4 Arborist Services; and, 2. Authorized the Town Manager to sign the agreement. Roll call vote was unanimous. (510-20-345)

7. COUNCIL INITIATED ITEMS AND REPORTS

7a. Council initiated agenda items - None

7b. Council reports on committee representation

Council Member Culleton attended a Solid Waste meeting and announced that the Green Waste Yard is now open on Friday and Saturdays and hopefully the Buy Back Center and Household Hazardous Waste will be open at the first of the year.

Council Member Tryon has been attending NRWS meetings the last six months working out the agreement for the green waste yard and shared that hopefully the Household Hazardous Waste and Recycling will be open the first of the year and attended Butte County Fire Safe Council check in and met regarding the Tier 4 trees.

Mayor Crowder staffed the Town booth at Johnny Appleseed Days, attended the swear in of a new officer and presented at the California Real Estate Appraiser Convention at South Lake Tahoe.

7c. Future Agenda Items

Council Member Culleton requested future discussion to form an Arts Commission to create Paradise as a destination for public art.

8. STAFF COMMUNICATION

8a. Town Manager Report

Town Manager Phillips appreciates the Town Councils support, attended Community Resiliency Collaboration and will be merging with the Park and Recreation to focus on bringing funding back for the buffer zone around Town and an alternative thought is how to bring the flumes back into working order; Officer Cooper is the newest addition to the Police Department; and six staff attended ICS 400 training.

9. CLOSED SESSION - None

10. ADJOURNMENT

10a. Mayor Crowder adjourned the meeting at 9:35 p.m. and announced that the Town Council will adjourn to November 7, 2022 at 6:00 p.m., Paradise Town Hall, 5555 Skyway, Paradise, CA 95969 for the purpose of holding a Regular Adjourned meeting pursuant to Government Code Section 54955.

Date approved:

By: Attest:

_____ _____

Steve Crowder, Mayor Dina Volenski, CMC, Town Clerk

TOWN OF PARADISE

CASH DISBURSEMENTS REPORT

FOR THE PERIOD OF
October 1, 2022 - October 31, 2022

CASH DISBURSEMENTS REPORT
October 1, 2022 - October 31, 2022

Check Date	Pay Period End	Description	Amount	Total
10/14/2022	10/9/2022	Net Payroll - Direct Deposits and Checks	$ 202,301.39	
10/28/2022	10/23/2022	Net Payroll - Direct Deposits and Checks	196,301.17	
				$ 398,602.56
Accounts Payable				
		Payroll Vendors: Taxes, PERS, Dues, Insurance, Etc.	356,755.05	
		Operations Vendors: Supplies, Contracts, Utilities, Etc.	$ 3,830,402.13	
		TOTAL CASH DISBURSEMENTS ACCOUNTS PAYABLE		4,187,157.18
		GRAND TOTAL CASH DISBURSEMENTS		$ 4,585,759.74

APPROVED BY: _____
Kevin Phillips, Town Manager

APPROVED BY: _____
Ross Gilb, Finance Director / Town Treasurer

TOWN OF PARADISE

Payment Register

From Payment Date: 10/1/2022 - To Payment Date: 10/31/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
AP - US Bank TOP AP Checking									
Check									
81647	10/03/2022	Open			Accounts Payable	De Lage Landen Public Finance LLC	$781.25		
81648	10/03/2022	Open			Accounts Payable	ENTERPRISE FM TRUST	$1,073.32		
81649	10/03/2022	Open			Accounts Payable	SBA Monarch Towers III LLC	$166.50		
81650	10/06/2022	Open			Accounts Payable	4LEAF, Inc	$63,205.00		
81651	10/06/2022	Open			Accounts Payable	AT&T	$101.41		
81652	10/06/2022	Open			Accounts Payable	AT&T & CALNET3 - CIRCUIT LINES	$110.56		
81653	10/06/2022	Open			Accounts Payable	AT&T MOBILITY	$186.54		
81654	10/06/2022	Open			Accounts Payable	AT&T MOBILITY	$89.46		
81655	10/06/2022	Open			Accounts Payable	AT&T/CALNET3 - REPEATER LINES	$211.65		
81656	10/06/2022	Open			Accounts Payable	AT&T/CALNET3 - COMMUNITY PARK	$23.20		
81657	10/06/2022	Open			Accounts Payable	AT&T/CALNET3 - Summary	$2,242.57		
81658	10/06/2022	Open			Accounts Payable	AT&T/CALNET3 - TH/FDPD FIBER LINES	$1,136.08		
81659	10/06/2022	Open			Accounts Payable	Batteries Plus Bulbs	$59.20		
81660	10/06/2022	Open			Accounts Payable	Bear Electrical Systems, Inc	$1,650.00		
81661	10/06/2022	Open			Accounts Payable	BIDWELL TITLE & ESCROW	$175.00		
81662	10/06/2022	Open			Accounts Payable	BIDWELL TITLE & ESCROW	$175.00		
81663	10/06/2022	Open			Accounts Payable	BIDWELL TITLE & ESCROW	$175.00		
81664	10/06/2022	Open			Accounts Payable	Big O Tires	$399.90		
81665	10/06/2022	Open			Accounts Payable	Blaise, Parry	$1,326.70		
81666	10/06/2022	Open			Accounts Payable	Blue Flamingo Marketing Advocates	$6,844.71		
81667	10/06/2022	Open			Accounts Payable	Broad & Gusman	$4,000.00		
81668	10/06/2022	Open			Accounts Payable	BUTTE CO RECORDER	$334.00		
81669	10/06/2022	Open			Accounts Payable	BUTTE REGIONAL TRANSIT	$40.00		
81670	10/06/2022	Open			Accounts Payable	CALIFORNIA BUILDING STANDARDS COMMISSION	$1,343.70		
81671	10/06/2022	Open			Accounts Payable	CALIFORNIA STATE DEPARTMENT OF CONSERVATION	$4,548.21		
81672	10/06/2022	Open			Accounts Payable	CDX Wireless Inc	$4,320.00		
81673	10/06/2022	Open			Accounts Payable	CivicPlus, LLC	$1,040.00		
81674	10/06/2022	Open			Accounts Payable	COMCAST CABLE	$401.40		
81675	10/06/2022	Open			Accounts Payable	COMCAST CABLE	$411.40		
81676	10/06/2022	Open			Accounts Payable	Cooper, Andrew	$134.05		
81677	10/06/2022	Open			Accounts Payable	Creative Composition Inc	$285.99		
81678	10/06/2022	Open			Accounts Payable	Deja Vu Gardens Galore Nursery	$62.48		
81679	10/06/2022	Open			Accounts Payable	Dokken Engineering, Inc.	$18,970.49		
81680	10/06/2022	Open			Accounts Payable	Dokken Engineering, Inc.	$1,942.64		
81681	10/06/2022	Open			Accounts Payable	Dokken Engineering, Inc.	$6,799.14		
81682	10/06/2022	Open			Accounts Payable	DURHAM PENTZ TRUCK CENTER	$103.68		
81683	10/06/2022	Open			Accounts Payable	FP/FRANCOTYP-POSTALIA MAILING SOLUTIONS	$135.00		
81684	10/06/2022	Open			Accounts Payable	Gates + Associates	$19,975.00		
81685	10/06/2022	Open			Accounts Payable	GOVERNOR'S OFFICE OF EMERGENCY SERVICES	$598.00		
81686	10/06/2022	Open			Accounts Payable	GREAT AMERICA LEASING CORP.	$145.47		
81687	10/06/2022	Open			Accounts Payable	Gregory Cundiff	$350.00		
81688	10/06/2022	Open			Accounts Payable	Hollingsworth, Owen	$361.74		
81689	10/06/2022	Open			Accounts Payable	Hope Crisis Response Network, Inc	$30,000.00		
81690	10/06/2022	Open			Accounts Payable	Hope Crisis Response Network, Inc	$10,000.00		
81691	10/06/2022	Open			Accounts Payable	Hope Crisis Response Network, Inc	$12,500.00		
81692	10/06/2022	Open			Accounts Payable	I.M.P.A.C. PAYMENTS IMPAC GOV SVCS/US BANCORP	$30,466.29		
81693	10/06/2022	Open			Accounts Payable	INTERSTATE OIL COMPANY	$403.54		

TOWN OF PARADISE

Payment Register

From Payment Date: 10/1/2022 - To Payment Date: 10/31/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
AP - US Bank TOP AP Checking									
Check									
81694	10/06/2022	Open			Accounts Payable	J.J.R. Enterprises Inc	$914.88		
81695	10/06/2022	Open			Accounts Payable	Jennifer Arbuckle	$6,300.00		
81696	10/06/2022	Open			Accounts Payable	JOHNNY ON THE SPOT PORTABLES	$3,161.00		
81697	10/06/2022	Open			Accounts Payable	KEN'S HITCH & WELDING	$229.67		
81698	10/06/2022	Open			Accounts Payable	KNIFE RIVER CONSTRUCTION	$65,171.95		
81699	10/06/2022	Open			Accounts Payable	KNIFE RIVER CONSTRUCTION	$670.74		
81700	10/06/2022	Open			Accounts Payable	KNIFE RIVER CONSTRUCTION	$1,944,680.83		
81701	10/06/2022	Open			Accounts Payable	L.N. CURTIS & SONS	$1,522.99		
81702	10/06/2022	Open			Accounts Payable	Look Ahead Veterinary Services	$384.34		
81703	10/06/2022	Open			Accounts Payable	Mark Thomas & Company Inc	$3,354.92		
81704	10/06/2022	Open			Accounts Payable	Mark Thomas & Company Inc	$8,737.45		
81705	10/06/2022	Open			Accounts Payable	Martin, Marie	$1,468.26		
81706	10/06/2022	Open			Accounts Payable	Mennonite Disaster Service	$582.00		
81707	10/06/2022	Open			Accounts Payable	Mennonite Disaster Service	$600.00		
81708	10/06/2022	Open			Accounts Payable	Mennonite Disaster Service	$40,000.00		
81709	10/06/2022	Open			Accounts Payable	Meyers Police K-9 Training, LLC	$2,040.00		
81710	10/06/2022	Open			Accounts Payable	MID VALLEY TITLE & ESCROW	$508.00		
81711	10/06/2022	Open			Accounts Payable	MID VALLEY TITLE & ESCROW	$529.00		
81712	10/06/2022	Open			Accounts Payable	MOBILE MINI INC	$475.93		
81713	10/06/2022	Open			Accounts Payable	MOTOROLA	$160,000.00		
81714	10/06/2022	Open			Accounts Payable	Mt Shasta Spring Water Co., Inc	$412.91		
81715	10/06/2022	Open			Accounts Payable	Norris, Melanie	$1,049.28		
81716	10/06/2022	Open			Accounts Payable	North State Tire Co. Inc.	$1,680.68		
81717	10/06/2022	Open			Accounts Payable	Northern California Glove & Safety	$491.63		
81718	10/06/2022	Open			Accounts Payable	NORTHERN RECYCLING & WASTE SERVICES, INC.	$5,590.17		
81719	10/06/2022	Open			Accounts Payable	NORTHGATE PETROLEUM CO	$9,536.08		
81720	10/06/2022	Open			Accounts Payable	NORTHSTAR	$94.00		
81721	10/06/2022	Open			Accounts Payable	NV5, Inc.	$358.83		
81722	10/06/2022	Open			Accounts Payable	NV5, Inc.	$3,376.53		
81723	10/06/2022	Open			Accounts Payable	O'REILLY AUTO PARTS	$1,280.63		
81724	10/06/2022	Open			Accounts Payable	Oak Ridge Enterprise	$3,841.77		
81725	10/06/2022	Open			Accounts Payable	OFFICE DEPOT ACCT#36233169	$1,234.06		
81726	10/06/2022	Open			Accounts Payable	P31 Enterprises, Inc.	$51,803.99		
81727	10/06/2022	Open			Accounts Payable	PACIFIC GAS & ELECTRIC	$817.04		
81728	10/06/2022	Open			Accounts Payable	PARADISE IRRIGATION DIST	$2,592.40		
81729	10/06/2022	Open			Accounts Payable	PARADISE POST	$369.43		
81730	10/06/2022	Open			Accounts Payable	PLATT ELECTRIC SUPPLY	$292.28		
81731	10/06/2022	Open			Accounts Payable	Psomas	$445.46		
81732	10/06/2022	Open			Accounts Payable	Psomas	$3,666.28		
81733	10/06/2022	Open			Accounts Payable	Psomas	$602.28		
81734	10/06/2022	Open			Accounts Payable	Psomas	$24,827.52		
81735	10/06/2022	Open			Accounts Payable	Psomas	$883.88		
81736	10/06/2022	Open			Accounts Payable	Psomas	$4,434.54		
81737	10/06/2022	Open			Accounts Payable	RE CONSTRUCTION	$10,440.00		
81738	10/06/2022	Open			Accounts Payable	RE CONSTRUCTION	$770.00		
81739	10/06/2022	Open			Accounts Payable	RENTAL GUYS - CHICO	$1,098.13		
81740	10/06/2022	Open			Accounts Payable	Riebes Auto Parts- Motorpool	$219.29		

TOWN OF PARADISE

Payment Register

From Payment Date: 10/1/2022 - To Payment Date: 10/31/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
AP - US Bank TOP AP Checking									
Check									
81741	10/06/2022	Open			Accounts Payable	Scotts PPE Recon Inc.	$1,422.00		
81742	10/06/2022	Open			Accounts Payable	SONSRAY MACHINERY LLC	$1,088.50		
81743	10/06/2022	Open			Accounts Payable	Spherion Staffing	$4,647.65		
81744	10/06/2022	Open			Accounts Payable	T & L Construction	$26,600.00		
81745	10/06/2022	Open			Accounts Payable	T MOBILE USA, INC.	$1,289.81		
81746	10/06/2022	Open			Accounts Payable	Tahoe Pure Water Co.	$159.23		
81747	10/06/2022	Open			Accounts Payable	The Ferguson Group	$5,000.00		
81761	10/06/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - ENG. DEPT.	$595.01		
81762	10/06/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - FIRE DEPT.	$208.75		
81763	10/06/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - MOTORPOOL	$106.58		
81764	10/06/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - POLICE DEPT.	$14.80		
81765	10/06/2022	Open			Accounts Payable	Tri Flame Propane	$111.69		
81766	10/06/2022	Open			Accounts Payable	UNITED RENTALS, INC.	$2,049.73		
81767	10/06/2022	Open			Accounts Payable	Urban Planning Partners Inc	$2,722.50		
81768	10/06/2022	Open			Accounts Payable	VALLEY OAK VETERINARY CENTER	$79.73		
81769	10/06/2022	Open			Accounts Payable	Visinoni Brothers Construction	$159,407.67		
81770	10/06/2022	Open			Accounts Payable	Westlake Ace Hardware	$81.49		
81771	10/06/2022	Open			Accounts Payable	WITTMEIER AUTO CENTER	$190.14		
81772	10/06/2022	Open			Accounts Payable	Wood Rodgers, Inc.	$5,287.90		
81773	10/06/2022	Open			Accounts Payable	Wood Rodgers, Inc.	$5,988.66		
81774	10/11/2022	Open			Accounts Payable	Aflac	$57.98		
81775	10/11/2022	Open			Accounts Payable	Met Life	$10,320.27		
81776	10/11/2022	Open			Accounts Payable	OPERATING ENGINEERS	$1,003.00		
81777	10/11/2022	Open			Accounts Payable	PARADISE POLICE OFFICERS ASSOCIATION	$1,928.51		
81778	10/11/2022	Open			Accounts Payable	SUN LIFE INSURANCE	$6,440.69		
81779	10/11/2022	Open			Accounts Payable	SUPERIOR VISION SVC NGLIC	$800.57		
81780	10/11/2022	Open			Accounts Payable	TOP CONFIDENTIAL MID MGMT ASSOCIATION	$120.00		
81781	10/18/2022	Open			Accounts Payable	ICMA 457 - VANTAGEPOINT	$1,000.00		
81782	10/18/2022	Open			Accounts Payable	STATE DISBURSEMENT UNIT	$194.76		
81783	10/20/2022	Open			Accounts Payable	ACCESS INFORMATION PROTECTED	$90.21		
81784	10/20/2022	Open			Accounts Payable	ADVANCED DOCUMENT CONCEPTS	$13.46		
81785	10/20/2022	Open			Accounts Payable	AIRGAS SAFETY, INC.	$1,550.72		
81786	10/20/2022	Open			Accounts Payable	AT&T & CALNET3 - CIRCUIT LINES	$858.06		
81787	10/20/2022	Open			Accounts Payable	AT&T MOBILITY	$69.55		
81788	10/20/2022	Open			Accounts Payable	AT&T MOBILITY	$186.54		
81789	10/20/2022	Open			Accounts Payable	Axon Enterprise Inc	$10,861.20		
81790	10/20/2022	Open			Accounts Payable	Bear Electrical Systems, Inc	$14,451.73		
81791	10/20/2022	Open			Accounts Payable	Big O Tires	$60.00		
81792	10/20/2022	Open			Accounts Payable	Biometrics4ALL, Inc	$33.00		
81793	10/20/2022	Open			Accounts Payable	Blue Flamingo Marketing Advocates	$3,091.94		
81794	10/20/2022	Open			Accounts Payable	Bug Smart	$83.00		
81795	10/20/2022	Open			Accounts Payable	Butte County Construction Inc	$20,000.00		
81796	10/20/2022	Open			Accounts Payable	COMCAST CABLE	$391.40		
81797	10/20/2022	Open			Accounts Payable	COMCAST CABLE	$416.40		
81798	10/20/2022	Open			Accounts Payable	COMCAST CABLE	$143.40		
81799	10/20/2022	Open			Accounts Payable	Cordico Psychological Corporation	$400.00		
81800	10/20/2022	Open			Accounts Payable	COUNTY OF BUTTE	$1,200.00		

TOWN OF PARADISE

Payment Register

From Payment Date: 10/1/2022 - To Payment Date: 10/31/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
AP - US Bank TOP AP Checking									
Check									
81801	10/20/2022	Open			Accounts Payable	Creative Composition Inc	$42.90		
81802	10/20/2022	Open			Accounts Payable	Critchfield, Pamela	$15.00		
81803	10/20/2022	Open			Accounts Payable	Crowder, Steven	$288.83		
81804	10/20/2022	Open			Accounts Payable	DATCO SERVICES CORPORATION	$315.00		
81805	10/20/2022	Open			Accounts Payable	Design Path Studio	$68,000.00		
81806	10/20/2022	Open			Accounts Payable	Dirt to Doorknobs	$60,000.00		
81807	10/20/2022	Open			Accounts Payable	Dokken Engineering, Inc.	$37,291.95		
81808	10/20/2022	Open			Accounts Payable	DURHAM PENTZ TRUCK CENTER	$2,046.98		
81809	10/20/2022	Open			Accounts Payable	Eagle Security Systems	$1,393.27		
81810	10/20/2022	Open			Accounts Payable	ESPLANADE OFFICE	$5,951.89		
81811	10/20/2022	Open			Accounts Payable	FEDERAL EXPRESS	$25.52		
81812	10/20/2022	Open			Accounts Payable	Granicher Appraisals, Inc	$400.00		
81813	10/20/2022	Open			Accounts Payable	GREAT AMERICA LEASING CORP.	$129.31		
81814	10/20/2022	Open			Accounts Payable	GREEN RIDGE LANDSCAPING	$5,404.16		
81815	10/20/2022	Open			Accounts Payable	HireRight, Inc.	$17.90		
81816	10/20/2022	Open			Accounts Payable	Huggins, Jeannette	$425.50		
81817	10/20/2022	Open			Accounts Payable	I.M.P.A.C. PAYMENTS IMPAC GOV SVCS/US BANCORP	$9,677.05		
81818	10/20/2022	Open			Accounts Payable	INTERSTATE SALES	$2,607.55		
81819	10/20/2022	Open			Accounts Payable	James or Lavenia Riotto	$125.00		
81820	10/20/2022	Open			Accounts Payable	JOHNNY ON THE SPOT PORTABLES	$590.80		
81821	10/20/2022	Open			Accounts Payable	KOEFRAN INDUSTRIES	$1,200.00		
81822	10/20/2022	Open			Accounts Payable	Kovacs, Cameron	$30.00		
81823	10/20/2022	Open			Accounts Payable	KP Research Services, Inc.	$4,213.44		
81824	10/20/2022	Open			Accounts Payable	LIFE ASSIST INC	$320.79		
81825	10/20/2022	Open			Accounts Payable	LOCATE PLUS CORPORATION	$67.00		
81826	10/20/2022	Open			Accounts Payable	Look Ahead Veterinary Services	$601.04		
81827	10/20/2022	Open			Accounts Payable	Lui, Andrea	$217.50		
81828	10/20/2022	Open			Accounts Payable	Mark Thomas & Company Inc	$36,390.84		
81829	10/20/2022	Open			Accounts Payable	MID VALLEY TITLE & ESCROW	$26,491.00		
81830	10/20/2022	Open			Accounts Payable	MID VALLEY TITLE & ESCROW	$10.00		
81831	10/20/2022	Open			Accounts Payable	MOTOROLA	$11,322.19		
81832	10/20/2022	Open			Accounts Payable	MOTOROLA	$32,600.57		
81833	10/20/2022	Open			Accounts Payable	MOTOROLA	$277,230.18		
81834	10/20/2022	Open			Accounts Payable	MOTOROLA	$209,190.53		
81835	10/20/2022	Open			Accounts Payable	MOTOROLA	$1,909.38		
81836	10/20/2022	Open			Accounts Payable	MOTOROLA	$122.74		
81837	10/20/2022	Open			Accounts Payable	NCCSIF TREASURER	$63,211.75		
81838	10/20/2022	Open			Accounts Payable	NORTHSTAR	$1,808.00		
81839	10/20/2022	Open			Accounts Payable	NV5, Inc.	$12,878.91		
81840	10/20/2022	Open			Accounts Payable	O'REILLY AUTO PARTS	$40.87		
81841	10/20/2022	Open			Accounts Payable	OFFICE DEPOT ACCT#36233169	$434.32		
81842	10/20/2022	Open			Accounts Payable	Oroville Tow & Salvage	$1,560.00		
81843	10/20/2022	Open			Accounts Payable	P31 Enterprises, Inc.	$94.73		
81844	10/20/2022	Open			Accounts Payable	PACIFIC GAS & ELECTRIC	$14,024.50		
81845	10/20/2022	Open			Accounts Payable	Pientak, Christina	$15.00		
81846	10/20/2022	Open			Accounts Payable	RoyalAire	$96.27		
81847	10/20/2022	Open			Accounts Payable	Shelby's Pest Control, Inc.	$180.00		

TOWN OF PARADISE

Payment Register

From Payment Date: 10/1/2022 - To Payment Date: 10/31/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
AP - US Bank TOP AP Checking									
Check									
81848	10/20/2022	Open			Accounts Payable	Sigler Pest Control	$50.00		
81849	10/20/2022	Open			Accounts Payable	Snow, Ashley	$15.00		
81850	10/20/2022	Open			Accounts Payable	Spherion Staffing	$3,404.51		
81851	10/20/2022	Open			Accounts Payable	Stratti	$9,460.64		
81852	10/20/2022	Open			Accounts Payable	T and S DVBE Inc.	$6,753.77		
81853	10/20/2022	Open			Accounts Payable	Tetra Tech - EMI	$897.50		
81854	10/20/2022	Open			Accounts Payable	The Ferguson Group	$10,000.00		
81855	10/20/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - ENG. DEPT.	$129.19		
81856	10/20/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - FIRE DEPT.	$186.08		
81857	10/20/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - MOTORPOOL	$24.37		
81858	10/20/2022	Open			Accounts Payable	THOMAS ACE HARDWARE - POLICE DEPT.	$31.33		
81859	10/20/2022	Open			Accounts Payable	THOMAS HYDRAULIC & HARDWARE SUPPLY, INC.	$59.23		
81860	10/20/2022	Open			Accounts Payable	TRUEPOINT SOLUTIONS, LLC	$675.00		
81861	10/20/2022	Open			Accounts Payable	TUCKER PEST CONTROL INC	$90.00		
81862	10/20/2022	Open			Accounts Payable	Urban Design Associates. LTD	$14,022.75		
81863	10/20/2022	Open			Accounts Payable	VERIZON WIRELESS	$983.71		
81864	10/20/2022	Open			Accounts Payable	VERIZON WIRELESS	$287.96		
81865	10/20/2022	Open			Accounts Payable	VERIZON WIRELESS	$344.89		
81866	10/20/2022	Open			Accounts Payable	Wallis, Roy	$246.00		
81867	10/20/2022	Open			Accounts Payable	White Glove Cleaning Svc Inc, Theresa Contreras	$5,610.00		
81868	10/20/2022	Open			Accounts Payable	Wood Rodgers, Inc.	$265.48		
81869	10/20/2022	Open			Accounts Payable	Wood Rodgers, Inc.	$896.67		
81870	10/20/2022	Open			Accounts Payable	Wood Rodgers, Inc.	$10,659.12		
81871	10/27/2022	Open			Accounts Payable	ICMA 457 - VANTAGEPOINT	$1,000.00		
81872	10/27/2022	Open			Accounts Payable	STATE DISBURSEMENT UNIT	$194.76		
Type Check Totals:					213 Transactions		$3,853,462.67		
EFT									
1350	10/06/2022	Open			Accounts Payable	CALPERS	$125,291.12		
1351	10/13/2022	Open			Accounts Payable	EMPLOYMENT DEVELOPMENT DEPARTMENT	$11,222.52		
1352	10/13/2022	Open			Accounts Payable	INTERNAL REVENUE SERVICE	$38,052.75		
1353	10/18/2022	Open			Accounts Payable	CALPERS - RETIREMENT	$49,067.57		
1354	10/18/2022	Open			Accounts Payable	ING LIFE INS & ANNUITY COMPANY	$7,460.00		
1355	10/11/2022	Open			Accounts Payable	STATE BOARD OF EQUALIZATION	$161.00		
1356	10/27/2022	Open			Accounts Payable	CALPERS - RETIREMENT	$49,525.76		
1357	10/27/2022	Open			Accounts Payable	EMPLOYMENT DEVELOPMENT DEPARTMENT	$10,164.04		
1358	10/27/2022	Open			Accounts Payable	ING LIFE INS & ANNUITY COMPANY	$7,460.00		
1359	10/27/2022	Open			Accounts Payable	INTERNAL REVENUE SERVICE	$35,289.75		
Type EFT Totals:					10 Transactions		$333,694.51		
AP - US Bank TOP AP Checking Totals									

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	213	$3,853,462.67	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	213	$3,853,462.67	$0.00

TOWN OF PARADISE

Payment Register

From Payment Date: 10/1/2022 - To Payment Date: 10/31/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
AP - US Bank TOP AP Checking									
Check									

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	10	$333,694.51	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Total	10	$333,694.51	$0.00

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	223	$4,187,157.18	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	223	$4,187,157.18	$0.00

Town of Paradise

Council Agenda Summary **Agenda Item: 2(c)**

Date: November 7, 2022

ORIGINATED BY:	Jessica Erdahl, Senior Capital Projects Manager
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	On-System Hardscape Replacement Project Acceptance
LONG TERM RECOVERY PLAN:	Yes, Tiers 1, Evacuation Routes

COUNCIL ACTION REQUESTED:

1. Adopt Resolution No. 2022-__, a Resolution of the Town Council of the Town of Paradise accepting Contract No. 7302.CON, On-System Hardscape Replacement Project, performed by Franklin Construction, Inc., Chico, CA.

Background:

As a result of the 2018 Camp Fire and on-going heavy fire debris removal, 30 hardscape locations were identified that sustained damage. The locations included damaged concrete curb, gutter and sidewalk, lighting, planters and amenities town wide.

The Town coordinated with Caltrans and Federal Highways Administration (FHWA) to secure Emergency Relief (ER) permanent restoration funding to repair the damaged infrastructure town wide. Through the Emergency Relief Program, the Town of Paradise has been approved for $866,900.00 for the on-system hardscape replacement project. The approved project is located on Federal-Aid "On-System" roads – meaning the Town's primary collectors and arterials such as Skyway, Clark, Pearson, Elliott, Bille, Wagstaff, Pentz, etc.

On December 11, 2018, Paradise Town Council awarded a contract to Mark Thomas to perform engineering services on disaster related projects. Subsequently, in July 2020, a task order was issued to perform civil design services on the hardscape replacement project.

On October 12, 2021 Paradise Town Council adopted a resolution approving the Plans & Specifications for the On-System hardscape replacement project. Council further directed staff to advertise for bids.

On January 11, 2022 Paradise Town Council awarded contract No 7302.CON On-System Hardscape Replacement Project to Franklin Construction, inc. the amount of their base bid $456,756.00 and approved contingency expenditures not exceeding 10%.

Analysis:
Construction efforts began on March 14, 2022 and continued through September 7, 2022. Work was mutually suspended during the months of July-August 2022 due to material procurement lead times.

Financial Impact:

The total estimated construction cost of the Skyway and Pearson Road Traffic Signal Repair Project, including a 10% contingency, was $502,431.00. The actual total construction cost is $621,370.48. Actual construction expenditures exceeded the 10% contingency due to additional damage caused by the Camp Fire not previously included in the contract quantities. Franklin Construction, Inc. bid was below available construction funding, therefore ER funds are available to cover these additional costs.

Project expenditures and a funding summary is detailed below:

Contract Items	Participating Reimb. Ratio	Total Cost	ER	Local Match
Construction Contract - Actuals	88.53%	$ 621,370.48	$ 550,099.29	$ 71,271.19
Construction Management - Estimated	88.53%	$ 117,040.72	$ 103,616.15	$ 13,424.57
Total		**$ 738,411.20**	**$ 653,715.44**	**$ 84,695.76**
Available Funding CON/CE		$ 797,400.00	$ 705,938.22	$ 91,461.78
Balance		**$ 58,988.80**	**$ 52,222.78**	**$ 6,766.02**

TOWN OF PARADISE
RESOLUTION NO. 2022-__

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE ACCEPTING THE WORK PERFORMED UNDER THE ON-SYSTEM HARDSCAPE REPLACEMENT PROJECT (CONTRACT NO. 7302.CON).

WHEREAS, the Town of Paradise has heretofore contracted with Franklin Construction, Inc. for certain work performed under that certain project known as the On-System Hardscape Replacement Project, being Contract No. 7302.CON; and

WHEREAS, said work of improvements, as called for by the contract between the Town of Paradise and Franklin Construction, Inc., referable to said project was completed on September 7, 2022 to the satisfaction of the Town; and

WHEREAS, there has been posted a bond insuring the work of improvements from a maintenance standpoint for a period of one year from and after completion.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. The Town Council hereby accepts the work performed on those certain improvements, the subject of a contract between the Town of Paradise and Franklin Construction, Inc., known and referred to as the On-System Hardscape Replacement Project.

PASSED AND ADOPTED by the Town Council of the Town of Paradise at a regular meeting held on the 7th day of November 2022 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Steve Crowder, Mayor

ATTEST:

_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

Town of Paradise

Council Agenda Summary **Agenda Item: 2(d)**

Date: November 7, 2022

ORIGINATED BY:	Jessica Erdahl, Senior Capital Projects Manager
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	Skyway and Pearson Road Traffic Signal Repair Project Acceptance
LONG TERM RECOVERY PLAN:	Yes, Tiers 1, Evacuation Routes

COUNCIL ACTION REQUESTED:

1. Adopt Resolution No. 2022-__, a Resolution of the Town Council of the Town of Paradise accepting Contract No. 8403.CON, Skyway and Pearson Road Traffic Signal Repair Project, performed by Bear Electrical Solutions, Inc., Alviso, CA.

Background:

Traffic signal equipment and adjacent hardscape were severely damaged as a result of the Camp Fire wildfire. Town staff completed a damage assessment post-fire and also arranged for temporary repairs (most notably the wood poles and span wire setup for a northbound signal indication) in order to keep the signal functional and safe for the travelling public. The work identified by the Town and incorporated in the final Plans, Specifications, and Estimate will replace the interim repairs and will bring the signal back to its pre-fire condition.

On December 11, 2018, Paradise Town Council awarded a contract to Mark Thomas to perform engineering services on disaster related projects. Subsequently, a task order was issued to perform civil design services on the Skyway and Pearson Road Traffic Signal Repairs Project.

The overall scope of work for the Project can be summarized as follows:

- Repair Camp Fire damaged Traffic signal equipment to achieve a pre-fire condition.
- Repair Camp Fire damaged hardscape (curb and gutter, ramps, etc.) to achieve an ADA compliant pre-fire condition.

On July 13th, 2021 Paradise Town Council adopted a resolution approving the Plans & Specifications for the Skyway and Pearson Road Traffic Signal Repair Project. Council further directed staff to advertise for bids on the subject combined project.

On August 10, 2021 Paradise Town Council awarded contract No 8403.CON Skyway and Pearson Road Traffic Signal Repair Project to Bear Electrical Solutions, inc. the amount of their base bid $254,710.00 and approved contingency expenditures not exceeding 10%.

Analysis:
Construction efforts began on February 23, 2022 and continued through October 13, 2022. Work was mutually suspended during the months of September 2021-January 2022 due to traffic signal equipment procurement lead times.

Financial Impact:

The total estimated construction cost of the Skyway and Pearson Road Traffic Signal Repair Project, including a 10% contingency, was $280,181.00. The actual total construction cost is $263,632.77. Project expenditures and a funding summary is detailed below:

Contract Items	**Insurance**
Construction Contract - Actuals	$263,632.77
Construction Engineering - Estimated	$71,411.35
Total	**$335,044.12**
Available Funding	$351,592.50
Balance	**$16,548.38**

TOWN OF PARADISE
RESOLUTION NO. 2022-___

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE ACCEPTING THE WORK PERFORMED UNDER THE SKYWAY AND PEARSON ROAD TRAFFIC SIGNAL REPAIR PROJECT (CONTRACT NO. 8403.CON).

WHEREAS, the Town of Paradise has heretofore contracted with Bear Electrical Solutions, Inc. for certain work performed under that certain project known as the Skyway and Pearson Road Traffic Signal Repair Project, being Contract No. 8403.CON; and

WHEREAS, said work of improvements, as called for by the contract between the Town of Paradise and Bear Electrical Solutions, Inc., referable to said project was completed on October 13, 2022 to the satisfaction of the Town; and

WHEREAS, there has been posted a bond insuring the work of improvements from a maintenance standpoint for a period of one year from and after completion.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. The Town Council hereby accepts the work performed on those certain improvements, the subject of a contract between the Town of Paradise and Bear Electrical Solutions, Inc., known and referred to as the Skyway and Pearson Road Traffic Signal Repair Project.

PASSED AND ADOPTED by the Town Council of the Town of Paradise at a regular meeting held on the 7th day of November 2022 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Steve Crowder, Mayor

ATTEST:

_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

Town of Paradise

Council Agenda Summary **Agenda Item: 2(e)**

Date: November 7, 2022

ORIGINATED BY: Tony Lindsey, Community Development Director – Building & Code Enforcement

REVIEWED BY: Kevin Phillips, Town Manager
Scott Huber, Town Attorney

SUBJECT: Adoption of Ordinance No. 622

LONG-TERM RECOVERY PLAN: Yes – Residential Codes & Standards

COUNCIL ACTION REQUESTED:

1. Waive second reading of the entire Town Ordinance No. 622 and approve reading by title only; and,

2. Adopt Town Ordinance No.622. " AN ORDINANCE OF THE TOWN OF PARADISE REPEALING PARADISE MUNICIPAL CODE CHAPTERS 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13 AND ADOPTING NEW CHAPTERS 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13, 15.14, AND 15.15 AND MAKING FINDINGS OF FACTS RELATING TO LOCAL CLIMATIC, GEOLOGICAL, AND TOPOGRAPHIC CONDITIONS, ALL RELATING TO THE AMENDMENTS AND ADOPTION OF THE 2022 CALIFORNIA BUILDING STANDARDS CODE."

Background:

On October 11, 2022, the Town Council introduced the above-noted Town ordinance for purposes of eventual adoption. If adopted, the proposed ordinance intends to amend the provisions of Chapters 15.01 through 15.15 of the Paradise Municipal Code to adopt the 2022 California Building Standards Code, with Findings of Fact and local amendments, to keep the Town in conformance with state regulations.

Analysis:

Town staff recommends the Town Council waive the second reading of this entire ordinance, read it by title only, and formally adopt Town Ordinance No. 622 [copy attached]. Once adopted, the provisions of this ordinance will be effective in January 1st, 2023.

Financial Impact:

There will be a nominal cost for publishing the ordinance in the local newspaper and codification.

LIST OF ATTACHMENTS

1. Ordinance No. 622 “An ordinance of the Town of Paradise Repealing Paradise Municipal Code Chapters 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13 and Adopting New Chapters 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.09, 15.10, 15.11, 15.12, 15.13, 15.14 and 15.15, and Making Findings of Facts Relating to Local Climatic, Geological, and Topographic Conditions, All Relating to the Adoption of the California Code of Regulations, TITLE 24, PART 2 VOLUME 1 & 2, PART 2.5, PART 3, PART 4, PART 5, PART 6, PART 8, PART 9, PART 10, PART 11, AND PART 12”.

2. Residential and Non-Residential checklist for permitting Electric Vehicles (EV) and Electric Vehicle Service Equipment (EVSE).

Town of Paradise
Ordinance No. 622

AN ORDINANCE OF THE TOWN OF PARADISE REPEALING PARADISE MUNICIPAL CODE CHAPTERS 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13, 15.14 AND ADOPTING NEW CHAPTERS 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13, 15.14, AND 15.15 AND MAKING FINDINGS OF FACTS RELATING TO LOCAL CLIMATIC, GEOLOGICAL, AND TOPOGRAPHIC CONDITIONS, ALL RELATING TO THE AMENDMENTS AND ADOPTION OF THE 2022 CALIFORNIA BUILDING STANDARDS CODE.

WHEREAS, the Town Council of the Town of Paradise hereby finds that the public health, safety, and welfare will be best protected and served by the adoption of the 2022 California Building Standards Code as established and maintained by the State Building Standards Commission with certain amendments; and

WHEREAS, the Town of Paradise finds that its jurisdiction has specific climatic, topographic, and geologic considerations, as set forth and incorporated herein, that can harm emergency services such as fire protection and emergency medical services and on structures and buildings; and

WHEREAS, except for the amendments authorized by Health and Safety Code sections 17958.5, 17958.7, and 18941.5, the Town of Paradise adopts ordinances and regulations imposing the building regulations contained in the rules adopted by the State according to the Health and Safety Code Section 17922; and

WHEREAS, sections 17958.5, 17958.7, and 18941.5 of the Health and Safety Code authorize the Town of Paradise to make changes or modifications to the California Building Standards Code as are reasonably necessary because of local climatic, topographic, and geologic conditions; and

WHEREAS, the California Building Standards Code applies to all occupancies throughout the State; and

WHEREAS, the State of California recently adopted Assembly Bill 1236 and Assembly Bill 970, which requires local agencies to adopt an ordinance that creates an expedited and streamlined permitting process for electric vehicle charging systems; and creation of an expedited, streamlined permitting process for electric vehicle charging stations would facilitate convenient charging of electric vehicles and help reduce the Town's reliance on environmentally damaging fossil fuels; and

WHEREAS, pursuant to Health and Safety Code section 17958.7, the Town of Paradise has filed the amendments, additions, or deletions expressly marked and identified as to the applicable findings with the California Building Standards Commission at 2525 Natomas Park Drive, Sacramento, Suite 130, Sacramento, California 95833-2936.

NOW, THEREFORE, The Town Council of the Town of Paradise does now ordain as follows:

SECTION 1. Chapters **15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13 and 15.14** of the Paradise Municipal Code are repealed.

SECTION 2. Chapters **15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.08, 15.09, 15.10, 15.11, 15.12, 15.13, 15.14 and 15.15** are hereby added to the Paradise Municipal Code read as follows:

15.01.010 Facts and findings.

A. Changes or Modifications. Pursuant to Sections 17958.5, 17958.7 and 18941.5 of the State of California Health and Safety Code, the Town of Paradise adopts and amends the 2022 California Building Standards Code (Title 24, Part 2) based on the 2021 International Building Code (ICC); the 2022 California Residential Code (Title 24, Part 2.5) based on the 2021 International Residential Code (ICC); the 2022 California Electrical Code (Title 24, Part 3) based on the 2020 National Electrical Code (NFPA); the 2022 California Mechanical Code (Title 24, Part 4) based on the 2021 Uniform Mechanical Code (IAPMO); the 2022 California Plumbing Code (Title 24, Part 5) based on the 2021 Uniform Plumbing Code (IAPMO); the 2022 California Fire Code (Title 24, Part 9) based on the 2021 International Fire Code (IFC); the 2022 California Administrative Code (Title 24, Part 1); the 2022 California Energy Code (Title 24, Part 6); the 2022 California Historical Building Code (Title 24, Part 8); the 2022 California Existing Building Code (Chapter 10; Title 24, Part 10); the 2022 California Green Building Standards Code (Cal Green, Title 24, Part 11) and the 2022 California Referenced Standards Code (Title 24, Part 12).

NOTE: The State of California officially adopted the 2022 California Administrative, Building, Residential, Electrical, Mechanical, Plumbing, Energy, Historical, Fire, Existing Building, Green Building Standards and Referenced Standards Codes in July of this year, and they become mandatory at the local level effective January 1, 2023.

B. Findings. According to Sections 17958.5, 17958.7, and 18941.5 of the State of California Health and Safety Code, the Town of Paradise has determined and found the attached amendments, additions, and/or modifications are needed reasonably necessary because of its local climatic, geologic, and topographical conditions.

C. Local Conditions. Local conditions have an adverse effect on the potential for life and property loss, making necessary changes and modifications to the 2022 California Building Standards Code to establish and maintain an environment that will provide the community with a desirable level of protection.

1. Climatic Conditions.

1A. On average, the Town of Paradise has an annual rainfall of fifty-two (52) to fifty-four (54) inches of rain. However, there is little, if any, measurable precipitation in the summer months. Heavy rains can characterize winter months, and occasionally heavy snowfalls with accumulations above the one thousand eight hundred (1,800) feet level. During the year, the temperatures range from the mid-20s to low 100's degrees in the summer months with light to gusty westerly winds. These drying winds, mixed with the density of vegetation, which is dominant throughout the Town, create a hazardous fuel condition that can have severe consequences.

2. Geographical and Topographical Conditions.

2A. The Town of Paradise is located within Butte County in Northern California. It is approximately one hundred (100) miles north of Sacramento and fifteen (15) miles east of the urban community of Chico. The Town of Paradise's population was approximately 26,000+, and the second largest community in Butte County. The Town encompassed 18.6 square miles and was incorporated in 1979. Before incorporation, the Town was a County mountain community with older construction of light commercial and industrial with a predominantly residential character.

2B. The Town of Paradise is located one thousand four hundred (1,400) to two thousand two hundred feet (2,200) above sea level. It is bordered by rugged canyons, creating somewhat of a triangular-shaped area in which the Town is situated.

2C. This environment has natural vegetative growth that is dense, both in the canyon areas and throughout the Town, which presents a challenge and difficulty in fighting and controlling the spread of wildfires. The Town of Paradise has been identified as a very high fire hazard severity zone according to Government Code Sections 51178.5 and 51179, based on the climatic, topographic, and geologic conditions combined with the dense vegetation throughout the Town.

2D. The Town's topography presents problems in the delivery of emergency services, including fire protection. Hilly terrain with narrow, winding roads with little circulation, limited escape routes, and limited ingress and egress to access the Town prevent rapid access and orderly evacuations. Many miles of public streets and private roads were built years ago, and many private roads are substandard in design and access capability due to topography.

2E. Combined with these features, all-weather surfaces based upon the soil and topographic conditions may not be able to support the imposed loads of fire apparatus and reduce accessibility to emergency response personnel. These conditions increase the likelihood of difficulty with approach angles, steep slopes, grades, and emergency response personnel's ability to be effective.

D. Conclusion. Local climatic, geologic, and topographic conditions impact the built environment and necessitate California Building Standards Code amendments. Therefore, it is reasonably necessary to change or modify the State Building Standards Codes to mitigate the effects of the above conditions by adopting this Ordinance. Furthermore, California Health and Safety Code Section 17958.7 require that the modifications or change be expressly marked and identified as to each finding to which it refers. Therefore, the Town of Paradise finds that Exhibit "A" [below] provides the code sections that have been modified according to the Ordinance that are building standards as defined in the Health and Safety Code Section 18909, and the associated referenced conditions or modifications are due to local climatic, geologic and topographical considerations.

EXHIBIT "A"
FACTS & FINDING CORRELATION

PARADISE MUNICIPAL CODE SECTION	CALIFORNIA CODE	CODE SECTION AMENDED	SHORT TITLE	REFERENCED FACT/FINDING
15.02.010	CBC		Adoption	Health & Safety Code 17958.5
15.02.020	CBC	105.2	Work Exempt from Permits	Administrative
15.02.030	CBC	107.6	Expiration of Plan Review	Administrative
15.02.040	CBC	109.4	Commencing Work/Permit	Administrative
15.02.050	CBC	109.6	Refunds	Administrative
15.02.060	CBC	114.4	Violation Penalties	Administrative

15.02.070	CBC	202	Definitions	Administrative
15.02.080	CBC	1505.1.3	Roof Coverings	1A, 2A, 2B, 2C
15.02.090	CBC	1603.1.3	Roof Snow Loads	1A, 2A
15.02.100	CBC	J101.1	Scope	Administrative
15.02.110	CBC	J101.3	Purpose	Administrative
15.02.120	CBC	J101.4	Hazards	Administrative
15.02.130	CBC	J102	Definitions	Administrative
15.02.140	CBC	J103	Permits Required	Administrative
15.02.150	CBC	J104.2	Site Plan Requirements	Administrative
15.02.160	CBC	J104.5	Bonds	Administrative
15.02.170	CBC	J105.3	Inspections	Administrative
15.02.180	CBC	J106.2	Rounding of cut slopes	1A, 2A, 2B, 2D, 2E
15.02.190	CBC	J106.3	Private road construction	1A, 2A, 2B, 2D, 2E
15.02.200	CBC	J106.3.1	Private road construction	1A, 2A, 2B, 2D, 2E
15.02.210	CBC	J107.7	Rounding of fill slopes	1A, 2A, 2B, 2D
15.02.220	CBC	J109.5	Overflow protection	1A, 2A, 2B, 2D, 2E
15.02.230	CBC	J110.3	Disturbed surfaces	1A, 2A, 2B, 2D, 2E
15.02.240	CBC	J110.4	Storm damage precautions	1A, 2A, 2B, 2D, 2E
15.03.010	CRC		Adoption	Health & Safety Code 17958.5
15.03.020	CBC	R105.2	Work Exempt from Permits	Administrative
15.03.030	CRC	R108.5	Refunds	Administrative
15.03.040	CRC	R108.6	Commencing Work Before Permit	Administrative
15.03.050	CRC	R202	Definitions	Administrative
15.03.060	CRC	R313.2.2	Alarms	1A, 2C, 2D
15.03.070	CRC	R337.1.3, Exceptions (1) & (2) and R337.5.4	Wildland Urban Interface & Non-combustible gutters	Health & Safety Code 17958.5
15.03.080	CRC	R902.1	Roof Coverings	1A, 2A, 2B, 2C
15.04.010	CEC		Adoption	Health & Safety Code 17958.5
15.05.010	CMC		Adoption	Health & Safety Code 17958.5
15.06.010	CPC		Adoption	Health & Safety Code 17958.5
15.07.010	Ca. Energy Code		Adoption	Health & Safety Code 17958.5
15.08.010	Ca. Historical Code		Adoption	Health & Safety Code 17958.5

15.09.010	CFC		Adoption	Health & Safety Code 17958.5
15.09.020	CFC	103	Dept. of Fire Prevention	Administrative
15.09.030	CFC	105.2.3	Time Limitation of Application	Administrative
15.09.040	CFC	106.6.29	Miscellaneous Combustibles	2A, 2B, 2D,
15.09.050	CFC	109.3	Violation Penalties	Administrative
15.09.060	CFC	111.4	Failure to Comply	Administrative
15.09.070	CFC	113.3	Work Commencing	Administrative
15.09.080	CFC	113.5	Refunds	Administrative
15.09.090	CFC	202	Sky Lantern	Administrative
15.09.100	CFC	307.1	General Open Burning	1A, 2A, 2B, 2C, 2D
15.09.110	CFC	308.6.3	Sky Lantern	1A, 2A, 2B, 2C, 2D
15.09.120	CFC	503.2.1	Dimensions	1A, 2A, 2B, 2C, 2D, 2E
15.09.130	CFC	503.2.3	Surface-Access Roadways	1A, 2A, 2B, 2D, 2E
15.09.140	CFC	503.4.1	Roadway Design Features	1A, 2A, 2B, 2D, 2E
15.09.150	CFC	503.6	Gates	2D, 2E
15.09.160	CFC	505.3	Map/Directory	2D
15.09.170	CFC	507.1.2	Required Water Supply	1A, 2A, 2B, 2D
15.09.180	CFC	510.6.1	Testing and Proof	Administrative
15.09.190	CFC	901.4.2	Non-Required Fire Prot. System	2D
15.09.200	CFC	2306.2.3	Aboveground Storage Tanks	1A, 2A, 2B
15.09.210	CFC	Chapter 56	Fireworks	1A, 2A, 2B, 2C, 2D
15.09.220	CFC	B105.2 Exception 1	Reduced Fire Flow	1A, 2A, 2B, 2D
15.09.230	CFC	D103.4	Dead End Access	1A, 2A, 2B, 2D, 2E
15.10.010	Ca. Existing Building Code		Adoption	Health & Safety Code 17958.5
15.11.010	Ca. Green Building Standards Code		Adoption	Health & Safety Code 17958.5
15.12.010	Ca. Administrative Code		Adoption	Health & Safety Code 17958.5
15.13.010	Ca. Ref. Stds.		Adoption	Health & Safety Code 17958.5

Chapter 15.02 2022 California Building Standards Code (Title 24, Part 2) Based upon the International Building Code (ICC)

15.02.010 Adoption.

The 2022 California Building Standards Code, Part 2, Volumes 1 and 2, including Chapter 7A, Appendices "B", "F," "G", "H", "I", "J", known as the California Building Code, as published and adopted by the California Building Standards Commission, including the Town's amendments, deletions, and additions set forth in this Chapter, is hereby adopted by reference and incorporated herein.

15.02.020 Chapter 1, Division II, Section 105.2, Work Exempt from Permits, added.

14. Floor sheathing, decking, and exterior siding repair - limited to 100 square feet of floor sheathing or siding and less than 100 linear board feet of decking.
15. Replacement, repair, or overlay of less than 10% not to exceed 100 square feet of an existing roof within any 12-month period. All repairs shall be Class A only.
16. Approved prefabricated carports serving residential land uses open on two or more sides, do not exceed 480 square feet in footprint, are installed per the manufacturer's instructions, and are located in compliance with applicable building or structure setbacks.

15.02.030 Chapter 1, Division II, Section 107.6, Expiration of Plan Review, added.

Applications for which no permit has been issued shall expire one year following the date of application or on the effective date of a new Town adopted edition of any part of the California Building Standards Code, whichever comes later. Plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee.

Exception: Such applications shall not expire under the following circumstances:

1. If the Building Official determines the new code changes are minor, additional reviews of the plans to determine compliance with the new codes may be done in lieu of expiration. The normal hourly rate, as determined by the Master Fee Schedule adopted by the Town of Paradise Town Council, shall apply to any additional review.
2. Applications for which plans have been submitted as a result of a compliance investigation shall expire 180 days following the date of application. No extensions will be granted except in emergency situations approved prior to the expiration by the Building Official.

15.02.040 Chapter 1, Division II, Section 109.4, Work Commencing Before Permit Issuance, amended.

Any person who commences any work on a building, structure, electrical, gas, mechanical, or plumbing system before first obtaining the necessary permits shall be subject to an investigation fee equal to the permit fee to be paid in addition to the permit fee when obtaining the building permit. All fees must be paid prior to release of the permit.

15.02.050 Chapter 1, Division II, Section 109.6 Refunds, amended.

The Building Official may authorize refunding of a fee paid hereunder which was erroneously paid or collected. The Building Official may authorize refunding of not more than 80 percent of the permit or plan review fee paid when no work or plan examination has been done under an application or permit issued in accordance with this code, provided a written refund application is filed by the original permittee prior to the expiration of the permit.

15.02.060 Chapter 1, Division II, Section 114.4 Violation Penalties, amended.

(a) It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert, demolish, equipment use, occupy or maintain any real property, building, structure, or building service equipment or cause or permit the same to be done in violation of Title 15 of the Paradise Municipal Code (PMC), this code or the technical codes as amended and adopted by the Town. Any person who violates any of the provisions of Title 15 of the PMC, this code, or the technical codes adopted by this jurisdiction or fails to comply with any order made there under, or who builds in violation of any detailed statement of specifications or plans submitted or approved there under, or any certificate or permit issued there under, and from which no appeal has been taken, or who fails to comply with such an order as affirmed or modified by the Board of Appeals or by a court of competent jurisdiction within the time fixed herein, is severally for each violation or noncompliance respectively guilty of an infraction punishable by a fine not to exceed one thousand dollars ($1,000.00). Each separate day or any portion thereof during which any violation occurs or continues is a separate offense, and upon conviction thereof shall be punishable as provided in this section. Any person, firm or corporation found guilty of any such violation shall be fully responsible for all of the Town's costs relating to the enforcement, investigation and prosecution of the offender.

The imposition of a penalty for any violation or noncompliance shall not excuse the violation of noncompliance or permit it to continue; and all such persons shall be required to correct or remedy such violations or defects within a reasonable time; and when not otherwise specified, each day that prohibited conditions are maintained shall constitute a separate offense.

(b) The application of the above penalty shall not be held to prevent the enforced removal of the prohibited conditions,

(c) The issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for, or an approval of, any violation of any of the provisions of these codes and shall not prevent the administrative authority from thereafter requiring the correction of errors in said plans or specifications or from preventing construction operations being carried on there under when in violation of these codes or any other ordinance or from revoking any certificate of occupancy or approval when issued in error. No permit presuming to give authority to violate or cancel the provisions of this Chapter shall be valid, except insofar as the work or use which it authorized is lawful.

(d) Any violation of the provisions of Title 15 or of the technical codes as adopted by the Town shall be and is hereby declared to be unlawful and a public nuisance and may be abated in the manner provided by law.

(e) The Town Attorney shall, upon the order of the Town Manager or his/her designee, immediately commence action or proceedings for the abatement and removal and enjoinment of any violation of Title 15 or of any technical codes as adopted by the Town as provided by law, and shall take such action and shall apply to such courts of competent jurisdiction to grant such relief as will abate and remove such building or structure or use, and restrain and enjoin any person from setting up, building, maintaining, or using such real property, building, structure, use or occupancy contrary to this code or the technical codes.

15.02.070 Chapter 2, Section 202, Definitions, added.

New Construction: For the purposes of enforcing the provisions of the California Fire Code, California Building Code, and the California Residential Building Code, any work, addition to, remodel, repair, renovation, or alteration of any building(s) or structure(s) shall be considered "New Construction" when 50 percent or more of the exterior weight bearing walls are removed or demolished.

15.02.080 Chapter 15, Section 1505.1.3, Roof Coverings, amended.

All roofing materials shall be installed in accordance with the manufacturer's installation instructions. The entire roof covering of every new structure shall be a minimum Class "A" roof covering. Any roof covering material applied in the alteration, repair or replacement of the roof of the existing structure shall be a minimum of a Class "A" roof covering. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within a one-year period shall be a minimum of a Class "A" roof covering. The owner of any structure regulated by this code shall comply with the provisions of this section relating to roofing materials.

15.02.090 Chapter 16, Section 1603.1.3 Roof Snow Loads, amended.

Snow loads full or unbalanced shall be considered in place of loads set forth in Table No. 1607.1, where such loading will result in larger members and connections. The minimum design snow load and roof live load for the Town of Paradise shall be twenty (20) pounds per square foot below elevation 1,800 feet and thirty (30) pounds per square foot at 1,800 feet and elevations above.

Potential accumulations of snow at roof valleys, parapets, roof structures and offsets in roofs of uneven configuration shall be considered. Where snow loads occur, the snow loads shall be determined by the Building Official.

15.02.100 Section J101.1 Scope, amended.

Section J101.1. This Chapter sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments, and erosion and sediment control; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading, erosion and sediment control operations.

15.02.110 Section J101.3, added.

Section J101.3. The purpose of this Chapter is to safeguard life, limb, property and the public welfare, and to preserve and enhance the natural environment by preventing and eliminating conditions of accelerated erosion and by regulating grading on private and public property in the incorporated areas of the Town of Paradise.

15.02.120 Section J101.4, added.

(a) Hazardous Conditions. Whenever the Building Official /or the Town Engineer determines that any existing excavation, embankment or fill has become a hazard to life and limb, or endangers structures, or adversely affects the safety, use, or stability of a public way or drainage channel, the owner of the property upon which the excavation, embankment, or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the Building Official or Town Engineer shall within the period specified therein repair, reconstruct or remove such excavation, embankment, or fill so as to eliminate the hazard.

(b) Maintenance of Protective Devices and Rodent Control. The owner of any property on which grading has been performed and a permit issued under the provisions of this code, or any other person or agent in control of such property, shall maintain in good condition and repair all drainage structures and other

protective devices and burrowing rodent control when shown on the grading plans filed with the application for grading permit and approved as a condition precedent to the issuance of such permit.

15.02.130 Section J102 Definitions, amended.

The following definitions are amended or added to Section J102 with all other definitions in the section remaining unchanged:

"Certifications" shall mean the specific inspections or tests required by the Building Official or Town Engineer have been performed and that the results of such tests are satisfactory and that all work complies with the conditions of the permits and the requirements of this Chapter.

"Design Engineer" shall be the Civil Engineer responsible for the preparation of the plans for the grading work.

"Drainage Course" shall be a natural or man-made channel which conveys storm runoff either year-round or intermittently.

"Hazardous Condition" shall be any natural ground, natural slope, excavation, fill, drainage device or erosion control device on public or private property is a menace to life and limb, or a danger to public safety, or endangers or adversely affects the safety, usability or stability of adjacent property, structures, or public or private facilities.

"Hill Area" shall be any part of the Town with street grades of ten percent (10%) or greater.

"Landscape Architect" shall be a person who holds a certificate to practice landscape architecture in the State of California.

"Natural Grade" shall be the vertical location of the ground surface prior to excavation or fill.

"Soil Testing Agency" shall be an agency regularly engaged in the testing of soils under the direction of a Civil Engineer experienced in soil mechanics.

"Surface Drainage" shall be water flows over the ground surface.

15.02.140 Section J103 Permits required, amended.

Section J103. No person shall do any grading, clearing, or grubbing without first having obtained a grading permit from the Town Engineer except for the following:

1. Grading associated with a commercial development required to obtain planning approval prior to issuance of a building permit, or required to obtain a building permit. Grading associated with the Commercial Development shall be tied to the issuance of the building permit, and associated environmental reviews and clearances.
2. An excavation which does not exceed two feet in vertical depth at its deepest point measured from the original ground surface and which does not create a cut slope greater than four feet in height and steeper than one and one-half horizontal to one vertical and does not exceed fifty cubic yards (1,350 cubic feet) of material.
3. A fill that does not exceed one foot in vertical depth and is placed on natural terrain with a slope flatter than five horizontal to one vertical at its deepest point measured from the natural ground surface, or less than three feet in depth, not intended to support structures, which do not exceed fifty cubic yards on any one lot and does not change the existing drainage pattern.
4. Temporary excavations in a public street or right-of-way for which a permit has been issued by the Department of Public Works.

5. An excavation below finish grade for a basement, footing, retaining wall, swimming pool, or other structure authorized by a valid permit, which excavation will be completely occupied by and retained by the structure authorized by valid building permit.

6. A fill above existing grade, which fill will be retained by the exterior wall of a building, a retaining wall, swimming pool or other structure authorized by a valid building permit.

7. Gardening and routine agricultural crop management practices.

8. Excavations for utilities installed pursuant to permits issued by the Building Department and/or the Department of Public Works.

9. Refuse disposal sites controlled by other regulations.

10. Mining, quarrying, excavating, processing, stockpiling of rock, sand, gravel, aggregate or clay where established and provided for by law, provided such operations do not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous buildings or property and required permits are obtained.

11. Exploratory excavations under the direction of soils engineers or engineering geologist.

12. Routine maintenance of private roads.

13. Clearing of vegetation for fire protection purposes within one hundred (100) feet of a dwelling unit. Any additional clearing for fire prevention, control or suppression purposes is exempt when authorized or required in writing by a fire prevention or suppression agency.

In addition, all excavations or fills that disturb one (1) acre or greater must comply with the State Construction Stormwater Permit and supply a copy of the required Storm Water Pollution Prevention Plan (SWPPP) and Waste Discharger Identification (WDID) number, to the Town Engineer.

15.02.150 Section J104.2 Permit Application and Submittals, Site Plan Requirements, amended.

Section J104.2 Information on Plans and in Specifications. Plans shall be drawn to scale upon substantial paper and shall be of sufficient clarity to indicate the nature and extent of work proposed and shown in detail that they will conform to provisions of ordinances, rules and regulations. The first sheet shall give the location of the work and the name and address of the owner and the person by whom they were prepared. At the sole discretion of the Building Official/Town Engineer, the plans may be required to be professionally prepared, and/or stamped and signed by a Registered Civil Engineer, and additional information may be required, if applicable to the site or grading operation proposed.

The plans shall include the following information, at a minimum:

1. Vicinity Map showing the project site in relationship to surrounding areas, water courses, water bodies and other significant geographic features, roads and structures.

2. Site Map and Grading plan showing: topographic and boundary survey with existing and proposed contours, with enough off-site contours included to show how surface water will flow onto and off the site; slope arrows and slopes; proposed limits of cuts and fills and other earthwork; proposed retaining structures; existing off-site structures within fifteen (15) feet of the site boundary and other off-site improvements, including but not limited to underground utilities, septic systems, water wells and french drains which may be affected by the grading work; public and private easements of record; typical sections of areas to be graded and profiles of all proposed traveled ways for vehicles and pedestrians; all proposed uses for the site; all proposed divisions; rock disposal areas, buttress fills or other specials features.

3. Drainage plan showing: all drainage devices, walls, cribbing or other protective devices and estimated runoff; building site including elevations of floors with respect to finish site grade and locations of proposed stoops, slabs and fences that may affect drainage.

4. A statement of the quantities of material to be excavated and/or filled and the amount of such material to be imported to or exported from the site.

5. A statement of the estimated starting and completion dates for work covered by the permit.

6. Erosion and Sediment control plans when required by the Town Engineer shall be prepared, stamped and signed by a Registered Civil Engineer or Erosion Control Professional and shall include all the following:

   (a) Interim measures designed to prevent excessive storm runoff of water or solid materials onto adjacent property, streets or watercourses including, but not limited to short term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment and storm water retention basins.

   (b) A narrative description of measure to be taken, planting materials and specifications, maintenance provisions and fertilizers. A statement: the plans are subject to change as conditions change.

   (c) Calculations of anticipated storm water runoff or runon and sediment volumes shall be included, if required by the Building Official or the Town Engineer.

   (d) The name, address and contact telephone number of the person responsible for emergency call out in the event of apparent danger to life or property as determined by the Town Engineer or Building Official.

15.02.160 Section J104.5 Grading Bonds, added.

Section J104.5 Grading Bonds.

(a) Bond Requirements. Whenever an application for grading permit is filed for the excavation or fill and the nature of the work is such that if left incomplete, will create a hazard to human life or endanger adjoining property, or the volume of the work is over 200 cubic yards, or property at a higher or lower level, or to any street or street improvement or any other public property, the Building Offficial/Town Engineer shall, before issuing the grading permit, have the discretion to require the applicant to guarantee faithful performance and payment of labor and material in a bond amount determined by the Town Engineer, which shall be not less than one hundred percent (100%) of the total estimated cost of the work, including corrective work necessary to remove or eliminate geological hazards. An additional cash deposit may be required by the Town Engineer in the form of a cash bond sufficient to cover the cost of site cleanup and debris removal. Where grading is required on property adjacent to the grading site to complete a project satisfactorily, the owner of the adjacent property need not provide additional security if the original guarantee is of sufficient amount to include such additional grading. Each bond and agreement shall remain in effect until the work authorized by the grading permit is completed and approved by the Town Engineer.

(b) Type of Bond. A guarantee of faithful performance and payment of labor and material, when required under the provisions of this section, shall be provided by one of the following methods:

   1. Bonds executed by the applicant, as principal, and a corporate surety authorized to do business in the State, as surety, and in a form furnished by the Town Engineer and approved by the Town Attorney.

   2. A cash deposit with the Town.

3. An instrument or instruments of credit from one or more financial institutions subject to regulation by the state or federal government pledging that the funds necessary to meet the performance are on deposit and guaranteed for payment, and an agreement that the funds designated by the instrument shall become trust funds for the purpose of securing faithful performance and payment of labor and material. The instrument of credit and agreement shall first be approved by the Town Attorney.

(c) Procedure on Default.

1. Whenever the Town Engineer finds that a default has occurred in the performance of any term or condition of any grading permit, written notice of the fact of default shall be given to the principal and to the corporate surety, financial institution or the depositor, stating the work to be done and the period of time deemed by the Town Engineer to be reasonably necessary for the completion of such work. Thirty days after the receipt of such notice the principal or the surety shall perform or cause the required work to be performed by commencing and diligently prosecuting the work to its completion. If either or both of them fail to commence such work within thirty (30) days, or having so commenced the work, fail, neglect or refuse to proceed diligently to complete the same within the time so specified in the notice, then the Town may enter the premises and do the work, and the cost and expense of doing the work so specified shall be the obligation of the principal and the surety, and shall be a part of the terms of the performance bond in consideration of the issuance of the grading permit.

2. If a cash bond has been posted, notice of default as provided by subdivision 1 of this subsection is given to the depositor, and if the depositor fails to cause the required work to be resumed as set forth in the notice within thirty (30) days after receipt thereof, the Town Engineer shall proceed without delay and without further notice or proceedings whatsoever to use the cash deposited, or any portion thereof, and cause the required work to be completed by such mode as he deems convenient. The balance of such cash deposit, if any, shall, upon the completion of the work, be returned to the depositor or his successor or assigns after deducting ten percent (10%) thereof.

3. If an instrument of credit is used to guarantee performance, notice of default shall be given, as provided in subdivision 1 of this subsection to the principal and to the financial institution issuing the instrument of credit, and if the principal fails to cause the required work to be resumed as set forth in the notice within thirty (30) days after receipt thereof, the Town Engineer shall make a demand upon the financial institution for the payment of the estimated costs from the trust fund held by the financial institution pursuant to the agreement. Upon receipt of said sum, the Town Engineer shall proceed without delay and without further notice or proceedings whatsoever to use the sum, or any portion thereof, and cause the required work to be completed by such mode as he deems convenient. The balance of such sum, if any, shall, upon the completion of the work, be returned to the financial institution, its successors or assigns, after deducting ten percent (10%) thereof; but if the financial institution fails or refuses to pay over said sum, then the Town Engineer shall proceed as in subdivision 1 of this subsection and shall look to said institution for the costs and expenses of the work, and the contractual liability of such institution therefore shall be a term or condition of its agreement.

15.02.170 Section J105.3 Grading Inspections, added.

Section J105.3 Inspections. If required in the Grading Permit, or if notified by the Town Engineer or Inspector that an inspection notice is required, the owner or his agent shall notify the Town Engineer/Inspector twenty-four (24) hours in advance of the time when the grading operation is ready for each of the following inspections.

Required Inspection Notices:

1. Initial inspection. When the permittee is ready to begin work, but before any grading is started;

2. Toe Inspection. After the natural ground is exposed and prepared to receive fill, but prior to the placement of any fill;

3. Excavation Inspection. After the excavation is started, but before the vertical depth of the excavation exceeds ten (10) feet;
4. Fill Inspection. After the fill emplacement is started, but before the vertical height of the lifts exceeds ten (10) feet;
5. Drainage Device Inspection. After forms, pipe and wire mesh are in place, but before any concrete is placed;
6. Final Inspection. When all work, including installation of all drainage structures, other protective devices, irrigation systems, planting and slope stabilization has been completed as per the approved grading plan and required reports have been submitted;
7. Other Inspection. In addition to the called inspections above, the Town Engineer may make periodic inspections of the grading operations to ascertain compliance with the provisions of this Chapter.

15.02.180 Section J106.2 Rounding of Cut Slopes, added.

Section J106.2 Rounding of cut slopes. All cut slopes shall be rounded/conformed into the existing terrain to produce a contoured transition from cut face to natural ground where conditions permit.

15.02.190 Section J106.3 Private Road Construction, added.

Section J106.3.1 Private Road Construction. (1) All private road construction involving grading shall be done under permit pursuant to the provisions of this section and shall be subject to the requirements stated in the Town of Paradise "Public and Private Road Standards of the Town of Paradise."

15.02.200 Section J107.7 Rounding of Fill Slopes, added.

Section J107.7 Rounding of Fill Slopes. All fill slopes shall be rounded/conformed into the existing terrain to produce a contoured transition from fill face to natural ground where conditions permit.

15.02.210 Section J109.5 Overflow Protection, added.

Section J109.5 Overflow Protection. Berms, swales or other devices shall be provided at the top of cut or fill slopes to prevent surface waters from overflowing onto and damaging the face of the slope. Gutters or other special drainage controls shall be provided where the proximity of runoff from buildings or other structures is such as to pose a potential hazard to slope integrity.

15.02.220 Section J110.3 Disturbed Surfaces, added.

Section J110.3 Disturbed Surfaces. All disturbed surfaces resulting from grading operations shall be prepared and maintained to control erosion. Dust from grading operations must be controlled. The owner or contractor may be required to keep adequate equipment on the grading site to prevent dust problems.

15.02.230 Section J110.4 Rainy Season Grading Precautions, added.

Section J110.4 Rainy Season Grading Precautions.

1. The period between the first day of October and the following fifteenth day of April is found and determined to be the period in which heavy rainfall normally occurs in the Town. During this period, regardless of an actual rain event, no grading work in excess of two hundred fifty (250) cubic yards may be commenced on any single grading site if the Town Engineer determines that such work will endanger the public health or safety, or performance of the proposed grading activity is deemed not feasible to protect with erosion

control measures, or in the best engineering judgement of the Town Engineer, should not be performed due to other related circumstances. Issuance of Grading Permits of any amount during this time are at the sole discretion of the Building Official/Town Engineer.

2. If grading operations are to be conducted during such period, plans for erosion control devices shall be submitted to the Town Engineer and design approval obtained prior to starting work.

3. All persons performing any grading operations during such period shall put into effect all safety precautions which are necessary to protect public and private property and access ways. All loose dirt shall be removed from the grading site and adequate erosion control or drainage devices, debris basins, or other safety devices shall be installed to protect persons and property from damage of any kind. All temporary erosion control devices, including desilting basins, shall be installed and be operative no later than the first day of November of each year, or as required to comply with local and State erosion control requirements.

Chapter 15.03 2022 CALIFORNIA RESIDENTIAL CODE (TITLE 24, PART 2.5) BASED UPON THE 2021 INTERNATIONAL RESIDENTIAL CODE (ICC)

15.03.010 2022 California Residential Code Title 24, Part 2.5, adopted.

The 2022 California Residential Code, Title 24, Part 2.5 including Appendices "A.H.", "A.J.", "A.K.", "A.Q.", "A.W.", and "A.X.", known as the California Residential Code, as published and adopted by the California Building Standards Commission, including the Town's amendments and additions, is hereby adopted by reference and incorporated herein as if fully set forth.

15.03.020 Chapter 1, Division II, Section R105.2, Work Exempt from Permits, added.

14. Floor sheathing, decking and exterior siding repair - limited to 100 square feet of floor sheathing or siding and less than 100 linear board feet of decking.

15. Replacement, repair or overlay of less than 10% not to exceed 100 square feet of an existing roof within any 12-month period, all repairs shall be Class A only.

16. Approved prefabricated carports serving residential land uses open on two or more sides, do not exceed 480 square feet in footprint, are installed per the manufacturer's instructions, and are located in compliance with applicable building or structure setbacks.

15.03.030 Chapter 1, Division II, Section R108.5, Refunds, amended.

The Building Official may authorize refunding of a fee paid hereunder which was erroneously paid or collected. The Building Official may authorize refunding of not more than 80 percent of the permit or plan review fee paid when no work or plan examination has been done under an application or permit issued in accordance with this code, provided a written refund application is filed by the original permittee prior to the expiration of the permit.

15.03.040 Chapter 1, Division II, Section R108.6, Work Commencing Before Permit Issuance, amended.

Any person who commences any work on a building, structure, electrical, gas, mechanical, or plumbing system before first obtaining the necessary permits shall be subject to a penalty equal to the permit fee to be paid in addition to the permit fee when obtaining the building. All fees must be paid prior to release of the permit.

15.03.050 Chapter 2, Section 202, Definitions, added.

New Construction: For the purposes of enforcing the provisions of the California Fire Code, California Building Code, and the California Residential Building Code, any work, addition to, remodel, repair, renovation, or alteration of any building(s) or structure(s) shall be considered "New Construction" when 50 percent or more of the exterior weight bearing walls are removed or demolished.

15.03.060 Chapter 3, Section R313.2.2 Alarms, added.

One exterior approved audible sprinkler water flow alarm device shall be connected to every automatic fire sprinkler system in an approved location. Such device shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system.

Multipurpose Piping Sprinkler System: In this system, the piping is intended to serve both domestic needs and the fire protection needs from one common piping system throughout the dwelling unit. A passive purge system is a multipurpose type, where a single toilet (or multiple toilets) is supplied in addition to the fire sprinklers. A single check valve is required in this type of system. Water flow device shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Water flow device may have an alarm delay of no more than 90 seconds.

15.030.070 Chapter 3, Section R337.1.3, Exceptions 1 & 2: Accessory Structures and Section R337.5.4 Roof Gutters, amended.

R337.1.3, Exception 1: Buildings of an accessory character classified as Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building (as written in current code).

R337.1.3, Exception 2: Buildings of an accessory character classified as Group U occupancy exceeding 120 square feet in size, based on the exterior measurements of the structure, shall comply with Section R337 and Wildland Urban Interface requirements.

R337.5.4: Roof gutters of a non-combustible material shall be provided with means of preventing accumulation of leaves and debris in the gutter.

15.030.080 Chapter 9, Section 902.1, Roofing Covering Material, amended.

All roofing materials shall be installed in accordance with the manufacturer's installation instructions. The entire roof covering of every new structure shall be a minimum Class "A" roof covering. Any roof covering material applied in the alteration, repair or replacement of the roof of the existing structure shall be a minimum of a Class "A" roof covering. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within a one-year period shall be a minimum of a Class "A" roof covering. The owner of any structure regulated by this code shall comply with the provisions of this section relating to roofing materials.

Chapter 15.04 2022 CALIFORNIA ELECTRICAL CODE (TITLE 24, PART 3) BASED UPON THE 2020 NATIONAL ELECTRICAL CODE (NFPA)

15.04.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 3, California Electrical Code, including the informative Annexes "A", "B", "C", "D", "F", "G", "I", and "J" as published and adopted by the California Building Standards Commission, is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.05 2022 CALIFORNIA MECHANICAL CODE (TITLE 24, PART 4) BASED ON THE 2021 UNIFORM MECHANICAL CODE (IAPMO)

15.05.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 4, California Mechanical Code including Appendices "B", "C", "D", "F", and "G" as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.06 2022 CALIFORNIA PLUMBING CODE (TITLE 24, PART 5) BASED UPON THE 2021 UNIFORM PLUMBING CODE (IAPMO)

15.06.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 5, California Plumbing Code, including Appendices "A", "B", "F", "G", "H", "I", and "J" as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.07 2022 CALIFORNIA ENERGY CODE (TITLE 24, PART 6)

15.07.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 6, California Energy Code, including Appendices "1-A" and "1-B" as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.08 2022 CALIFORNIA HISTORICAL BUILDING CODE (TITLE 24, PART 8)

15.08.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 8, California Historical Building Code, including Appendix A as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.09 2022 CALIFORNIA FIRE CODE (TITLE 24, PART 9)

15.09.010 2022 California Fire Code (Title 24, Part 9), adopted.

The 2022 California Building Standards Code, Title 24, Part 9, including Appendix Chapters 4, "B", "B.B.", "C", "CC", "D", "E", "F", "G", "H", "I", "K" "N" and "O" known as the California Fire Code, as published and adopted by the California Building Standards Commission, including the Town's amendments and additions, is hereby adopted by reference and incorporated herein as if fully set forth.

15.09.020 Chapter 1, Division II, Section 103, Dept. of Fire Prevention, amended.

The California Fire Code shall be enforced by the Fire Prevention Bureau within the Town of Paradise, which is hereby established, and which shall be operated under the direction of the Fire Chief of the Fire Department. The Fire Chief of the Fire Department may detail to the fire prevention bureau such members of the Fire Department as may from time to time be necessary. The Fire Chief of the Fire Department shall review, authorize, or require technical experts as may be necessary in order to ensure that life and property protection requirements have met the requirements of this and all other Title 24 codes and standards.

Sections 103.1; 103.2; and 103.3 are hereby deleted in their entirety.

15.09.030 Chapter 1, Division II, Section 105.2.3, Time Limitation of Application, amended.

An application for a permit for any proposed work shall expire one (1) year after the date of filing unless the permit has been issued.

15.09.040 Chapter 1, Division II, Section 106.6.29, Miscellaneous Combustible Storage, amended.

An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork, firewood (retail or storage) or similar combustible material.

15.09.050 Chapter 1, Division II, Section 109.3, Violation Penalties, amended.

Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as set forth in section 15.02.210. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

15.09.060 Chapter 1, Division II, Section 111.4, Failure to Comply, amended.

Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than $100 or more than $500.

15.09.070 Chapter 1, Division II, Section 113.3, Work commencing before permit issuance, amended.

Any *person* who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be subject to an investigation fee that is equal to 50% of the original permit fee, which shall be in addition to the required permit fees.

15.09.080 Chapter 1, Division II, Section 113.5, Refunds, amended.

The Fire Marshal may authorize refunding of a fee paid hereunder which was erroneously paid or collected. The Fire Marshal may authorize refunding of not more than 80 percent of the permit or plan review fee paid when no work or plan examination has been done under an application or permit issued in accordance with this code, provided a written refund application is filed by the original permittee prior to the expiration of the permit.

15.09.090 Chapter 2, Section 202, Definitions, Sky Lantern, added.

SKY LANTERN: An unmanned device with a fuel source that incorporates an open flame in order to make the device airborne.

NEW CONSTRUCTION: For the purposes of enforcing the provisions of the California Fire Code, California Building Code, and the California Residential Building Code, any work, addition to, remodel, repair, renovation, or alteration of any building(s) or structure(s) shall be considered "New Construction" when 50 percent or more of the exterior weight bearing walls are removed or demolished.

15.09.100 Chapter 3, Section 307.1, General Open Burning, amended.

Burn permits are required for all outdoor burning within the Town of Paradise limits with the exception of barbeque equipment used for the preparation of food and outdoor fireplaces or warming devices used in accordance with the manufacturer's specifications, approved screening not to exceed 3/8-inch opening and in a safe manner.

Residential Burn Permits: Permits shall be issued annually, July 1 through June 30 and may be suspended, restricted, or prohibited as determined by the Fire Chief and a fee in accordance with the Master Fee schedule of the Town of Paradise shall be charged. Permits shall only be valid for the address, and name of the individual cited on the permit. Permits shall not be transferable to other addresses or individuals. Permits may be issued to persons to perform maintenance on residential property, providing the owner of the residential property has given their written consent and that is produced and verified as to the owner of record. The owner shall be responsible for the cost of a Fire Department response caused by the maintenance person as a result of an escape burn in violation of the rules of the burn permit on behalf of the maintenance person. Residential burn permits shall be issued for parcels containing one- and two-family residences, for which an address has been issued by the Town of Paradise, and only for the purpose of maintenance of vegetation growth on the parcel. Garbage, rubbish, demolition, construction debris, lumber, painted or treated lumber, plywood, particle board, petroleum waste, tires, plastics, cloth or other similar smoke producing materials are strictly prohibited from being burned. All requirements provided for on the burn permit must be followed at all times Burn bans shall be strictly adhered to.

Failure to follow the burn ban restrictions may result in the requirements of Section 109.3 as amended to apply and any emergency response cost recovery.

Land Clearing Permits: Land clearing permits are issued for a specific timeframe to coincide with the time when open, outdoor burning is permitted and may be suspended, restricted, or prohibited as determined by the Fire Chief. Land clearing permits expire when seasonal burn bans go into effect in the late spring of each year and shall be null and void. Persons burning on the property for which a permit is issued shall be responsible for following all of the requirements of that permit until the permit has expired or is revoked. The Fire Department may revoke the permit at any time due to unsafe conditions, practices, or violations of the permit. Burning of wood waste from trees, vines, or bushes on property being developed for commercial or residential purposes, may be disposed of by open outdoor fires on the property where it was grown, pursuant to the provisions of section 41802-41805 of the California Health and Safety Code and in compliance with the conditions of Butte County Air Quality Management District Rule 300, and authorized by the Town of Paradise Fire Department. Permits are required by both agencies prior to burning. All burning times must be strictly adhered to otherwise it may require another method of disposal. The land clearing burn site must be determined and inspected prior to releasing the permit by the Paradise Fire Department. This site must be the only site authorized to burn once the permit is issued. Any changes in site location will require additional inspections and fees. The owner shall be responsible for the cost of a Fire Department response caused by the maintenance person as a result of an escape burn in violation of the rules of the burn permit on behalf of the maintenance person. Garbage, rubbish, demolition, construction debris, lumber, painted or treated lumber, plywood, particle board, petroleum waste, tires, plastics, cloth or other similar smoke producing materials are strictly prohibited from being burned.

Fuel Reduction Permits: Fuel reduction permits are issued for parcels 2/3 acre or larger on an annual basis July 1 through June 30 may be suspended, restricted, or prohibited as determined by the Fire Chief. Fuel reduction permits expire when the seasonal burn ban goes into effect in the late spring of each year. Persons burning on the property for which the permit is issued shall be responsible for following all of the requirements of that permit as indicated until the permit expires or is revoked. The Fire Department may revoke the permit at any time due to unsafe burning conditions, practices, or violations of the permit. Burning of wood waste from trees, vines, or bushes on existing improved property, may be disposed of by open outdoor fires on the property where it was grown, pursuant to the provisions of section 41802-41805 of the California Health and Safety Code and in compliance with the conditions of Butte County Air Quality Management District Rule 300, and authorized by the Town of Paradise Fire Department. All burning times must be strictly adhered to otherwise it may require another method of disposal. The fuel reduction burn site must be determined and inspected prior to releasing the permit by the Paradise Fire Department. This site must be the only site authorized to burn once the permit is issued. Any changes in site location will require additional inspections and fees. The owner shall be responsible for the cost of a Fire Department response caused by the maintenance person as a result of an escape burn in violation of the rules of the burn permit on behalf of the maintenance person. Garbage, rubbish, demolition, construction debris, lumber, painted or treated lumber, plywood, particle board, petroleum waste, tires, plastics, cloth or other similar smoke producing materials are strictly prohibited from being burned.

Campfires/Bon Fires/Recreational Fires and Special Event Fires: Permits are required for these activities and a permit fee will be charged in accordance with the Master Fee schedule adopted by the Town Council. A minimum of 48 hours' notice is required for the inspection. Such activities shall be in strict conformance with the requirements provided for on the permit and the requirements within Section 307 of the California Fire Code. Permits are issued on an annual basis to coincide with the time when open, outdoor burning is permitted, unless they are approved by the Fire Chief.

15.09.110 Chapter 3, Section 308.6.3, added.

Sky Lanterns or similar devices. The ignition and/or launching of a Sky Lantern or similar device is prohibited. Exceptions: Upon approval of the fire code official, sky lanterns may be used as necessary for religious or cultural ceremonies providing that adequate safeguards have been taken as approved by the fire code official. Sky Lanterns

must be tethered in a safe manner to prevent them from leaving the area and must be constantly attended until extinguished.

15.09.120 Chapter 5, Section 503.2.1 Dimensions, amended.

Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches. Exception: Residential driveways shall comply with Town of Paradise Road Standards.

15.09.130 Chapter 5, Section 503.2.3, Surface, amended.

Fire apparatus access roads shall be designed and maintained to support the imposed load of fire apparatus at 75,000 pounds and shall be surfaced so as to provide all-weather driving capabilities.

15.09.140 Chapter 5, Section 503.4.1, Roadway Design Features, added.

Roadway design features (speed bumps, speed humps, speed control dips, etc.) which may interfere with emergency apparatus responses shall not be installed on fire apparatus access roadways.

15.09.150 Chapter 5, Section 503.6, Gates, amended.

The installation of security gates across a fire apparatus access road shall be approved by the Fire Marshal. Where security gates are installed, they shall have an approved means of emergency operation. The emergency gates and emergency operation shall be maintained operational at all times. Electric gate operators are required when serving five or more residential lots, Assembly occupancies, Hazardous occupancies, Institutional occupancies, and Storage occupancies and shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F-2200. Access keypads shall be provided that are coded with the fire department emergency access code as specified. Plans and specifications shall be submitted for review and approval by the Fire Prevention Bureau prior to installation.

15.09.160 Chapter 5, Section 505.3, Map/Directory, added.

A lighted directory map, meeting current Fire Department standards, shall be installed at each driveway entrance to a multiple unit residential project and mobile home parks, where the number of units in such projects exceeds 15.

15.09.170 Chapter 5, Section 507.1.2, Required Water Supply, added.

Group R Division 3 Occupancies (Residential one- and two-family dwellings, mobile homes, manufactured housing, or modular home) shall comply with the fire flow requirements of Appendix "B". Fire Flow may be reduced to 750 GPM at 20 PSI for two hours when the unit is fully protected in accordance with NFPA 13D and there are no exposures of other buildings within twenty (20) feet of each other; otherwise the minimum required water supply capability will be in accordance with Appendix "B". In no case shall the water supply capability be less than 1000 GPM at 20 PSI for two hours within the requirements found in Appendix "B".

The required water supply for a detached "U" occupancy accessory to a Residential one and two family dwelling is not required to meet the water supply requirements of Appendix "B" if the "U" occupancy is less than 1500 square feet and separated from the dwelling unit by a minimum of 20 feet. If both requirements cannot be met then the requirements of Appendix "B" will apply.

15.09.180 Chapter 5, Section 510.6.1 Testing and proof of compliance, added.

5. At the conclusion of the testing, a report, which shall verify compliance with Section 510.5.4, shall be submitted to the fire code official. In addition, one complete copy of the report shall be posted in the building, on the wall immediately adjacent to the Fire Alarm Control Panel.

15.09.190 Chapter 9, Section 901.4.2, Non-required Fire Protection Systems, amended.

Any fire protection system not required by this code or the California Building Code shall be allowed to be furnished for complete protection only provided such installed system meets the requirements of this code and the California Building Code.

15.09.200 Chapter 22, Section 2306.2.3, Aboveground Storage Tanks, amended.

The storage of class I, II, and III liquids in aboveground tanks outside of buildings is prohibited in all areas of the Town except in areas zoned as Industrial Services (I.S.).

Exception: The installation of approved listed above ground storage tanks shall be allowed in areas zoned for commercial purposes. Such tanks shall meet with State and County Environmental codes, and the California Fire and Building Code requirements. Aggregate quantities and type(s) of liquid(s) to be stored shall not exceed 2,000 gallons. Tanks shall be located outside of buildings and in accordance with the requirements of the California Fire and Building Codes. On those rare occasions when there may be need for additional tank capacity beyond the 2,000 gallons, the applicant can submit a written request to the Fire Marshal. The Fire Marshal, after evaluating the circumstances, shall have the authority to modify the conditions to the installation of such tanks. Above ground storage tanks used only for heating fuels to heating appliances in areas zoned residential shall meet the requirements of the California Fire Code and the Town of Paradise Administrative policy but in no case shall tanks exceed 250 gallons.

15.09.210 Chapter 56, Fireworks, is deleted, amended.

Refer to Paradise Municipal Code Title 8 Chapter 8.44 for prohibition on fireworks.

The storage of explosives and blasting agents is prohibited within the limits of the Town of Paradise, except for temporary storage between the hours of 6:00 a.m. and 6:00 p.m. for use in connection with blasting operations approved by the Fire Marshal. This prohibition shall not apply to stock of small arms ammunition and supplies for retail or approved manufacturing facilities as outlined under the California Fire Code.

15.09.220 Appendix B, Section B105.2 Exception 1, Reduced Fire Flow, amended.

A reduction in required fire flow of 50 percent is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with section 903.1.1 or 903.3.1.2. The resulting fire flow shall not be less than 1,500 GPM at 20 PSI for prescribed hours provided for in Table B105.1.

15.09.230 Appendix D, Table D103.4, Requirements for Dead-End Access, amended.

Table D103.4, Requirements for Dead End Access and Turn Around requirements shall be used as a guide only. The Town of Paradise Fire Department Administrative Policy for turn-around requirements shall be complied with as though set forth in this amendment.

Chapter 15.10 2022 CALIFORNIA EXISTING BUILDING CODE (TITLE 24, PART 10)

15.10.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 10, California Existing Building Code, as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.11 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (TITLE 24, PART 11)

15.11.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 11, California Green Building Standards Code, including Appendices A4 and A5 as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.12 2022 CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1)

15.12.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 1, California Administrative Code, as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.13 2022 CALIFORNIA REFERENCED STANDARDS CODE (TITLE 24, PART 12)

15.13.010 Adoption.

The 2022 California Building Standards Code, Title 24, Part 12, California Referenced Standards Code, as published and adopted by the California Building Standards Commission is adopted by reference and incorporated herein as if fully set forth in this Chapter.

Chapter 15.14 SMALL RESIDENTIAL ROOFTOP SOLAR ENERGY SYSTEMS

15.14.010 Purpose.

A. California Government Code Section 65850.5 provides that every city, county, or city and county shall adopt an ordinance that creates an expedited, streamlined permitting process for small residential rooftop solar energy systems.

B. California Government Code Section 65850.5 provides that in developing an expedited permitting process, the city, county, or city and county shall develop a checklist of all requirements with which small rooftop solar energy systems shall comply to be eligible for expedited review. The building official is hereby authorized and directed to develop such checklist.

15.14.020 Definitions.

A. "Small residential rooftop solar energy system" means all of the following:

1. A solar energy system that is no larger than ten (10) kilowatts alternating current nameplate rating or thirty (30) kilowatts thermal.

2. A solar energy system that conforms to all applicable state fire, structural, electrical, and other building codes as adopted or amended by the Town and Civil Code Section 714(c)(iii), as such section or subdivision may be amended, renumbered, or redesignated from time to time.

3. A solar energy system that is installed on a single or duplex family dwelling.

4. A solar panel or module array that does not exceed the maximum legal building height as defined by the authority having jurisdiction.

B. "Solar energy system" has the same meaning set forth in Civil Code Section 801.5(a)(1) and (2), as such section or subdivision may be amended, renumbered, or redesignated from time to time.

15.14.030 Review process.

A. The checklist shall be published on the Town's internet web site. An applicant may submit the permit application and associated documentation to the Town's building division in person or mailed together with any required permit processing and inspection fees.

B. Prior to submitting an application, the applicant shall:

1. Verify to the applicant's reasonable satisfaction through the use of standard engineering evaluation techniques that the support structure for the small residential rooftop solar energy system is stable and adequate to transfer all wind, seismic, and dead and live loads associated with the installation and the maintenance thereof; and

2. At the applicant's cost, verify to the applicant's reasonable satisfaction using standard electrical inspection techniques that the existing electrical system including existing line, load, ground and bonding wiring as well as main panel and subpanel sizes are adequately sized, based on the existing electrical system's current use, to carry all new photovoltaic electrical loads,

C. For a small residential rooftop solar energy system eligible for expedited review, only one inspection shall be required, which shall be done in a timely manner. If a small residential rooftop solar energy system fails inspection, a subsequent inspection is authorized; however, the subsequent inspection need not conform to the requirements of this subsection.

D. An application that satisfies the information requirements in the checklist, as determined by the building official, shall be deemed complete. Upon receipt of an incomplete application, the building official shall issue a written correction notice detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance.

E. Upon confirmation by the building official of the application and supporting documentation being complete and meeting the requirements of the checklist, the building official shall administratively approve the application and issue all required permits or authorizations. Such approval shall not include any necessary approval or permission by a local utility provider to connect the small residential rooftop energy system to the provider's electricity grid. The applicant is responsible for obtaining such approval or permission from the local utility provider.

Chapter 15.15 ELECTRIC VEHICLE CHARGING STATIONS

15.15.010 Purpose.

This Chapter aims to promote and encourage the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health and safety and preventing specific adverse impacts in the installation and use of such charging stations. This Chapter is also purposed to comply with California Government Code Section 65850.7.

15.15.20 Definitions.

A. "Electric vehicle charging station" or "charging station" means any level of electric vehicle supply equipment station that is designed and built-in compliance with Article 625 of the California Electrical Code, as it reads on the effective date of this Chapter, and delivers electricity from a source outside an electric vehicle into a plug-in electric vehicle.

B. "Specific, adverse impact" means a significant, quantifiable, direct, and unavoidable impact based on objective, identified, and written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

C. "Electronic submittal" means the utilization of one or more of the following:

1. Electronic mail or email.
2. The internet.
3. Facsimile.

15.15.030 Expedited Permitting Processes.

Consistent with Government Code Section 65850.7, the Building Official shall implement an expedited, streamlined permitting process for electric vehicle charging stations, and adopt a checklist of all requirements with which electric vehicle charging stations shall comply to be eligible for expedited review. The expedited streamlined permitting process and checklist may refer to the recommendations contained in the most current version of the "Plug-In Electric Vehicle Infrastructure Permitting Checklist" of the "Zero-Emission Vehicles in California: Community Readiness Guidebook" as published by the Governor's Office of Planning and Research. The Town's adopted checklist shall be published on the Town's website.

A. Deems an application to install an E.V. charging station complete if the building official of the city, county, or city and county has not either deemed the application complete or written a correction notice detailing the deficiencies in the application within the following periods:

1. Five business days of the application being submitted to construct at least one and up to 25 charging stations at a single site.
2. Ten business days of the application being submitted to construct more than 25 charging stations at a single site.

B. Deems approved an application to install an E.V. charging station 20 business days after the application was deemed complete for an installation of up to 25 charging stations at a single site or 40 business days for an installation of more than 25 charging stations if all the following are valid:

1. The building official has not administratively approved or denied the application based on the requirements of AB 1236.
2. The building official has not found that the E.V. charging station could have a specific adverse impact on public health or safety or require the applicant to apply for a use permit.
3. An appeal has not been made to the planning commission of the Town.

15.15.040 Permit Application Processing.

A. Before submitting an application for processing, the applicant shall verify that installing an electric vehicle charging station will not have a specific, adverse impact on public health and safety and building occupants. Verification by the applicant includes but is not limited to: electrical system capacity and loads; electrical system wiring, bonding, and overcurrent protection; building infrastructure affected by charging station equipment and associated conduits; areas of charging station equipment and vehicle parking.

B. A permit application that satisfies the information requirements in the Town's adopted checklist shall be deemed complete and be promptly processed. Upon confirmation by the Building Official that the permit application and supporting documents meet the requirements of the Town adopted checklist and are consistent with all applicable laws and health and safety standards, the Building Official shall, consistent with Government Code Section 65850.7, approve the application and issue all necessary permits. Such approval does not authorize an applicant to energize or utilize the electric vehicle charging station until the Town grants approval. If the Building Official determines that the permit application is incomplete, they shall issue a written correction notice to the applicant detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance.

C. Consistent with Government Code Section 65850.7, the Building Official shall allow for the electronic submittal of permit applications covered by this Ordinance and associated supporting documentation. In accepting such permit applications, the Building Official shall also accept electronic signatures on all forms, applications, and other documentation in place of a wet signature by any applicant.

15.15.050 Technical Review.

A. This Ordinance intends to encourage the installation of electric vehicle charging stations by removing obstacles to permitting charging stations so long as the action does not supersede the Building Official's authority to address higher-priority life-safety situations. If the Building Official makes a finding based on substantial evidence that the electric vehicle charging station could have a specific adverse impact on public health or safety, as defined in this Chapter, the Town may require the applicant to apply for a use permit.

B. In the technical review of a charging station, consistent with Government Code Section 65850.7, the Building Official shall not condition the approval for any electric vehicle charging station permit on the approval of such a system by an association, as that term is defined by Civil Code Section 4080.

15.15.060 Electric Vehicle Charging Station Installation Requirements.

A. Electric vehicle charging station equipment shall meet the requirements of the California Electrical Code, the Society of Automotive Engineers, the National Electrical Manufacturers Association, and accredited testing laboratories such as Underwriters Laboratories, and rules of the Public Utilities Commission or a Municipal Electric Utility Company regarding safety and reliability.

B. Installation of electric vehicle charging stations and associated wiring, bonding, disconnecting means, and overcurrent protective devices shall meet the requirements of Article 625 and all applicable provisions of the California Electrical Code.

C. Installation of electric vehicle charging stations shall be incorporated into the load calculations of all new or existing electrical services and shall meet the requirements of the California Electrical Code. Electric vehicle charging equipment shall be considered a continuous load.

D. Anchorage of either floor-mounted or wall-mounted electric vehicle charging stations shall meet the requirements of the California Building or Residential Code as applicable per occupancy and the manufacturer's installation instructions provisions. Mounting of charging stations shall not adversely affect building elements.

SECTION 2. Pursuant to California Environmental Quality Act (CEQA) Guidelines section 15308 this Ordinance is exempt from CEQA in that it is a Class 8 categorical exemption for actions taken by a regulatory agency to establish procedures for the protection of the environment.

SECTION 3. This Ordinance shall take effect on January 1, 2023. Before the expiration of fifteen (15) days after its passage, this Ordinance or a summary thereof shall be published in a newspaper of general circulation published and circulated within the Town of Paradise along with the names of the members of the Town Council of Paradise voting for and against same.

PASSED AND ADOPTED BY THE Town Council of the Town of Paradise, County of Butte, State of California, on this ___ day of _____2022, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Steve Crowder, Mayor

ATTEST:

_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

Town of Paradise
Community Development Department
Building Resiliency Center
6295 Skyway
Paradise, CA 95969
(530) 872-6291 x411

RESIDENTIAL AND NON-RESIDENTIAL CHECKLIST FOR PERMITTING ELECTRIC VEHICLES AND ELECTRIC VEHICLE SERVICE EQUIPMENT (EVSE)

Please complete the following information related to permitting and installation of Electric Vehicle Service Equipment (EVSE) as a supplement to the application for a building permit. This checklist contains the technical aspects of EVSE installations and is intended to help expedite permitting and use for electric vehicle charging.

Upon this checklist being deemed complete, a permit shall be issued to the applicant. However, if it is determined that the installation might have a specific adverse impact on public health or safety, additional verification will be required before a permit can be issued.

This checklist substantially follows the *"Plug-In Electric Vehicle Infrastructure Permitting Checklist"* contained in the *Governor's Office of Planning and Research "Zero Emission Vehicles in California: Community Readiness Guidebook"* and is purposed to augment the guidebook's checklist.

Job Address:	Permit No.
☐ Single-Family ☐ Multi-Family (Apartment) ☐ Multi-Family (Condominium) ☐ Commercial (Single Business) ☐ Commercial (Multi-Businesses) ☐ Mixed-Use ☐ Public Right-of-Way	
Location and Number of EVSE to be Installed: Garage _____ Parking Level(s) _____ Parking Lot _____ Street Curb _____	

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Applicant Name:	
Applicant Phone & email:	
Contractor Name:	License Number & Type:
Contractor Phone & email:	
Owner Name:	
Owner Phone & email:	

EVSE Charging Level: ☐ Level 1 (120V) ☐ Level 2 (240V) ☐ Level 3 (480V)	
Maximum Rating (Nameplate) of EV Service Equipment = _____ kW	
Voltage EVSE = _____ V	Manufacturer of EVSE: _____
Mounting of EVSE: ☐ Wall Mount ☐ Pole Pedestal Mount ☐ Other _____	

System Voltage: ☐ 120/240V, 1ϕ, 3W ☐ 120/208V, 3ϕ, 4W ☐ 120/240V, 3ϕ, 4W ☐ 277/480V, 3ϕ, 4W ☐ Other _____
Rating of Existing Main Electrical Service Equipment = _____ Amperes
Rating of Circuit for EVSE: _____ Amps / _____ Poles

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AIC Rating of EVSE Circuit Breaker (if not Single Family, 400A) = _____ A.I.C. *(or verify with Inspector in the field)*

Specify Either the Connected, Calculated or Documented Demand Load of the Existing Panel:
• Connected Load of Existing Panel Supplying EVSE = _____ Amps
• Calculated Load of Existing Panel Supplying EVSE = _____ Amps
• Demand Load of Existing Panel or Service Supplying EVSE = _____ Amps *(Provide Demand Load Reading from Electric Utility)*
Total Load (Existing plus EVSE Load) = _____ Amps
For Single Family Dwellings, if the Existing Load is not known by any of the above methods, then the Calculated Load may be estimated using the "Single-Family Residential Permitting Application Example" in the Governor's Office of Planning and Research "Zero Emission Vehicles in California: Community Readiness Guidebook" https://www.opr.ca.gov

EVSE Rating _____ Amps x 1.25 = _____ Amps = Minimum Ampacity of EVSE Conductor = # _____ AWG

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For Single-Family: Size of Existing Service Conductors = # _____ AWG or kcmil - or -: Size of Existing Feeder Conductor Supplying EVSE Panel = # _____ AWG or kcmil *(or Verify with Inspector in the field)*

I now acknowledge that the information presented is an accurate and correct representation of existing conditions at the job site and that any causes for concern regarding life-safety verifications may require further substantiation.

Signature of Permit Applicant: _____ Date: _____

Town of Paradise

Council Agenda Summary **Agenda Item: 2(f)**

Date: November 7, 2022

ORIGINATED BY: Ross Gilb, Finance Director/Town Treasurer

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Quarterly Investment Report

COUNCIL ACTION REQUESTED:

Review and file the 1st Quarter Investment Report for the Fiscal Year Ending June 30, 2023.

Background:

Attached is the report on the Town's cash and investments for the quarter ended September 30, 2022.

A US Bank checking account is currently being used for payroll, accounts payable and other operating purposes. Most accounts payable disbursements are drawn through checks, and most payroll disbursements are processed through direct deposit. Deposits are fully collateralized. With COVID-19 and the impacts to the economy, the credit rate is currently less than 0.01%.

The Town received a $5 million cash advance from CalOES in December 2018 for projects and restoration that will be funded through FEMA's public assistance grant program. As FEMA eligible expenses and/or projects are completed, funds are transferred to the Town operating checking account to fund those activities. The remaining advance funds are required to be held in a non-interest-bearing account. A US Bank non-interest-bearing checking account was established to track the funds. As of September 30, 2022, the remaining funds yet to be drawn upon was $1,672,356. Additional funds are expected to be received into this account during the following fiscal year as the Town secures additional reimbursement for ongoing FEMA public assistance grants.

The Town has historically primarily utilized the State of California managed Local Agency Investment Fund (LAIF) for investment of General Fund cash in excess of immediately needed operating capital. LAIF provides for same day liquidity as funds can be transferred electronically through computer authorization between LAIF and the Town checking account. LAIF has also provided historically competitive yields, with an average return of 1.35% for the quarter ended September 30, 2022. LAIF has been a great investment option for the Town's General Fund short term reserves.

To provide additional opportunity for asset diversification, during the quarter ended September 30, 2022, the Town began utilizing the California Cooperative Liquid Assets Securities System (California CLASS) in conjunction with the aforementioned investment accounts to hold short-term reserves.

California CLASS is a joint exercise of powers entity authorized under Section 6509.7, California Government Code. California CLASS is a pooled investment option that was created via a joint exercise of powers agreement (JPA Agreement) by and among California public agencies. California CLASS provides the Town with a convenient method for investing in high-quality, short- to medium-term securities carefully selected to optimize interest earnings while maximizing safety and liquidity. The California CLASS Prime fund has provided the Town with an opportunity to strengthen and diversify its cash management programs in accordance with the safety, liquidity, and yield hierarchy that governs the investment of public funds. During the first quarter of the fiscal year, CLASS has provided a very competitive yield, with an average return of 2.14% for the quarter ended September 30, 2022.

In July 2020, the Town received a net settlement from PG&E related to the 2018 Camp Fire in the amount of $219,187,262. Since that time, the Town continues to utilize two investment vehicles to manage these funds. Securities purchases are held in a custodial account with US Bank. The Town has contracted with Meeder Investments to assist with management of these funds. Excess funds that are not invested in specific securities are held in the State of California managed Local Agency Investment Fund (LAIF). These funds are held separate from the Town's General Fund LAIF account. Future use of these funds continues to be evaluated through a long-term fiscal sustainability model. Based on current rebuild rates and revenue growth trends, at this time it is expected that at least 80% of the total fund balance will be required to be utilized for long-term revenue backfill to ensure continued fiscal sustainability.
During the first quarter of the 2022-23 fiscal year, the Town transferred a total of $3,000,000 from the LAIF account to the Town's US Bank operating account in order to fund operations for the quarter.

In June of 2011, the Town established an irrevocable trust to begin funding the future obligations associated with retiree health as required by GASB 45. The funds are being managed by Self-Insured Schools of California (SISC) and can only be used for the payment of retiree health benefits.

Financial Impact:

Total investment earnings for the quarter ended September 30, 2022 was $336,024, which trends in line with total budgeted investment earnings for the 2022-23 fiscal year in the amount of $1,100,000.

TOWN OF PARADISE
QUARTERLY SUMMARY OF INVESTMENTS
For Quarter Ended September 30, 2022

		For Quarter Ended September 30, 2022				For Quarter Ended June 30, 2022			
Investment	**Type**	**Yield**	**Book Value**	**Market Value**	**Interest Earnings**	**Yield**	**Book Value**	**Market Value**	**Net Change**
US Bank	Checking	0.00%	2,945,582.69	2,945,582.69	-	0.00%	3,916,053.04	3,916,053.04	(970,470.35)
US Bank - Cal OES Advance	Checking	0.00%	1,672,356.86	1,672,356.86	-	0.00%	1,672,356.86	1,672,356.86	-
Local Agency Investment Fund (LAIF) (General Fund)	Savings	1.35%	3,283,498.59	3,220,327.24 *	11,172.54	0.75%	3,277,362.68	3,235,167.99	(14,840.76)
Local Agency Investment Fund (LAIF) (PG&E Settlement Fund)	Savings	1.35%	5,404,571.20	5,300,592.45 *	33,954.45	0.75%	15,374,224.95	15,176,288.17	(9,875,695.72)
California CLASS Prime Fund	Savings	2.14%	7,021,420.85	7,020,309.64 **	21,420.85	N/A	-	-	7,020,309.64
US Bank Custodial Investment Account	Various****	1.02%	199,845,464.82	184,132,633.48 ***	269,476.36	0.67%	199,597,388.36	187,002,466.05	(2,869,832.57)
SISC GASB 45 Trust B	Various	0.00%	283,844.18	283,844.18	-	0.51%	283,844.18	283,844.18	-
Fiscal Agents & Petty Cash	Other	0.00%	1,350.00	1,350.00	-	0.00%	1,350.00	1,350.00	-
	Totals		220,458,089.19	204,576,996.54	336,024.20		224,122,580.07	211,287,526.29	(6,710,529.76)

Total Quarterly Earnings on Accrual Basis	336,024.20
Year-to-Date Earnings (July 1st - June 30th)	336,024.20

* Market Value determined by LAIF
** Market Value determined by California CLASS Prime Fund
*** Market Value determined by US Bank
**** Detail investment type listing attached

In compliance with the California Code Section 53646; the Treasurer of the Town of Paradise herby certifies that sufficient investment liquidity and anticipated revenues are available to meet the Town's budgeted expenditure requirements for the next six months.

Investments in the report meet the requirements of the Town of Paradise's adopted investment policy.

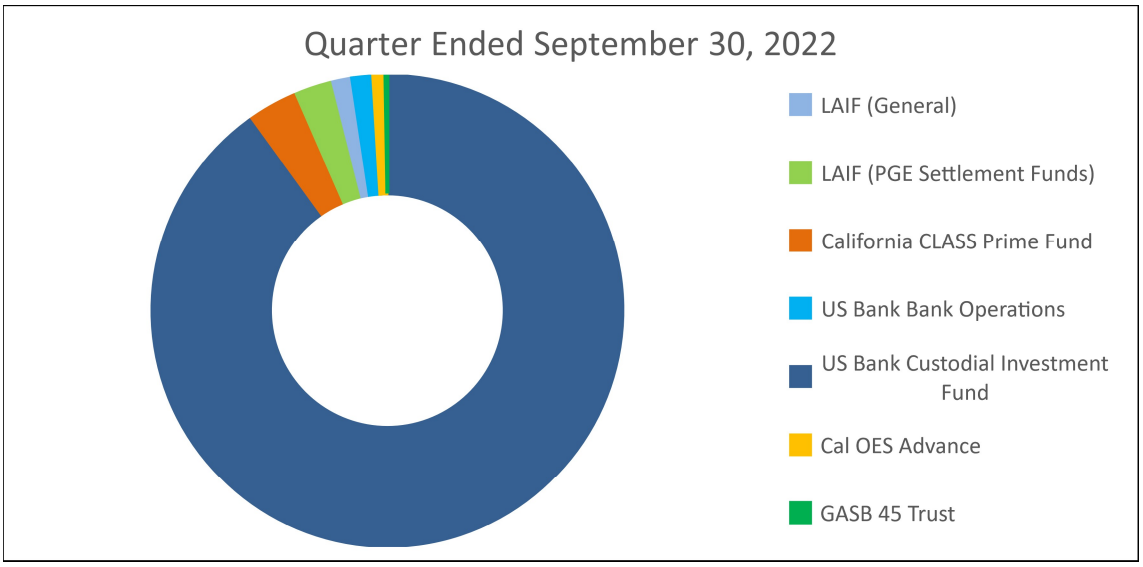
Respectfully submitted,

/s/

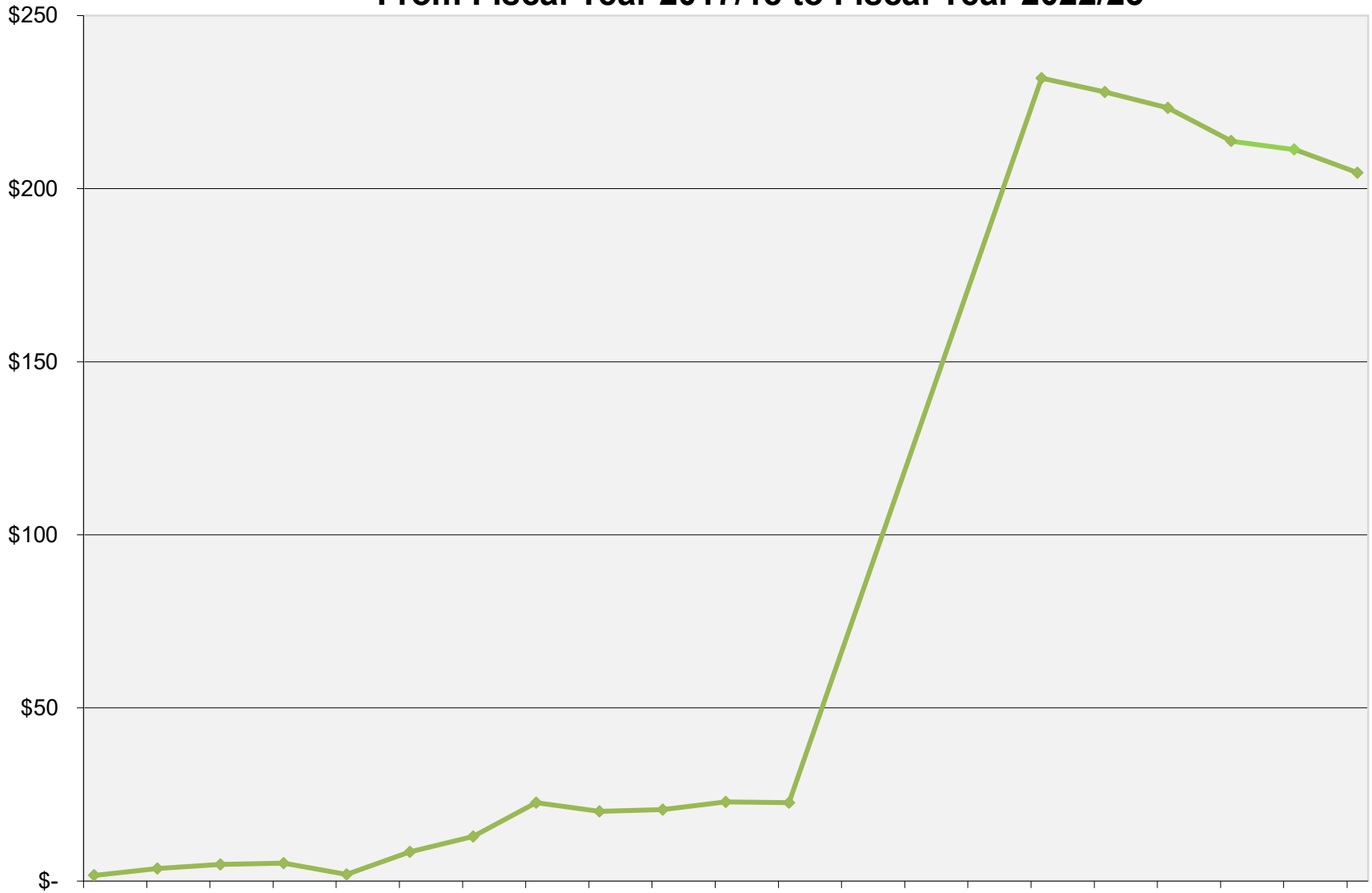
Ross Gilb
Finance Director/Town Treasurer

TOWN OF PARADISE
INVESTMENT BALANCES AT A GLANCE
For Quarter Ended September 30, 2022

Investment Type	Total	
LAIF (General)	$	3,220,327.24
LAIF (PGE Settlement Funds)		5,300,592.45
California CLASS Prime Fund		7,020,309.64
US Bank Bank Operations		2,945,582.69
US Bank Custodial Investment Fund		184,132,633.48
Cal OES Advance		1,672,356.86
GASB 45 Trust		283,844.18
Petty Cash		1,350.00
Grand Total	$	204,576,996.54



TOWN OF PARADISE
Timeline of Investment Market Value Balances (in millions)
From Fiscal Year 2017/18 to Fiscal Year 2022/23



	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22
Series1	1.68	3.66	4.80	5.19	1.91	8.42	12.89	22.67	20.13	20.67	22.86	22.64	231.93	227.87	223.35	213.75	211.30	204.58			

Town of Paradise Operating Account

PORTFOLIO SUMMARY

As of September 30, 2022

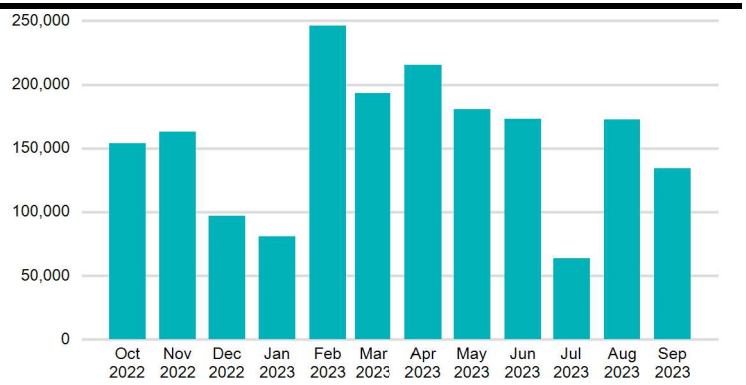
QUARTERLY RECONCILIATION

Beginning Book Value	**199,597,388.36**
Contributions	
Withdrawals	
Prior Month Management Fees	(16,500.00)
Prior Month Custodian Fees	(4,702.65)
Realized Gains/Losses	(112,013.33)
Purchased Interest	(197.22)
Gross Interest Earnings	381,489.69
Ending Book Value	**199,845,464.85**

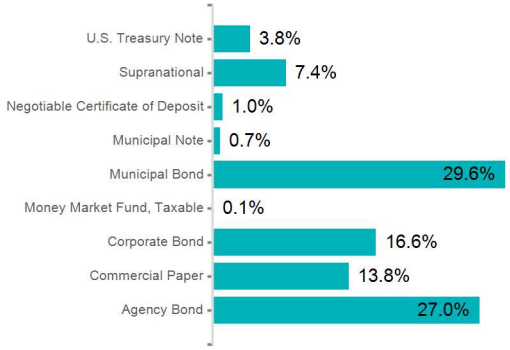
PORTFOLIO CHARACTERISTICS

Portfolio Yield to Maturity	1.02%
Portfolio Effective Duration	2.18 yrs
Weighted Average Maturity	2.27 yrs

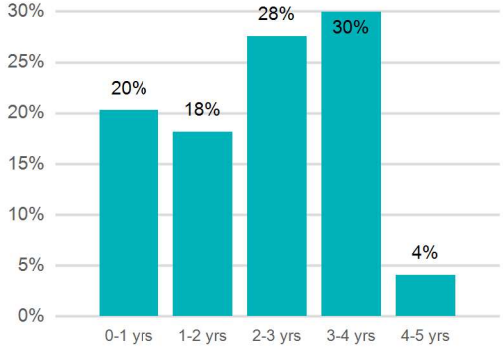
PROJECTED MONTHLY INCOME SCHEDULE



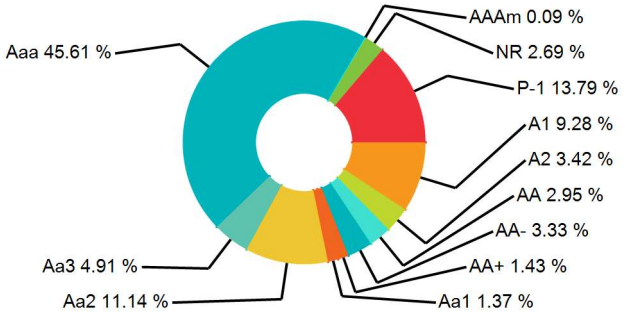
SECTOR ALLOCATION



MATURITY DISTRIBUTION



CREDIT QUALITY



POSITION STATEMENT

As of September 30, 2022

MEEDER PUBLIC FUNDS

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
Cash and Cash Equivalents											
00266CASH	LAIF-PG&E	9/30/2022 9/30/2022	$5,404,571.20	$5,404,571.20	$5,404,571.20	1.60%	0.003 0.003	$1.00 $5,404,571.20	$0.00	2.75%	NR
31846V567	First American Funds, Inc.	9/30/2022 9/30/2022	$162,054.00	$162,054.00	$162,054.00	2.74%	0.003 0.003	$1.00 $162,054.00	$0.00	0.08%	AAAm
00343CASH	California CLASS Prime Fund	9/30/2022 9/30/2022	$7,021,420.85	$7,021,420.85	$7,021,420.85	2.83%	0.003 0.003	$1.00 $7,021,420.85	$0.00	3.57%	
	SubTotal		**$12,588,046.05**	**$12,588,046.05**	**$12,588,046.05**	**2.30%**		**$12,588,046.05**	**$0.00**	**6.40%**	
Agency Bond											
3133ENEX4	FFCB 0.550% 11/24/2023	1/12/2022 1/13/2022	$2,000,000.00	$1,986,954.00	$1,986,954.00	0.90%	1.151 1.124	$95.85 $1,916,960.00	($69,994.00)	0.98%	Aaa AA+
3133EMLV2	FFCB 0.270% 04/05/2024	1/5/2021 1/6/2021	$5,000,000.00	$4,996,250.00	$4,996,250.00	0.29%	1.515 1.479	$93.85 $4,692,700.00	($303,550.00)	2.39%	Aaa AA+
3135G06E8	FNMA 0.420% 11/18/2024	11/23/2020 11/24/2020	$5,000,000.00	$4,996,250.00	$4,996,250.00	0.44%	2.137 2.078	$91.79 $4,589,250.00	($407,000.00)	2.33%	Aaa AA+
3134GXDZ4	FMCC 0.450% 11/25/2024	11/25/2020 11/30/2020	$3,000,000.00	$2,999,550.00	$2,999,550.00	0.45%	2.156 2.096	$91.77 $2,753,100.00	($246,450.00)	1.40%	Aaa AA+
3134GXJQ8	FMCC 0.320% 01/06/2025	1/27/2021 1/28/2021	$1,750,000.00	$1,749,125.00	$1,749,125.00	0.33%	2.271 2.212	$91.09 $1,594,005.00	($155,120.00)	0.81%	Aaa AA+
3130AKQF6	FHLB 0.400% 01/27/2025	1/19/2021 1/27/2021	$2,500,000.00	$2,499,250.00	$2,499,250.00	0.41%	2.329 2.265	$90.94 $2,273,375.00	($225,875.00)	1.16%	Aaa AA+
3134GXKU7	FMCC 0.375% 01/29/2025	1/11/2021 1/29/2021	$3,500,000.00	$3,495,450.00	$3,495,450.00	0.41%	2.334 2.272	$90.97 $3,183,810.00	($311,640.00)	1.62%	Aaa AA+
3134GXCV4	FMCC 0.500% 05/30/2025	11/19/2020 11/30/2020	$5,000,000.00	$5,000,000.00	$5,000,000.00	0.50%	2.666 2.586	$90.08 $4,504,200.00	($495,800.00)	2.29%	Aaa AA+
3133EMDZ2	FFCB 0.520% 10/21/2025	11/19/2020 11/20/2020	$5,000,000.00	$4,986,000.00	$4,986,000.00	0.58%	3.060 2.957	$88.79 $4,439,650.00	($546,350.00)	2.26%	Aaa AA+
3135GA2A8	FNMA 0.580% 10/28/2025	12/21/2020 12/22/2020	$5,000,000.00	$5,013,800.00	$5,013,800.00	0.43%	3.079 2.973	$88.90 $4,445,150.00	($568,650.00)	2.26%	Aaa AA+
3134GXFA7	FMCC 0.650% 11/26/2025	11/24/2020 11/30/2020	$3,000,000.00	$3,000,000.00	$3,000,000.00	0.65%	3.159 3.044	$88.86 $2,665,710.00	($334,290.00)	1.36%	Aaa AA+
3134GXFV1	FMCC 0.625% 12/17/2025	12/3/2020 12/17/2020	$2,500,000.00	$2,498,750.00	$2,498,750.00	0.64%	3.216 3.101	$88.61 $2,215,225.00	($283,525.00)	1.13%	Aaa AA+

POSITION STATEMENT

As of September 30, 2022

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
3135G06Q1	FNMA 0.640% 12/30/2025	12/23/2020 12/30/2020	$3,000,000.00	$3,003,750.00	$3,003,750.00	0.61%	3.252 3.122	$88.62 $2,658,480.00	($345,270.00)	1.35%	Aaa AA+
3133EMMR0	FFCB 0.470% 01/12/2026	1/5/2021 1/12/2021	$2,340,000.00	$2,336,536.80	$2,336,536.80	0.50%	3.288 3.178	$87.93 $2,057,468.40	($279,068.40)	1.05%	Aaa AA+
31422B6K1	AGM 0.480% 01/15/2026	1/7/2021 1/15/2021	$3,500,000.00	$3,496,500.00	$3,496,500.00	0.50%	3.296 3.197	$88.58 $3,100,265.00	($396,235.00)	1.58%	
3135G06R9	FNMA 0.550% 01/28/2026	1/5/2021 1/28/2021	$3,000,000.00	$3,000,000.00	$3,000,000.00	0.55%	3.332 3.217	$88.03 $2,640,990.00	($359,010.00)	1.34%	Aaa AA+
	SubTotal		**$55,090,000.00**	**$55,058,165.80**	**$55,058,165.80**	**0.50%**		**$49,730,338.40**	**($5,327,827.40)**	**25.30%**	
Commercial Paper											
2254EBK34	Credit Suisse AG 10/03/2022	1/6/2022 1/7/2022	$2,500,000.00	$2,490,099.31	$2,490,099.31	0.53%	0.008 0.011	$99.97 $2,499,367.50	$9,268.19	1.27%	P-1 A-1
13607FKH8	Canadian Imperial Holdings Inc. 10/17/2022	1/20/2022 1/21/2022	$550,000.00	$547,472.52	$547,472.52	0.62%	0.047 0.049	$99.85 $549,191.50	$1,718.98	0.28%	P-1 A-1
06366HL13	Bank of Montreal 11/01/2022	2/4/2022 2/8/2022	$3,000,000.00	$2,982,045.00	$2,982,045.00	0.81%	0.088 0.089	$99.70 $2,990,910.00	$8,865.00	1.52%	P-1 A-1
53948BL80	Lloyds Bank Corporate Markets PLC 11/08/2022	2/11/2022 2/11/2022	$2,200,000.00	$2,181,520.00	$2,181,520.00	1.13%	0.107 0.108	$99.63 $2,191,882.00	$10,362.00	1.12%	P-1 A-1
46640QMG3	J.P. Morgan Securities LLC 12/16/2022	3/21/2022 3/23/2022	$705,000.00	$696,077.84	$696,077.84	1.72%	0.211 0.209	$99.21 $699,402.30	$3,324.46	0.36%	P-1 A-1
62479MMT7	MUFG Bank, Ltd. 12/27/2022	8/26/2022 8/29/2022	$2,000,000.00	$1,978,666.66	$1,978,666.66	3.23%	0.241 0.239	$99.09 $1,981,860.00	$3,193.34	1.01%	P-1 A-1
62479MNQ2	MUFG Bank, Ltd. 01/24/2023	8/24/2022 8/25/2022	$1,000,000.00	$985,982.22	$985,982.22	3.37%	0.318 0.313	$98.73 $987,270.00	$1,287.78	0.50%	P-1 A-1
09659KP61	BNP Paribas 02/06/2023	8/4/2022 8/5/2022	$1,400,000.00	$1,375,466.94	$1,375,466.94	3.47%	0.353 0.348	$98.52 $1,379,280.00	$3,813.06	0.70%	P-1 A-1
62479MPQ0	MUFG Bank, Ltd. 02/24/2023	8/24/2022 8/25/2022	$1,000,000.00	$982,310.00	$982,310.00	3.54%	0.403 0.396	$98.31 $983,140.00	$830.00	0.50%	P-1 A-1
2254EBPT2	Credit Suisse AG 02/27/2023	6/2/2022 6/2/2022	$875,000.00	$857,937.50	$857,937.50	2.65%	0.411 0.404	$98.28 $859,941.25	$2,003.75	0.44%	P-1 A-1
53948BQL6	Lloyds Bank Corporate Markets PLC 03/20/2023	8/24/2022 8/25/2022	$2,000,000.00	$1,959,175.00	$1,959,175.00	3.62%	0.468 0.461	$97.97 $1,959,440.00	$265.00	1.00%	P-1 A-1

POSITION STATEMENT

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MEEDER PUBLIC FUNDS

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
62479MRQ8	MUFG Bank, Ltd. 04/24/2023	8/24/2022 8/25/2022	$1,300,000.00	$1,268,277.83	$1,268,277.83	3.72%	0.564 0.554	$97.49 $1,267,422.00	($855.83)	0.64%	P-1 A-1
62479MRR6	MUFG Bank, Ltd. 04/25/2023	8/25/2022 8/26/2022	$1,750,000.00	$1,707,297.08	$1,707,297.08	3.72%	0.567 0.556	$97.48 $1,705,935.00	($1,362.08)	0.87%	P-1 A-1
62479MS12	MUFG Bank, Ltd. 05/01/2023	8/4/2022 8/5/2022	$500,000.00	$486,624.72	$486,624.72	3.68%	0.584 0.572	$97.35 $486,745.00	$120.28	0.25%	P-1 A-1
21687BSP7	Cooperatieve Rabobank U.A. 05/23/2023	8/24/2022 8/26/2022	$1,500,000.00	$1,459,050.00	$1,459,050.00	3.74%	0.644 0.631	$97.08 $1,456,140.00	($2,910.00)	0.74%	P-1 A-1
46640QTG6	J.P. Morgan Securities LLC 06/16/2023	9/19/2022 9/19/2022	$3,510,000.00	$3,396,276.00	$3,396,276.00	4.46%	0.710 0.695	$96.78 $3,396,872.70	$596.70	1.73%	P-1 A-1
	SubTotal		**$25,790,000.00**	**$25,354,278.62**	**$25,354,278.62**	**2.70%**		**$25,394,799.25**	**$40,520.63**	**12.92%**	
Corporate Bond											
06406RAM9	The Bank of New York Mellon Corporation 1.850% 01/27/2023	3/8/2022 3/10/2022	$500,000.00	$501,480.00	$501,480.00	1.48%	0.326 0.322	$99.36 $496,785.00	($4,695.00)	0.25%	A1 A
17330PSX8	Citigroup Global Markets Holdings Inc. 3.750% 07/20/2023	7/8/2022 7/20/2022	$1,950,000.00	$1,950,000.00	$1,950,000.00	3.75%	0.803 0.774	$99.12 $1,932,879.00	($17,121.00)	0.98%	A2 A
89236THF5	Toyota Motor Credit Corporation 0.500% 08/14/2023	11/24/2020 11/27/2020	$3,025,000.00	$3,033,152.38	$3,033,152.38	0.40%	0.871 0.853	$96.67 $2,924,207.00	($108,945.38)	1.49%	A1 A+
06406RAP2	The Bank of New York Mellon Corporation 0.350% 12/07/2023	8/18/2021 8/20/2021	$1,200,000.00	$1,200,000.00	$1,200,000.00	0.35%	1.186 1.159	$95.28 $1,143,408.00	($56,592.00)	0.58%	A1 A
89236THU2	Toyota Motor Credit Corporation 0.450% 01/11/2024	1/7/2021 1/11/2021	$4,000,000.00	$4,004,160.00	$4,004,160.00	0.42%	1.282 1.252	$94.96 $3,798,280.00	($205,880.00)	1.93%	A1 A+
023135BW5	Amazon.com, Inc. 0.450% 05/12/2024	5/11/2021 5/13/2021	$2,000,000.00	$1,999,220.00	$1,999,220.00	0.46%	1.616 1.575	$93.85 $1,877,000.00	($122,220.00)	0.95%	A1 AA
89236TJG1	Toyota Motor Credit Corporation 0.500% 06/14/2024	6/4/2021 6/14/2021	$1,500,000.00	$1,500,000.00	$1,500,000.00	0.50%	1.707 1.661	$93.34 $1,400,160.00	($99,840.00)	0.71%	A1 A+

POSITION STATEMENT

As of September 30, 2022

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
14913R2P1	Caterpillar Financial Services Corporation 0.600% 09/13/2024	9/9/2021 9/14/2021	$420,000.00	$420,151.20	$420,151.20	0.59%	1.956 1.903	$92.68 $389,243.40	($30,907.80)	0.20%	A2 A
14913R2P1	Caterpillar Financial Services Corporation 0.600% 09/13/2024	9/8/2021 9/14/2021	$480,000.00	$480,240.00	$480,240.00	0.58%	1.956 1.903	$92.68 $444,849.60	($35,390.40)	0.23%	A2 A
69371RR99	PACCAR Financial Corp. 3.550% 08/11/2025	8/10/2022 8/12/2022	$2,000,000.00	$2,002,020.00 $197.22	$2,002,217.22	3.51%	2.866 2.671	$97.04 $1,940,860.00	($61,160.00)	0.99%	A1 A+
478160CN2	Johnson & Johnson 0.550% 09/01/2025	1/12/2021 1/14/2021	$3,000,000.00	$2,992,050.00	$2,992,050.00	0.61%	2.923 2.836	$89.52 $2,685,720.00	($306,330.00)	1.37%	Aaa AAA
037833EB2	Apple Inc. 0.700% 02/08/2026	2/2/2021 2/8/2021	$5,000,000.00	$4,988,750.00	$4,988,750.00	0.75%	3.362 3.242	$88.02 $4,400,800.00	($587,950.00)	2.24%	Aaa AA+
14913R2Q9	Caterpillar Financial Services Corporation 1.150% 09/14/2026	9/17/2021 9/21/2021	$2,500,000.00	$2,506,275.00	$2,506,275.00	1.10%	3.959 3.777	$87.22 $2,180,600.00	($325,675.00)	1.11%	A2 A
24422EWD7	John Deere Capital Corporation 2.350% 03/08/2027	3/8/2022 3/10/2022	$1,500,000.00	$1,497,345.00	$1,497,345.00	2.39%	4.438 4.116	$90.35 $1,355,295.00	($142,050.00)	0.69%	A2 A
89236TJZ9	Toyota Motor Credit Corporation 3.050% 03/22/2027	3/18/2022 3/22/2022	$1,750,000.00	$1,757,752.50	$1,757,752.50	2.95%	4.477 4.093	$92.30 $1,615,197.50	($142,555.00)	0.82%	A1 A+
023135CF1	Amazon.com, Inc. 3.300% 04/13/2027	5/17/2022 5/19/2022	$2,000,000.00	$1,982,220.00 $6,600.00	$1,988,820.00	3.50%	4.537 4.050	$94.68 $1,893,580.00	($88,640.00)	0.96%	A1 AA
	SubTotal		**$32,825,000.00**	**$32,814,816.08 $6,797.22**	**$32,821,613.30**	**1.38%**		**$30,478,864.50**	**($2,335,951.58)**	**15.51%**	
Municipal Bond											
757696AP4	Redondo Beach - Community Financing Authority, City of 0.415% 05/01/2023	7/2/2021 7/15/2021	$850,000.00	$850,000.00	$850,000.00	0.42%	0.584 0.571	$97.66 $830,118.50	($19,881.50)	0.42%	AA
38122NA51	Golden State Tobacco Securitization Corporation 0.672% 06/01/2023	10/6/2021 10/8/2021	$2,300,000.00	$2,307,314.00	$2,307,314.00	0.48%	0.668 0.654	$97.52 $2,243,029.00	($64,285.00)	1.14%	Aa3 A+

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CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
482124SM7	Jurupa Unified School District 0.421% 08/01/2023	4/13/2021 5/4/2021	$1,895,000.00	$1,895,000.00	$1,895,000.00	0.42%	0.836 0.819	$96.96 $1,837,354.10	($57,645.90)	0.93%	Aa3
03667PHC9	Antelope Valley Community College District 0.282% 08/01/2023	8/11/2021 8/31/2021	$320,000.00	$320,000.00	$320,000.00	0.28%	0.836 0.819	$96.84 $309,875.20	($10,124.80)	0.16%	Aa2 AA
626905PN7	Murrieta Valley Unified School District 0.449% 09/01/2023	7/15/2021 7/28/2021	$500,000.00	$500,000.00	$500,000.00	0.45%	0.921 0.901	$96.43 $482,165.00	($17,835.00)	0.25%	Aa2
953321AB2	West Hollywood Community Development Commission 0.493% 09/01/2023	7/16/2021 7/29/2021	$250,000.00	$250,000.00	$250,000.00	0.49%	0.921 0.900	$96.36 $240,900.00	($9,100.00)	0.12%	AA-
797686EL2	The San Francisco Municipal Transportation Agency 0.389% 03/01/2024	9/16/2021 9/20/2021	$500,000.00	$498,650.00	$498,650.00	0.50%	1.419 1.387	$94.67 $473,345.00	($25,305.00)	0.24%	Aa3 A+
072024WP3	Bay Area Toll Authority 2.254% 04/01/2024	1/6/2021 1/8/2021	$800,000.00	$845,696.00	$845,696.00	0.47%	1.504 1.441	$97.16 $777,272.00	($68,424.00)	0.40%	Aa3 AA
797412DL4	San Diego County Water Authority 0.593% 05/01/2024	11/24/2020 11/27/2020	$1,000,000.00	$1,003,490.00	$1,003,490.00	0.49%	1.586 1.545	$94.45 $944,480.00	($59,010.00)	0.48%	Aa2 AAA
757696AQ2	Redondo Beach - Community Financing Authority, City of 0.741% 05/01/2024	7/2/2021 7/15/2021	$1,435,000.00	$1,435,000.00	$1,435,000.00	0.74%	1.586 1.539	$93.93 $1,347,924.20	($87,075.80)	0.69%	AA
798153ND0	San Jose, City of 0.844% 06/01/2024	4/16/2021 4/20/2021	$705,000.00	$710,731.65	$710,731.65	0.58%	1.671 1.621	$93.91 $662,086.65	($48,645.00)	0.34%	Aa2 AA
79773KBF0	San Francisco, City & County of 0.616% 06/15/2024	11/20/2020 12/8/2020	$250,000.00	$250,000.00	$250,000.00	0.62%	1.710 1.663	$93.74 $234,345.00	($15,655.00)	0.12%	Aaa AAA
119174AC4	Buena Park, City of 0.595% 07/01/2024	8/18/2021 8/31/2021	$1,000,000.00	$1,000,000.00	$1,000,000.00	0.60%	1.753 1.704	$92.92 $929,160.00	($70,840.00)	0.47%	AA+

POSITION STATEMENT

As of September 30, 2022

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
969268DF5	William S. Hart Union High School District 0.607% 08/01/2024	12/10/2020 12/23/2020	$2,250,000.00	$2,250,000.00	$2,250,000.00	0.61%	1.838 1.790	$93.45 $2,102,692.50	($147,307.50)	1.07%	Aa2
798186N73	San Jose Unified School District 0.383% 08/01/2024	1/8/2021 1/20/2021	$535,000.00	$535,000.00	$535,000.00	0.38%	1.838 1.793	$93.00 $497,539.30	($37,460.70)	0.25%	Aaa AA+
482124SN5	Jurupa Unified School District 0.625% 08/01/2024	4/13/2021 5/4/2021	$500,000.00	$500,000.00	$500,000.00	0.63%	1.838 1.789	$93.33 $466,645.00	($33,355.00)	0.24%	Aa3
03667PHD7	Antelope Valley Community College District 0.545% 08/01/2024	8/11/2021 8/31/2021	$225,000.00	$225,000.00	$225,000.00	0.55%	1.838 1.790	$93.18 $209,652.75	($15,347.25)	0.11%	Aa2 AA
20056XAA6	Commerce, City of 0.667% 08/01/2024	8/25/2021 8/31/2021	$525,000.00	$525,000.00	$525,000.00	0.67%	1.838 1.786	$93.04 $488,444.25	($36,555.75)	0.25%	AA-
206849GM7	Conejo Valley Unified School District 0.702% 08/01/2024	9/1/2021 9/22/2021	$200,000.00	$200,000.00	$200,000.00	0.70%	1.838 1.786	$93.23 $186,460.00	($13,540.00)	0.09%	Aa3
223047AC5	Covina, City of 0.738% 08/01/2024	10/6/2021 10/8/2021	$1,000,000.00	$999,490.00	$999,490.00	0.76%	1.838 1.786	$93.27 $932,650.00	($66,840.00)	0.47%	AA
155105NM7	Central School District School Facilities Corporation 1.022% 08/01/2024	11/17/2021 12/9/2021	$280,000.00	$280,000.00	$280,000.00	1.02%	1.838 1.791	$95.43 $267,212.40	($12,787.60)	0.14%	Aa3 AA
802649TH6	Santa Rosa, City of 0.827% 09/01/2024	11/24/2020 12/1/2020	$1,000,000.00	$1,010,410.00	$1,010,410.00	0.55%	1.923 1.869	$93.36 $933,590.00	($76,820.00)	0.47%	AA
21976THG0	Corona-Norco Unified School District 0.667% 09/01/2024	4/23/2021 5/13/2021	$2,480,000.00	$2,480,000.00	$2,480,000.00	0.67%	1.923 1.869	$92.69 $2,298,712.00	($181,288.00)	1.17%	AA-
626905PP2	Murrieta Valley Unified School District 0.698% 09/01/2024	7/15/2021 7/28/2021	$500,000.00	$500,000.00	$500,000.00	0.70%	1.923 1.869	$92.94 $464,675.00	($35,325.00)	0.24%	Aa2
797299MM3	San Diego, City of 1.450% 10/15/2024	4/12/2021 4/14/2021	$900,000.00	$921,672.00	$921,672.00	0.75%	2.044 1.962	$94.04 $846,351.00	($75,321.00)	0.43%	AA-

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CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
79771FAX5	San Francisco, City & County of 0.723% 11/01/2024	1/4/2021 1/6/2021	$1,455,000.00	$1,474,453.35	$1,474,453.35	0.37%	2.090 2.026	$92.62 $1,347,650.10	($126,803.25)	0.69%	Aa2 AA-
649791RA0	New York, State of 0.910% 03/15/2025	4/19/2021 4/21/2021	$1,000,000.00	$1,007,440.00	$1,007,440.00	0.72%	2.458 2.378	$91.53 $915,290.00	($92,150.00)	0.47%	Aa1 AA+
13063DGB8	California, State of 3.375% 04/01/2025	12/23/2020 12/28/2020	$475,000.00	$531,610.50	$531,610.50	0.54%	2.504 2.327	$97.36 $462,469.50	($69,141.00)	0.24%	Aa2 AA-
797412DM2	San Diego County Water Authority 0.743% 05/01/2025	11/24/2020 11/27/2020	$1,075,000.00	$1,081,987.50	$1,081,987.50	0.59%	2.586 2.498	$90.81 $976,250.50	($105,737.00)	0.50%	Aa2 AAA
68609TWD6	Oregon, State of 0.895% 05/01/2025	12/8/2020 12/10/2020	$1,750,000.00	$1,780,887.50	$1,780,887.50	0.49%	2.586 2.495	$91.64 $1,603,630.00	($177,257.50)	0.82%	Aa1 AA+
91412HGE7	The Regents of the University of California 0.883% 05/15/2025	12/15/2020 12/17/2020	$1,425,000.00	$1,442,199.75	$1,442,199.75	0.61%	2.625 2.530	$91.15 $1,298,859.00	($143,340.75)	0.66%	Aa2 AA
91412HGE7	The Regents of the University of California 0.883% 05/15/2025	12/21/2020 12/23/2020	$1,355,000.00	$1,372,736.95	$1,372,736.95	0.58%	2.625 2.530	$91.15 $1,235,055.40	($137,681.55)	0.63%	Aa2 AA
91412HGE7	The Regents of the University of California 0.883% 05/15/2025	1/20/2021 1/22/2021	$3,000,000.00	$3,047,880.00	$3,047,880.00	0.51%	2.625 2.530	$91.15 $2,734,440.00	($313,440.00)	1.39%	Aa2 AA
546417DQ6	State of Louisiana 0.840% 06/01/2025	8/24/2021 8/26/2021	$400,000.00	$401,512.00	$401,512.00	0.74%	2.671 2.579	$91.14 $364,556.00	($36,956.00)	0.19%	Aa2 AA-
79773KBG8	San Francisco, City & County of 0.766% 06/15/2025	11/20/2020 12/8/2020	$200,000.00	$200,000.00	$200,000.00	0.77%	2.710 2.617	$90.35 $180,692.00	($19,308.00)	0.09%	Aaa AAA
574193TR9	Maryland, State of 0.660% 08/01/2025	11/18/2020 11/20/2020	$3,000,000.00	$3,014,580.00	$3,014,580.00	0.56%	2.838 2.751	$90.49 $2,714,700.00	($299,880.00)	1.38%	Aaa AAA
56781RJJ7	Marin Community College District 5.000% 08/01/2025	11/25/2020 11/30/2020	$2,280,000.00	$2,742,270.00	$2,742,270.00	0.59%	2.838 2.603	$101.45 $2,313,128.40	($429,141.60)	1.18%	Aaa AAA
969268DG3	William S. Hart Union High School District 0.757% 08/01/2025	12/10/2020 12/23/2020	$1,000,000.00	$1,000,000.00	$1,000,000.00	0.76%	2.838 2.743	$89.95 $899,540.00	($100,460.00)	0.46%	Aa2

POSITION STATEMENT

As of September 30, 2022

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
798186N81	San Jose Unified School District 0.558% 08/01/2025	1/8/2021 1/20/2021	$1,000,000.00	$1,000,000.00	$1,000,000.00	0.56%	2.838 2.752	$89.63 $896,280.00	($103,720.00)	0.46%	Aaa AA+
482124SP0	Jurupa Unified School District 1.059% 08/01/2025	5/27/2021 6/1/2021	$500,000.00	$504,265.00	$504,265.00	0.85%	2.838 2.732	$90.71 $453,565.00	($50,700.00)	0.23%	Aa3
03667PHE5	Antelope Valley Community College District 0.866% 08/01/2025	8/11/2021 8/31/2021	$170,000.00	$170,000.00	$170,000.00	0.87%	2.838 2.739	$90.29 $153,491.30	($16,508.70)	0.08%	Aa2 AA
206849GN5	Conejo Valley Unified School District 0.974% 08/01/2025	9/1/2021 9/22/2021	$205,000.00	$205,000.00	$205,000.00	0.97%	2.838 2.737	$90.86 $186,265.05	($18,734.95)	0.09%	Aa3
802649TJ2	Santa Rosa, City of 0.977% 09/01/2025	11/24/2020 12/1/2020	$1,530,000.00	$1,554,357.60	$1,554,357.60	0.64%	2.923 2.817	$90.13 $1,378,973.70	($175,383.90)	0.70%	AA
50420BDE9	La Quinta, City of 1.168% 09/01/2025	4/8/2021 4/14/2021	$2,000,000.00	$2,022,960.00	$2,022,960.00	0.90%	2.923 2.805	$89.85 $1,797,000.00	($225,960.00)	0.91%	AA-
419792ZL3	Hawaii, State of 0.852% 10/01/2025	11/19/2020 11/23/2020	$5,000,000.00	$5,052,250.00	$5,052,250.00	0.63%	3.005 2.891	$89.93 $4,496,350.00	($555,900.00)	2.29%	Aa2 AA+
13034AL65	California Infrastructure and Economic Development Bank 0.765% 10/01/2025	12/8/2020 12/17/2020	$1,000,000.00	$1,007,250.00	$1,007,250.00	0.61%	3.005 2.893	$89.22 $892,190.00	($115,060.00)	0.45%	AAA
21969AAE2	Corona, City of 1.361% 05/01/2026	9/30/2021 10/14/2021	$860,000.00	$860,000.00	$860,000.00	1.36%	3.586 3.395	$88.23 $758,803.80	($101,196.20)	0.39%	AA+
21969AAE2	Corona, City of 1.361% 05/01/2026	10/5/2021 10/14/2021	$1,065,000.00	$1,071,336.75	$1,071,336.75	1.23%	3.586 3.395	$88.23 $939,681.45	($131,655.30)	0.48%	AA+
20772KNX3	Connecticut, State of 1.123% 06/01/2026	6/4/2021 6/9/2021	$2,200,000.00	$2,213,090.00	$2,213,090.00	1.00%	3.671 3.497	$87.66 $1,928,410.00	($284,680.00)	0.98%	Aa3 A+
80182AAE9	Santa Cruz, County of 1.024% 06/01/2026	9/21/2021 9/23/2021	$1,060,000.00	$1,060,763.20	$1,060,763.20	1.01%	3.671 3.510	$88.25 $935,481.80	($125,281.40)	0.48%	AAA
80182AAE9	Santa Cruz, County of 1.024% 06/01/2026	9/28/2021 9/30/2021	$1,075,000.00	$1,071,237.50	$1,071,237.50	1.10%	3.671 3.510	$88.25 $948,719.75	($122,517.75)	0.48%	AAA
696735QQ5	Palmdale School District 1.071% 08/01/2026	8/6/2021 9/2/2021	$250,000.00	$250,000.00	$250,000.00	1.07%	3.838 3.672	$88.32 $220,800.00	($29,200.00)	0.11%	Aa3

POSITION STATEMENT

As of September 30, 2022

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
20056XAC2	Commerce, City of 1.212% 08/01/2026	8/25/2021 8/31/2021	$525,000.00	$525,000.00	$525,000.00	1.21%	3.838 3.654	$87.52 $459,480.00	($65,520.00)	0.23%	AA-
	SubTotal		**$59,055,000.00**	**$59,957,521.25**	**$59,957,521.25**	**0.65%**		**$54,498,431.60**	**($5,459,089.65)**	**27.73%**	
Municipal Note											
91412HJL8	The Regents of the University of California 0.670% 05/15/2025	2/24/2021 3/10/2021	$1,500,000.00	$1,500,000.00	$1,500,000.00	0.67%	2.625 2.539	$90.63 $1,359,420.00	($140,580.00)	0.69%	Aa2 AA
	SubTotal		**$1,500,000.00**	**$1,500,000.00**	**$1,500,000.00**	**0.67%**		**$1,359,420.00**	**($140,580.00)**	**0.69%**	
Negotiable Certificate of Deposit											
90348JS76	UBS Bank USA 0.350% 09/11/2023	8/31/2021 9/9/2021	$249,000.00	$248,626.50	$248,626.50	0.43%	0.948 0.929	$96.54 $240,379.62	($8,246.88)	0.12%	
856285XE6	State Bank of India 0.400% 09/18/2023	9/17/2021 9/21/2021	$249,000.00	$248,738.55	$248,738.55	0.45%	0.967 0.948	$96.52 $240,344.76	($8,393.79)	0.12%	
87165HC32	Synchrony Bank 0.550% 09/03/2024	8/31/2021 9/3/2021	$249,000.00	$248,253.00	$248,253.00	0.65%	1.929 1.882	$93.61 $233,088.90	($15,164.10)	0.12%	
89235MLN9	Toyota Financial Savings Bank 0.650% 09/09/2024	8/31/2021 9/9/2021	$249,000.00	$248,377.50	$248,377.50	0.73%	1.945 1.897	$93.75 $233,425.05	($14,952.45)	0.12%	
649447VM8	New York Community Bank 0.650% 09/10/2024	8/30/2021 9/10/2021	$249,000.00	$248,564.25	$248,564.25	0.71%	1.948 1.900	$93.74 $233,405.13	($15,159.12)	0.12%	
05580AE67	BMW Bank of North America 0.650% 10/08/2024	9/30/2021 10/8/2021	$249,000.00	$248,315.25	$248,315.25	0.74%	2.025 1.968	$93.50 $232,812.51	($15,502.74)	0.12%	
7954507A7	Sallie Mae Bank 1.000% 07/14/2026	7/14/2021 7/16/2021	$248,000.00	$246,760.00	$246,760.00	1.10%	3.789 3.632	$88.70 $219,963.60	($26,796.40)	0.11%	
38149MZJ5	Goldman Sachs Bank USA Holdings LLC 1.050% 09/08/2026	8/31/2021 9/8/2021	$249,000.00	$247,879.50	$247,879.50	1.14%	3.942 3.778	$88.53 $220,449.66	($27,429.84)	0.11%	
	SubTotal		**$1,991,000.00**	**$1,985,514.55**	**$1,985,514.55**	**0.74%**		**$1,853,869.23**	**($131,645.32)**	**0.94%**	

POSITION STATEMENT

As of September 30, 2022

MEEDER PUBLIC FUNDS

CUSIP	Security Description	Trade Date/ Settlement Date	Par Value	Principal Cost/ Purchased Interest	Total Cost	Yield at Cost	Maturity/ Duration	Market Price/ Market Value	Unrealized Gain/ (Loss)	% of Assets	Moody's/ S&P Rating
Supranational											
45818WDD5	IADB 0.39% 04/16/2024	4/8/2021 4/16/2021	$3,000,000.00	$3,000,270.00	$3,000,270.00	0.39%	1.545 1.507	$94.19 $2,825,580.00	($174,690.00)	1.44%	Aaa AA+
459058JA2	IBRD 0.750% 03/11/2025	3/4/2021 3/9/2021	$3,150,000.00	$3,167,671.50	$3,167,671.50	0.61%	2.447 2.375	$91.81 $2,892,141.00	($275,530.50)	1.47%	Aaa AA+
459058JL8	IBRD 0.500% 10/28/2025	2/3/2021 2/8/2021	$5,000,000.00	$4,994,200.00	$4,994,200.00	0.52%	3.079 2.984	$89.09 $4,454,250.00	($539,950.00)	2.27%	Aaa AA+
459058JS3	IBRD 0.650% 02/10/2026	5/27/2021 6/1/2021	$2,000,000.00	$1,981,720.00	$1,981,720.00	0.85%	3.367 3.240	$86.41 $1,728,280.00	($253,440.00)	0.88%	Aaa AA+
45950VPU4	IFC 0.75% 03/23/2026	3/4/2021 3/23/2021	$2,000,000.00	$1,994,880.00	$1,994,880.00	0.80%	3.479 3.423	$88.40 $1,768,000.00	($226,880.00)	0.90%	Aaa AA+
	SubTotal		**$15,150,000.00**	**$15,138,741.50**	**$15,138,741.50**	**0.59%**		**$13,668,251.00**	**($1,470,490.50)**	**6.95%**	
U.S. Treasury Note											
91282CCP4	UST 0.625% 07/31/2026	9/23/2021 9/24/2021	$2,500,000.00	$2,462,792.97	$2,462,792.97	0.94%	3.836 3.706	$87.61 $2,190,225.00	($272,567.97)	1.11%	Aaa AA+
91282CCW9	UST 0.750% 08/31/2026	9/23/2021 9/24/2021	$2,500,000.00	$2,481,054.69	$2,481,054.69	0.91%	3.921 3.780	$87.86 $2,196,575.00	($284,479.69)	1.12%	Aaa AA+
91282CCZ2	UST 0.875% 09/30/2026	9/28/2021 9/30/2021	$2,950,000.00	$2,930,525.39	$2,930,525.39	1.01%	4.003 3.833	$88.13 $2,599,805.50	($330,719.89)	1.32%	Aaa AA+
	SubTotal		**$7,950,000.00**	**$7,874,373.05**	**$7,874,373.05**	**0.96%**		**$6,986,605.50**	**($887,767.55)**	**3.55%**	
Grand Total			**$211,939,046.05**	**$212,271,456.90 $6,797.22**	**$212,278,254.12**	**1.10%**		**$196,558,625.53**	**($15,712,831.37)**	**100.00%**	

Town of Paradise Operating Account

TRANSACTION STATEMENT

As of September 30, 2022

MEEDER PUBLIC FUNDS

Transaction Type	Trade Date	Settlement Date	CUSIP	Security Description	Par Value	Principal Amount	Purchased Interest	Total Cost	Yield at Cost
Purchase									
Purchase	7/8/2022	7/20/2022	17330PSX8	Citigroup Global Markets Holdings Inc. 3.750% 07/20/2023	1,950,000.00	1,950,000.00		1,950,000.00	3.75%
Purchase	8/4/2022	8/5/2022	09659KP61	BNP Paribas 02/06/2023	1,400,000.00	1,375,466.94		1,375,466.94	3.47%
Purchase	8/4/2022	8/5/2022	62479MS12	MUFG Bank, Ltd. 05/01/2023	500,000.00	486,624.72		486,624.72	3.68%
Purchase	8/10/2022	8/12/2022	69371RR99	PACCAR Financial Corp. 3.550% 08/11/2025	2,000,000.00	2,002,020.00	197.22	2,002,217.22	3.51%
Purchase	8/24/2022	8/25/2022	62479MNQ2	MUFG Bank, Ltd. 01/24/2023	1,000,000.00	985,982.22		985,982.22	3.37%
Purchase	8/24/2022	8/25/2022	62479MRQ8	MUFG Bank, Ltd. 04/24/2023	1,300,000.00	1,268,277.83		1,268,277.83	3.72%
Purchase	8/24/2022	8/25/2022	53948BQL6	Lloyds Bank Corporate Markets PLC 03/20/2023	2,000,000.00	1,959,175.00		1,959,175.00	3.62%
Purchase	8/24/2022	8/25/2022	62479MPQ0	MUFG Bank, Ltd. 02/24/2023	1,000,000.00	982,310.00		982,310.00	3.54%
Purchase	8/25/2022	8/26/2022	62479MRR6	MUFG Bank, Ltd. 04/25/2023	1,750,000.00	1,707,297.08		1,707,297.08	3.72%
Purchase	8/24/2022	8/26/2022	21687BSP7	Cooperatieve Rabobank U.A. 05/23/2023	1,500,000.00	1,459,050.00		1,459,050.00	3.74%
Purchase	8/26/2022	8/29/2022	62479MMT7	MUFG Bank, Ltd. 12/27/2022	2,000,000.00	1,978,666.66		1,978,666.66	3.23%
Purchase	9/19/2022	9/19/2022	46640QTG6	J.P. Morgan Securities LLC 06/16/2023	3,510,000.00	3,396,276.00		3,396,276.00	4.46%
Total					**19,910,000.00**	**19,551,146.45**	**197.22**	**19,551,343.67**	

Town of Paradise Operating Account

TRANSACTION STATEMENT

As of September 30, 2022

MEEDER PUBLIC FUNDS

Transaction Type	Trade Date	Settlement Date	CUSIP	Security Description	Par Value	Principal Cost	Total Proceeds	Realized Gain/Loss
Maturity								
Maturity	8/1/2022	8/1/2022	204709JJ9	Compton, City Of 0.445% 08/01/2022	250,000.00	250,000.00	250,000.00	0.00
Maturity	8/1/2022	8/1/2022	72869BKA1	Pleasant Valley School District 0.410% 08/01/2022	250,000.00	250,000.00	250,000.00	0.00
Maturity	8/1/2022	8/1/2022	358233BV5	Fresno Unified School District Educational Facilities Corpor 0.538% 08/01/2022	100,000.00	100,000.00	100,000.00	0.00
Maturity	8/1/2022	8/1/2022	63873KH18	Natixis 08/01/2022	1,000,000.00	997,656.94	1,000,000.00	2,343.06
Maturity	8/1/2022	8/1/2022	797272RJ2	San Diego Community College District 0.497% 08/01/2022	1,000,000.00	1,000,000.00	1,000,000.00	0.00
Maturity	8/25/2022	8/25/2022	53948BHR3	Lloyds Bank Corporate Markets PLC 08/25/2022	5,000,000.00	4,985,645.83	5,000,000.00	14,354.17
Maturity	8/26/2022	8/26/2022	2254EBHS3	Credit Suisse AG 08/26/2022	5,000,000.00	4,986,330.56	5,000,000.00	13,669.44
Maturity	9/1/2022	9/1/2022	953321AA4	West Hollywood Community Development Commission 0.343% 09/01/2022	250,000.00	250,000.00	250,000.00	0.00
Maturity	9/19/2022	9/19/2022	63873KJK4	Natixis 09/19/2022	3,125,000.00	3,115,625.00	3,125,000.00	9,375.00
Total					**15,975,000.00**	**15,935,258.33**	**15,975,000.00**	**39,741.67**
Sell								
Sell	7/8/2022	7/12/2022	119174AB6	Buena Park, City of 0.325% 07/01/2023	1,000,000.00	1,000,000.00	969,500.00	(30,500.00)
Sell	7/8/2022	7/12/2022	189344EW0	Clovis Unified School District 0.605% 06/01/2023	1,000,000.00	1,000,000.00	974,250.00	(25,750.00)
Sell	8/12/2022	8/12/2022	3133EMSJ2	FFCB 0.430% 03/03/2025	1,500,000.00	1,493,775.00	1,398,270.00	(95,505.00)
Total					**3,500,000.00**	**3,493,775.00**	**3,342,020.00**	**(151,755.00)**

Transaction Type	Payment Date	Settlement Date	CUSIP	Security Description	Interest Received

Transaction Type	Payment Date	Settlement Date	CUSIP	Security Description	Interest Received
Interest/Dividends					
Interest/Dividends	7/1/2022	7/1/2022	119174AB6	Buena Park, City of 0.325% 07/01/2023	2,717.36
Interest/Dividends	7/1/2022	7/1/2022	119174AC4	Buena Park, City of 0.595% 07/01/2024	4,974.86
Interest/Dividends	7/1/2022	7/1/2022	31846V567	First American Funds, Inc.	34.07
Interest/Dividends	7/6/2022	7/6/2022	3134GXJQ8	FMCC 0.320% 01/06/2025	2,800.00
Interest/Dividends	7/11/2022	7/11/2022	89236THU2	Toyota Motor Credit Corporation 0.450% 01/11/2024	9,000.00
Interest/Dividends	7/11/2022	7/11/2022	90348JS76	UBS Bank USA 0.350% 09/11/2023	71.63
Interest/Dividends	7/12/2022	7/12/2022	3133EMMR0	FFCB 0.470% 01/12/2026	5,499.00
Interest/Dividends	7/8/2022	7/12/2022	119174AB6	Buena Park, City of 0.33% 07/01/2023	99.31
Interest/Dividends	7/8/2022	7/12/2022	189344EW0	Clovis Unified School District 0.61% 06/01/2023	689.03
Interest/Dividends	7/14/2022	7/14/2022	7954507A7	Sallie Mae Bank 1.000% 07/14/2026	1,229.81
Interest/Dividends	7/15/2022	7/15/2022	31422B6K1	AGM 0.480% 01/15/2026	8,400.00
Interest/Dividends	7/27/2022	7/27/2022	06406RAM9	The Bank of New York Mellon Corporation 1.850% 01/27/2023	4,625.00
Interest/Dividends	7/27/2022	7/27/2022	3130AKQF6	FHLB 0.400% 01/27/2025	5,000.00
Interest/Dividends	7/28/2022	7/28/2022	3135G06R9	FNMA 0.550% 01/28/2026	8,250.00
Interest/Dividends	7/29/2022	7/29/2022	3134GXKU7	FMCC 0.375% 01/29/2025	6,562.50
Interest/Dividends	8/1/2022	8/1/2022	574193TR9	Maryland, State of 0.660% 08/01/2025	9,900.00
Interest/Dividends	8/1/2022	8/1/2022	56781RJJ7	Marin Community College District 5.000% 08/01/2025	57,000.00
Interest/Dividends	8/1/2022	8/1/2022	969268DF5	William S. Hart Union High School District 0.607% 08/01/2024	6,828.75

Transaction Type	Payment Date	Settlement Date	CUSIP	Security Description	Interest Received
Interest/Dividends	8/1/2022	8/1/2022	969268DG3	William S. Hart Union High School District 0.757% 08/01/2025	3,785.00
Interest/Dividends	8/1/2022	8/1/2022	798186N73	San Jose Unified School District 0.383% 08/01/2024	1,024.53
Interest/Dividends	8/1/2022	8/1/2022	798186N81	San Jose Unified School District 0.558% 08/01/2025	2,790.00
Interest/Dividends	8/1/2022	8/1/2022	482124SN5	Jurupa Unified School District 0.625% 08/01/2024	1,562.50
Interest/Dividends	8/1/2022	8/1/2022	482124SM7	Jurupa Unified School District 0.421% 08/01/2023	3,988.98
Interest/Dividends	8/1/2022	8/1/2022	482124SP0	Jurupa Unified School District 1.059% 08/01/2025	2,647.50
Interest/Dividends	8/1/2022	8/1/2022	696735QQ5	Palmdale School District 1.071% 08/01/2026	1,338.75
Interest/Dividends	8/1/2022	8/1/2022	03667PHD7	Antelope Valley Community College District 0.545% 08/01/2024	613.13
Interest/Dividends	8/1/2022	8/1/2022	03667PHC9	Antelope Valley Community College District 0.282% 08/01/2023	451.20
Interest/Dividends	8/1/2022	8/1/2022	03667PHE5	Antelope Valley Community College District 0.866% 08/01/2025	736.10
Interest/Dividends	8/1/2022	8/1/2022	20056XAA6	Commerce, City of 0.667% 08/01/2024	1,750.88
Interest/Dividends	8/1/2022	8/1/2022	20056XAC2	Commerce, City of 1.212% 08/01/2026	3,181.50
Interest/Dividends	8/1/2022	8/1/2022	206849GN5	Conejo Valley Unified School District 0.974% 08/01/2025	998.35
Interest/Dividends	8/1/2022	8/1/2022	206849GM7	Conejo Valley Unified School District 0.702% 08/01/2024	702.00
Interest/Dividends	8/1/2022	8/1/2022	223047AC5	Covina, City of 0.738% 08/01/2024	3,690.00
Interest/Dividends	8/1/2022	8/1/2022	204709JJ9	Compton, City Of 0.445% 08/01/2022	556.25
Interest/Dividends	8/1/2022	8/1/2022	155105NM7	Central School District School Facilities Corporation 1.022% 08/01/2024	1,430.80
Interest/Dividends	8/1/2022	8/1/2022	72869BKA1	Pleasant Valley School District 0.410% 08/01/2022	512.50
Interest/Dividends	8/1/2022	8/1/2022	358233BV5	Fresno Unified School District Educational Facilities Corpor 0.538% 08/01/2022	269.00

Transaction Type	Payment Date	Settlement Date	CUSIP	Security Description	Interest Received
Interest/Dividends	8/1/2022	8/1/2022	797272RJ2	San Diego Community College District 0.497% 08/01/2022	2,485.00
Interest/Dividends	8/1/2022	8/1/2022	91282CCP4	UST 0.625% 07/31/2026	7,812.50
Interest/Dividends	8/1/2022	8/1/2022	31846V567	First American Funds, Inc.	625.87
Interest/Dividends	8/8/2022	8/8/2022	037833EB2	Apple Inc. 0.700% 02/08/2026	17,500.00
Interest/Dividends	8/9/2022	8/9/2022	90348JS76	UBS Bank USA 0.350% 09/11/2023	74.02
Interest/Dividends	8/10/2022	8/10/2022	459058JS3	IBRD 0.650% 02/10/2026	6,500.00
Interest/Dividends	8/12/2022	8/12/2022	3133EMSJ2	Federal Farm Credit Banks Funding Corporation 0.43% 03/03/2025	2,848.75
Interest/Dividends	8/15/2022	8/15/2022	89236THF5	Toyota Motor Credit Corporation 0.500% 08/14/2023	7,562.50
Interest/Dividends	8/22/2022	8/22/2022	17330PSX8	Citigroup Global Markets Holdings Inc. 3.750% 07/20/2023	6,093.75
Interest/Dividends	8/31/2022	8/31/2022	91282CCW9	UST 0.750% 08/31/2026	9,375.00
Interest/Dividends	9/1/2022	9/1/2022	802649TH6	Santa Rosa, City of 0.827% 09/01/2024	4,135.00
Interest/Dividends	9/1/2022	9/1/2022	802649TJ2	Santa Rosa, City of 0.977% 09/01/2025	7,474.05
Interest/Dividends	9/1/2022	9/1/2022	478160CN2	Johnson & Johnson 0.550% 09/01/2025	8,250.00
Interest/Dividends	9/1/2022	9/1/2022	50420BDE9	La Quinta, City of 1.168% 09/01/2025	11,680.00
Interest/Dividends	9/1/2022	9/1/2022	21976THG0	Corona-Norco Unified School District 0.667% 09/01/2024	8,270.80
Interest/Dividends	9/1/2022	9/1/2022	626905PN7	Murrieta Valley Unified School District 0.449% 09/01/2023	1,122.50
Interest/Dividends	9/1/2022	9/1/2022	626905PP2	Murrieta Valley Unified School District 0.698% 09/01/2024	1,745.00
Interest/Dividends	9/1/2022	9/1/2022	953321AA4	West Hollywood Community Development Commission 0.343% 09/01/2022	428.75
Interest/Dividends	9/1/2022	9/1/2022	953321AB2	West Hollywood Community Development Commission 0.493% 09/01/2023	616.25

Town of Paradise Operating Account

TRANSACTION STATEMENT

As of September 30, 2022

MEEDER PUBLIC FUNDS

Transaction Type	Payment Date	Settlement Date	CUSIP	Security Description	Interest Received
Interest/Dividends	9/1/2022	9/1/2022	797686EL2	The San Francisco Municipal Transportation Agency 0.389% 03/01/2024	972.50
Interest/Dividends	9/1/2022	9/1/2022	31846V567	First American Funds, Inc.	1,642.96
Interest/Dividends	9/6/2022	9/6/2022	87165HC32	Synchrony Bank 0.550% 09/03/2024	690.38
Interest/Dividends	9/8/2022	9/8/2022	38149MZJ5	Goldman Sachs Bank USA Holdings LLC 1.050% 09/08/2026	1,317.99
Interest/Dividends	9/8/2022	9/8/2022	24422EWD7	John Deere Capital Corporation 2.350% 03/08/2027	17,722.92
Interest/Dividends	9/9/2022	9/9/2022	90348JS76	UBS Bank USA 0.350% 09/11/2023	74.02
Interest/Dividends	9/9/2022	9/9/2022	89235MLN9	Toyota Financial Savings Bank 0.650% 09/09/2024	815.90
Interest/Dividends	9/12/2022	9/12/2022	459058JA2	IBRD 0.750% 03/11/2025	11,812.50
Interest/Dividends	9/12/2022	9/12/2022	649447VM8	New York Community Bank 0.650% 09/10/2024	815.90
Interest/Dividends	9/13/2022	9/13/2022	14913R2P1	Caterpillar Financial Services Corporation 0.600% 09/13/2024	2,700.00
Interest/Dividends	9/14/2022	9/14/2022	14913R2Q9	Caterpillar Financial Services Corporation 1.150% 09/14/2026	14,375.00
Interest/Dividends	9/15/2022	9/15/2022	649791RA0	New York, State of 0.910% 03/15/2025	4,550.00
Interest/Dividends	9/19/2022	9/19/2022	856285XE6	State Bank of India 0.400% 09/18/2023	502.09
Interest/Dividends	9/20/2022	9/20/2022	17330PSX8	Citigroup Global Markets Holdings Inc. 3.750% 07/20/2023	6,093.75
Interest/Dividends	9/22/2022	9/22/2022	89236TJZ9	Toyota Motor Credit Corporation 3.050% 03/22/2027	26,687.50
Interest/Dividends	9/23/2022	9/23/2022	45950VPU4	IFC 0.75% 03/23/2026	7,500.00
Interest/Dividends	9/30/2022	9/30/2022	91282CCZ2	UST 0.875% 09/30/2026	12,906.25
Total					**381,489.69**

TRANSACTION STATEMENT

As of September 30, 2022

Transaction Type	Trade Date	Settlement Date	Transaction Description	Amount
Custodian Fee				
Custodian Fee	7/26/2022	7/26/2022	Cash Out	(1,562.12)
Custodian Fee	8/25/2022	8/25/2022	Cash Out	(1,572.81)
Custodian Fee	9/26/2022	9/26/2022	Cash Out	(1,567.72)
Total				**(4,702.65)**
Management Fee				
Management Fee	7/19/2022	7/19/2022	Cash Out	(5,500.00)
Management Fee	8/23/2022	8/23/2022	Cash Out	(5,500.00)
Management Fee	9/22/2022	9/22/2022	Cash Out	(5,500.00)
Total				**(16,500.00)**

Town of Paradise

Council Agenda Summary

Date: November 7, 2022

Agenda Item: 5(a)

ORIGINATED BY: Kate Anderson, Housing Program Manager

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Housing Recovery Update

LONG TERM RECOVERY PLAN: No

COUNCIL ACTION REQUESTED:

1. Conduct the duly noticed and scheduled public hearing to solicit comments and/or suggestions regarding the Draft 2019-2023 Permanent Local Housing Allocation (PLHA) Plan; and,
2. Adopt the Draft 2019-2023 Permanent Local Housing Allocation (PLHA) Plan as submitted; OR
3. Revise the Draft 2019-2023 Permanent Local Housing Allocation (PLHA) Plan as submitted; AND
4. Adopt Resolution No. 2022-____ "A Resolution of the Town Council of the Town of Paradise Authorizing the Application and Adopting The PLHA Plan For The Permanent Local Housing Allocation Program". (ROLL CALL VOTE)

Background:

The Town of Paradise has been a U.S. Department of Housing and Development (HUD) entitlement city since 1994. HUD awards grants to entitlement communities to carry out a wide range of community development activities directed toward housing, public infrastructure and improvements, economic development, and public services. In addition, the State of California awards grants to entitlement communities, as well.

The California Department of Housing and Community Development (Department or HCD) announced the release of the 2022 Permanent Local Housing Allocation (PLHA) Program's Formula Component Notice of Funding Availability (NOFA) for approximately $335 million in calendar year 2021 funds in addition to the $131 million in calendar year 2019 and calendar year 2020 funds for Entitlement and Non-Entitlement Local governments. This NOFA is funded from moneys deposited in the Building Homes and Jobs Trust Fund (Fund) in calendar year 2021 and includes any remaining unawarded funds not requested for calendar years 2019 and 2020.

Funding for this NOFA is provided pursuant to Senate Bill 2 (SB 2) (Chapter 364, Statutes of 2017). SB 2 established the Fund and authorizes the Department to allocate 70 percent of moneys collected and deposited in the Fund, beginning in calendar year 2019, to Local governments for eligible housing and homelessness activities. The intent of the bill is to provide a permanent, on-going source of funding to Local governments for housing-related projects and programs that assist in addressing the unmet housing needs of their local communities.

Analysis:

The Town of Paradise is eligible to receive a PLHA grant, in an amount not to exceed the five-year estimate of the PLHA formula allocations, as stated in Appendix C of the current NOFA $561,576 in accordance with all applicable rules and laws.

An eligible activity for this funding includes matching portions of funds placed into Local or Regional Housing Trust Funds. By doing so, the local or regional housing trust can use these funds to attract additional funding for projects serving other eligible activities under this PLHA grant, such as 1) the predevelopment and development of multifamily, residential live-work, rental housing that is affordable to extremely-low to moderate-income households, including necessary operating subsidies, 2) the predevelopment and development of affordable rental and ownership housing, including Accessory Dwelling Units (ADUs) that meet the needs of a growing workforce earning up to 120% AMI. ADUs shall be available for occupancy for a term of no less than 30 days, and 3) assisting persons who are experiencing or at-risk of homelessness by providing new construction of permanent housing.

Financial Impact:

The impact of this agenda item is positive, as it will result in the award of approximately $561,576 in state funds and the opportunity to significantly increase that amount to be used in the production of affordable housing in our community. There is no impact to the General Fund.

Permanent Local Housing Allocation (PLHA) Formula Allocation

2022 Application for New Applicants

State of California
Governor, Gavin Newsom

Lourdes Castro Ramírez, Secretary
Business, Consumer Services and Housing Agency

Gustavo Velasquez, Director
Department of Housing and Community Development

Program Design and Implementation, PLHA Program
2020 West El Camino Avenue, Suite 150, Sacramento, CA 95833
PLHA Program Email: PLHA@hcd.ca.gov

Final Filing Date: October 31, 2022
at 4:00 P.M. PST

Instructions

This application form is limited to Applicants who did not apply to the 2020 and 2021 Formula Allocation NOFA

Rev. 2/16/22

When opening this file, a yellow banner at the top may appear with a button that says "Enable Content". It is essential that you click this box so that the macros are enabled. Enabling macros is necessary for full worksheet functionality. Macros do not work with Microsoft's Excel version for Apple Mac.

Applications must be submitted electronically to the Department's website. Requirements for uploading the Application Workbook and required supporting documentation, including naming conventions, are described in the application instructions available at https://www.hcd.ca.gov/grants-funding/active-funding/plha.shtml. All applicable information must be received by HCD no later than 4:00 p.m. on:

Monday, October 31, 2022

Applications must be on the Department's forms and cannot be altered or modified by the Applicant. Excel forms must be in Excel format and 'save as' .xls or .xlsx. Do not 'save as' .xlsm or .pdf format. If you encounter problems with the application, please fill out the Application Support worksheet and email the entire workbook to Application Support at AppSupport@hcd.ca.gov and PLHA@hcd.ca.gov

General Instructions Additional instructions and guidance are given throughout the Formula Allocation Application in "red" text and in cell comments.

Guideline references are made with "§" and the corresponding guideline section number.

"Yellow" cells are for Applicant input. Failure to provide the required attachments and documentation will disqualify your application from consideration.

Required attachments are indicated in "orange" throughout the Supplemental Application. Failure to provide the required attachments and documentation may disqualify your application from consideration. Electronically attached files must use the naming convention in the PLHA Application. For Example: "App1 Payee Data" for Applicant 1 Payee Data Record/STD. 204.

Threshold items are indicated in "blue" cells.

"Red" shaded cells indicate the Sponsor has failed to meet a requirement of the program.

Applicant must complete the following worksheets in the PLHA Formula Allocation Application.

Formula Allocation Application

302(c)(4) Plan

Legislative Contacts

Checklist

Threshold Requirement	Electronic File Name	Document Description	Included?
X	**Application and Adopting the PLHA Plan (2019-2023 Allocations) Reso**	Pursuant to section 302(c)(4) of the Guidelines, Applicant's PLHA Plan for 2019-2023 allocations is attached to this resolution, and Applicant certifies compliance with all public notice, comment, and hearing requirements in accordance with the Guidelines.	Included
	App1 TIN	0	Included
X	**Applicant Delegation Agreement**	Legally binding agreement between Delegating and Administering Local Governments (sample provided—just click on icon in row 17, column AI)	Not Included
X	**Reuse Plan**	Program Income Reuse Plan describing how repaid loans or accrued interest will be used for eligible activities in Section 301.	Included
X	**Executed Application**	Provide a copy of the signed application. Signature in blue ink preferred.	Included

Disclosure of Application (California Public Records Act Statutes of 1968 Chapter 1473): Information provided in the application will become a public record available for review by the public, pursuant to the California Public Records Act Statutes of 1968 Chapter 1473. As such, any materials provided will be disclosable to any person making a request under this Act. The Department cautions Applicants to use discretion in providing information not specifically requested, including but not limited to, bank accounts, personal phone numbers and home addresses. By providing this information to the Department, the Applicant is waiving any claim of confidentiality and consents to the disclosure of submitted material upon request.

Local Government Formula Allocation for New Applicants

Rev. 2/16/22

Eligible Applicant Type:	**Entitlement.**		
Local Government Recipient of PLHA Formula Allocation:		Paradise	
2020 PLHA NOFA Formula Allocation Amount:	$93,596	**2020 NOFA Allowable Local Admin (5%):**	**$4,680**
2021 PLHA NOFA Formula Allocation Amount:	$145,477	**2021 NOFA Allowable Local Admin (5%):**	**$7,274**
2022 PLHA NOFA Formula Allocation Amount:	$160,093	**2022 NOFA Allowable Local Admin (5%):**	**$8,005**

Instructions: If the Local Government Recipient of the PLHA Formula Allocation delegated its PLHA formula allocation to a Local Housing Trust Fund or to another Local Government, the Applicant (for which information is required below) is the Local Housing Trust Fund or administering Local Government. The PLHA award will be made to the Applicant (upon meeting threshold requirements) and the Applicant is responsible for meeting all program requirements throughout the term of the Standard Agreement.

The 302(c)(4) Plan template worksheet requires first choosing one or more of the Eligible Activities listed below. If "Yes" is clicked, the 302(c)(4) Plan worksheet opens a series of questions about what precise activities are planned. Some specific activities, such as providing downpayment assistance to lower-income households for acquisition of an affordable home, could be included under either Activity 2 or 9. Please only choose one of those Activities; don't list the downpayment assistance under both Activities.

If the PLHA funds are used for the same Activity but for different Area Median Income (AMI) level, select the same Activity twice (or more times) and the different AMI level the Activity will serve. Please enter the percentage of funds allocated to the Activity in only the first Activity listing to avoid double counting the funding allocation.

For each year (2019-2023), allocations must equal 100% annually including the allowable administrative costs of up to 5%.

Eligible Applicants §300

§300(a) and **(b)** Eligible Applicants for the Entitlement and Non-Entitlement formula component described in Section §100(b)(1) and (2) are limited to the metropolitan cities and urban counties allocated a grant for the federal fiscal year 2017 pursuant to the federal CDBG formula specified in 42 USC, Section §5306 and Non-entitlement local governments.

Applicant:	Town of Paradise										
Address:	5555 Skyway										
City:	Paradise	State:	CA	Zip:	95969	County:	Butte				
Auth Rep Name:	Kevin Phillips	Title:	Town Manager	Auth Rep. Email:	kphillips@townofparadise.com				Phone:	530-872-6291x104	
Address:	5555 Skyway			City:	Paradise	State:	CA	Zip Code:	95969		
Contact Name:	Kate Anderson	Title:	Housing Program Manager	Contact Email:	kanderson@townofparadise.com			Contact Phone:	530-872-6291x115		
Address:	5555 Skyway			City:	Paradise	State:	CA	Zip Code:	95969		

§300(d) Is Applicant delegated by another Local government to administer on its behalf its formula allocation of program funds?					No
§300(d) If Applicant answered "Yes" above, has the Applicant attached the legally binding agreement required by §300 (c) and (d)?			A sample agreement can be found by double clicking on the icon to the right	SAMPLE -Legally Binding Agreement	N/A
File Name:	Application and Adopting the PLHA Plan (2019-2023 Allocations) Reso	Pursuant to section 302(c)(4) of the Guidelines, Applicant's PLHA Plan for 2019-2023 allocations is attached to this resolution, and Applicant certifies compliance with all public notice, comment, and hearing requirements in accordance with the Guidelines.	Yes	Uploaded to HCD?	No
File Name:	App1 TIN			Uploaded to HCD?	No
File Name:	**Applicant Delegation Agreement**	Legally binding agreement between Delegating and Administering Local Governments (sample provided—just click on icon in row 17, column AI)		Uploaded to HCD?	N/A

Eligible Activities, §301

§301(a) Eligible activities are limited to the following:	Included?
§301(a)(1) The predevelopment, development, acquisition, rehabilitation, and preservation of multifamily, residential live-work, rental housing that is affordable to Extremely low-,Very low-, Low-, or Moderate-income households, including necessary operating subsidies.	☐ YES
§301(a)(2) The predevelopment, development, acquisition, rehabilitation, and preservation of affordable rental and ownership housing, including Accessory Dwelling Units (ADUs), that meets the needs of a growing workforce earning up to 120 percent of AMI, or 150 percent of AMI in high-cost areas. ADUs shall be available for occupancy for a term of no less than 30 days.	☐ YES
§301(a)(3) Matching portions of funds placed into Local or Regional Housing Trust Funds.	☑ YES
§301(a)(4) Matching portions of funds available through the Low- and Moderate-Income Housing Asset Fund pursuant to subdivision (d) of HSC Section 34176.	☐ YES
§301(a)(5) Capitalized Reserves for services connected to the preservation and creation of new permanent supportive housing.	☐ YES
§301(a)(6) Assisting persons who are experiencing or At-risk of homelessness, including, but not limited to, providing rapid re-housing, rental assistance, supportive/case management services that allow people to obtain and retain housing, operating and capital costs for navigation centers and emergency shelters, and the new construction, rehabilitation, and preservation of permanent and transitional housing.	☐ YES
§301(a)(7) Accessibility modifications in Lower-income Owner-occupied housing.	☐ YES
§301(a)(8) Efforts to acquire and rehabilitate foreclosed or vacant homes and apartments.	☐ YES
§301(a)(9) Homeownership opportunities, including, but not limited to, down payment assistance.	☐ YES
§301(a)(10) Fiscal incentives made by a county to a city within the county to incentivize approval of one or more affordable housing Projects, or matching funds invested by a county in an affordable housing development Project in a city within the county, provided that the city has made an equal or greater investment in the Project. The county fiscal incentives shall be in the form of a grant or low-interest loan to an affordable housing Project. Matching funds investments by both the county and the city also shall be a grant or low-interest deferred loan to the affordable housing Project.	☐ YES

Threshold Requirements, §302

§302(a) The Applicant's Housing Element and Delegating Local Government's Housing Element (if applicable) was/were adopted by the Local Government's governing body by the application submittal date subsequently determined to be in substantial compliance with state Housing Element Law pursuant to Government Code Section 65585.	Yes
§302(b) Applicant or Delegating Local Government has submitted the current or prior year's Annual Progress Report to the Department of Housing and Community Development pursuant to Government Code Section 65400.	Yes
§302(c)(2) Applicant certified in the Resolution submitted with this application that submission of the application was authorized by the governing board of the Applicant.	Yes
§302(c)(3) Applicant certified in the Resolution submitted with this application that, if the Local Government proposes allocation of funds for any activity to another entity, the Local government's selection process had no conflicts of interest and was accessible to the public.	Yes
§302(c)(4) Applicant certified in the Resolution submitted with this application that the application include a Plan in accordance with §302(c)(4)?	Yes
§302(c)(4)(D) Applicant certified in the Resolution submitted with this application that the Plan was authorized and adopted by resolution by the Local Government and that the public had an adequate opportunity to review and comment on its content.	Yes
§302(c)(5) Applicant certified in the Resolution submitted with this application that the Plan submitted is for a term of five years (2019-2023). Local Governments agree to inform the Department of changes made to the Plan in each succeeding year of the term of the Plan.	Yes
§302(c)(6) Applicant certified in the Resolution submitted with this application that it will ensure compliance with §302(c)(6) if funds are used for the acquisition, construction, or rehabilitation of for-sale housing projects or units within for-sale housing projects.	Yes
§302(c)(7) Applicant certified in the Resolution submitted with this application that it will ensure that the PLHA assistance is in the form of a low-interest, deferred loan to the Sponsor of the Project, if funds are used for the development of an Affordable Rental Housing Development. The loan shall be evidenced through a Promissory Note secured by a Deed of Trust and a Regulatory Agreement shall restrict occupancy and rents in accordance with the Local government-approved underwriting of the Project for a term of at least 55 years.	Yes
(8) Has Applicant attached a program income reuse plan describing how repaid loans or accrued interest will be reused for eligible activities specified in Section 301?	Yes

me:	**Reuse Plan**	Program Income Reuse Plan describing how repaid loans or accrued interest will be used for eligible activities in Section 301.	Narrative uploaded to HCD?	No

Administration	
Applicant agrees to adhere to **§500**, Accounting Records.	Yes
Applicant agrees to adhere to **§501**, Audits/Monitoring of Project Files.	Yes
Applicant agrees to adhere to **§502**, Cancellation/Termination.	Yes
Applicant agrees to adhere to **§503**, Reporting.	

Certifications

On behalf of the entity identified below, I certify that: The information, statements and attachments included in this application are, to the best of my knowledge and belief, true and correct and I possess the legal authority to submit this application on behalf of the entity identified in the signature block.

Kevin Phillips	Town Manager		
Authorized Representative Printed Name	Title	Signature	Date

§302(c)(4) Plan

Rev. 2/16/22

§302(c)(4)(A) Describe the manner in which allocated funds will be used for eligible activities.

The Town will allocate PLHA funding to a local or regional housing trust as matching funds that can be used for: 1) the predevelop and development of multifamily, residential live-work, rental housing that is affordable to extremely-low to moderate-income households, including necessary operating subsidies, 2) the predevelopment and development of affordable rental and ownership housing, including Accessory Dwelling Units (ADUs) that meet the needs of a growing workforce earning up to 120% AMI. ADUs shall be available for occupancy for a term of no less than 30 days, and 3) assisting persons who are experiencing or at-risk of homelessness by providing new construction of permanent housing. Funds deposited with the local or regional housing trust will be used to attract additional funding for projects serving lown-income households. Generating this regional fund help reach our housing goals be assuring financing for projects serving low-income households now and in the future.

§302(c)(4)(B) Provide a description of the way the Local government will prioritize investments that increase the supply of housing for households with incomes at or below 60 percent of Area Median Income (AMI).

The focus of the PLHA funding is two-fold: first, to provide matching funds for a local or regional housing trust funds with the intent of leveraging these funds to obtain additional funding, and second, to ultimately dedicate all funds toward the singular goal of increasing the supply of affordable housing in our area. Our local or regional housing trust has experience using HCD grant funding to loan to permanent supportive housing serving households below 30% AMI and has secured additional private capital in the form of grants and land donations for projects serving households below 60% AMI. The Town has extensive experience in successfully administering federally-funded Community Development Block Grant (CDBG) entitlement grant and numerous Home Investment Partnership (HOME) awards, as well as state-funded CalHome, Local Early Action Planning (LEAP), Wildfire Resiliency and Recovery Planning Grant (Prop 84), and the SB2 Planning Grant Program awards, and is currently implementing CDBG-DR funding. The Town also has successfully leveraged grant funds to support affordable housing projects that have been funded by tax credits and other state fundings.The priority of investments include partnering with development projects that include new affordable housing units for households with incomes at or below 80% AMI. A mixed-income project with someunits at higher levels may be eligible, but awards will be based on the number of units at 80% AMI or below. Town Housing staff is currently aware of potential projects in the pipeline that may be eligible for such funds.

§302(c)(4)(C) Provide a description of how the Plan is consistent with the programs set forth in the Local Government's Housing Element.

Town of Paradise Housing Element: HP-6 - The Town will encourage the productions and availability of new affordable housing through a variety of menasures including...supoort for funding applications...when available. HP-28 - The Town will support post-disaster funding for multi-family and affordable housing development. HI-2 Affordable Housing Resources - Continue to promote affordable housing by working with ans assisting developers who are interested in producing affordable housing and by providing staff support, identifying available resources, supporting funding applications, and providing funding when available. The Town will take the following actions..Annually encourage nonprofit sponsors to make application to state and federal agencies for affordable senior citizen and/or disabled rental housing...Continue to seek funding for affordable housing rehabilitation and new construction that ensures that a variety of populations are addressed (e.g., once one project is funded, support a different type of project in the next funding round). The approach should maximize the Town's available funding resources, prioritize projects that will be very competitive in the funding process, supoort new construction for a variety of affordable housing needs, and be based on the interest of developers in providing specific housing types.

Activities Detail (Activities Detail (Must Make a Selection on Formula Allocation Application worksheet under Eligible Activities, §301))

§301(a)(3) Matching portions of funds placed into Local or Regional Housing Trust Funds.

§302(c)(4)(E)(i) Provide a detailed and complete description of how allocated funds will be used for the proposed Activity.

Enter Percentage of Funds Allocated for Affordable Owner-occupied Workforce Housing

The Town will allocate PLHA funding to a local or regional housing trust as matching funds that can be used for: 1) the predevelopment and development of multifamily, residential live-work, rental housing that is affordable to extremely-low to moderate-income households, including necessary operating subsidies, 2) the predevelopment and development of affordable rental and ownership housing, including Accessory Dwelling Units (ADUs) that meet the needs of a growing workforce earning up to 120% AMI. ADUs shall be available for occupancy for a term of no less than 30 days, and 3) assisting persons who are experiencing or at-risk of homelessness by providing new construction of permanent housing.

Complete the table below for each proposed Activity to be funded with 2019-2023 PLHA allocations. If a single Activity will be assisting households at more than one level of Area Median Income, please list the Activity as many times as needed to capture all of the AMI levels that will be assisted, but only show the percentage of annual funding allocated to the Activity one time (to avoid double counting).

Funding Allocation Year	2019	2020	2021	2022	2023										
Type of Affordable Housing Activity	Rental: Development	Rental: Predevelopment	Rental: Development	Rental: Development	Rental: Development										
§302(c)(4)(E)(i) Percentage of Funds Allocated for the Proposed Activity	95.00%	95.00%	95.00%	95.00%	95.00%										
§302(c)(4)(E)(ii) Area Median Income Level Served	80%	80%	80%	80%	80%										**TOTAL**
§302(c)(4)(E)(ii) Unmet share of the RHNA at AMI Level **Note: complete for years 2019, 2020, 2021 only**															0
§302(c)(4)(E)(ii) Projected Number of Households Served	5	5	5	5	5										25
§302(c)(4)(E)(iv) Period of Affordability for the Proposed Activity **(55 years required for rental housing projects)**	55 years	55 years	55 years	55 years	55 years										

§302(c)(4)(E)(iii) A description of major steps/actions and a proposed schedule for the implementation and completion of the Activity.
Establish MOU with local or regional housing trust within 1 month of award, determine project scoring and selection guidelines within 1 month of the executed MOU, review projects for eligibility and readiness within 2 months of determining project scoring and selection guidelines, work with developer(s) during predevelopment and development of projects withing 6 months of project selection.

TOWN OF PARADISE
RESOLUTION NO. 22-____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE AUTHORIZING THE APPLICATION AND ADOPTING THE PLHA PLAN FOR THE PERMANENT LOCAL HOUSING ALLOCATION PROGRAM

A majority of the council members of the Town of Paradise ("Applicant") hereby consents to, adopts, and ratifies the following resolution:

WHEREAS, the Department is authorized to provide up to $335 million under the SB 2 Permanent Local Housing Allocation Program Formula Component from the Building Homes and Jobs Trust Fund for assistance to Cities and Counties (as described in Health and Safety Code section 50470 et seq. (Chapter 364, Statutes of 2017 (SB 2));

WHEREAS, the State of California (the "State"), Department of Housing and Community Development ("Department") issued a Notice of Funding Availability ("NOFA") dated 8/17/2022 under the Permanent Local Housing Allocation (PLHA) Program;

WHEREAS, the Town of Paradise is an eligible Local government who has applied for program funds to administer one or more eligible activities, or a Local or Regional Housing Trust Fund to whom an eligible Local government delegated its PLHA formula allocation; and

WHEREAS, the Department may approve funding allocations for PLHA Program, subject to the terms and conditions of the Guidelines, NOFA, Program requirements, the Standard Agreement, and other contracts between the Department and PLHA grant recipients;

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

1. If Applicant receives a grant of PLHA funds from the Department pursuant to the above referenced PLHA NOFA, it represents and certifies that it will use all such funds in a manner consistent and in compliance with all applicable state and federal statutes, rules, regulations, and laws, including without limitation all rules and laws regarding the PLHA Program, as well as any and all contracts Applicant may have with the Department.

2. Applicant is hereby authorized and directed to receive a PLHA grant, in an amount not to exceed the five-year estimate of the PLHA formula allocations, as stated in Appendix C of the current NOFA $561,576 in accordance with all applicable rules and laws.

3. Applicant hereby agrees to use the PLHA funds only for eligible activities as approved by the Department and in accordance with all Program requirements, Guidelines, other rules and laws, as well as in a manner consistent and in

compliance with the Standard Agreement, its Application, and other contracts between the Applicant and the Department.

4. **Pursuant to Section 302(c)(4) of the Guidelines, Applicant's PLHA Plan for the 2019-2023 Allocations is attached to this resolution, and Applicant hereby adopts this PLHA Plan and certifies compliance with all public notice, public comment, and public hearing requirements in accordance with the Guidelines.**

5. Applicant certifies that it has or will subgrant some or all of its PLHA funds to another entity or entities. Pursuant to Guidelines Section 302(c)(3), "entity" means a housing developer or program operator.

6. Applicant certifies that, if funds are used for the acquisition, construction or rehabilitation of for-sale housing projects or units within for-sale housing projects, the grantee shall record a deed restriction against the property that will ensure compliance with one of the requirements stated in Guidelines Section 302(c)(6)(A),(B) and (C).

7. Applicant certifies that, if funds are used for the development of an Affordable Rental Housing Development, the Local government shall make PLHA assistance in the form of a low-interest, deferred loan to the Sponsor of the Project, and such loan shall be evidenced through a Promissory Note secured by a Deed of Trust and a Regulatory Agreement shall restrict occupancy and rents in accordance with a Local government-approved underwriting of the Project for a term of at least 55 years.

8. Applicant shall be subject to the terms and conditions as specified in the Standard Agreement, the PLHA Program Guidelines, and any other applicable SB 2 guidelines published by the Department.

9. Mayor or Town Manager are authorized to execute the PLHA Program Application, the PLHA Standard Agreement and any subsequent amendments or modifications thereto, as well as any other documents which are related to the Program or the PLHA grant awarded to Applicant, as the Department may deem appropriate

PASSED AND ADOPTED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE THIS 7TH DAY OF NOVEMBER, 2022, BY THE FOLLOWING VOTE:

AYES: _____
NOES: _____
ABSENT: _____
NOT VOTING: _____

_____
Scott Crowder, Mayor

ATTEST:

_____
Dina Volenski, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

CERTIFICATE OF THE ATTESTING OFFICER

The undersigned, Officer of the Town of Paradise, Town Clerk, Dina Volenski, does hereby attest and certify that the attached Resolution is a true, full and correct copy of a resolution duly adopted at a meeting of the Town Council, Town of Paradise which was duly convened and held on the date stated thereon, and that said document has not been amended, modified, repealed or rescinded since its date of adoption and is in full force and effect as of the date hereof.

ATTEST: _____
Signature of Attesting Officer
Dina Volenski, Town Clerk

Town of Paradise

Council Agenda Summary **Agenda Item: 5(b)**

Date: November 7, 2022

ORIGINATED BY: Marc Mattox, Public Works Director &Town Engineer
Ashley Stanley, Engineering Division Manager

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Paradise Sewer Project – Certification of Final Programmatic Environmental Impact Report (PEIR) with CEQA findings for Significant Environmental Impacts, adoption of a Mitigation and Monitoring Plan and other related findings.

LONG TERM RECOVERY PLAN: Yes, Tier 1 "Sewer"

COUNCIL ACTION REQUESTED:

Upon conclusion of the public hearing of the Paradise Sewer Project, consisting of the design, right of way acquisition and construction for the core collection system, extended collection system, export pipeline and connection to the City of Chico Water Pollution Control Plant, consider a resolution, or an alternative action:

a) Introduce Town of Paradise Resolution No. 22-_____, "A Resolution of the Town Council of the Town of Paradise Certifying the Final Programmatic Environmental Impact Report with CEQA findings for significant environmental impacts, and adoption of Mitigation, Monitoring and Reporting Program for the Paradise Sewer Project; and

b) Adoption of the Final Programmatic Environmental Impact Report (Final PEIR) for use in conjunction with the Paradise Sewer Project, or other action; and

c) Direct staff to continue the next steps in the Paradise Sewer Project implementation including Federal environmental reviews and processes, Design and Right of Way phases, including solicitation of Staff Augmentation and Design Build contract(s) in compliance with secured and potential funding sources' policies and procedures; or

d) Provide alternative action (ROLL CALL VOTE)

Background:

Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. The Town has prepared numerous studies to address its need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 feasibility study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022.

The Proposed Project would consist of three primary components: Core Collection System, Export Pipeline System, and Extended Collection System. The Core Collection System would support the centralized businesses and housing in Town, including approximately 1,500 parcels along the Skyway, Clark Road, and Pearson Road corridors. The proposed Export Pipeline System would start at the southern end of the Core Collection System as a gravity sewer line and would continue southwest approximately 18 miles to the City of Chico for connection to the Chico Water Pollution Control Plant. Other than the Town of Paradise flow, no other connections will be allowed to the export pipeline. The Extended Collection System would be an extension of the Core Collection System that would allow collection of sewage from parcels outside the Core Collection System, but within the Town limits.

Analysis:

The Final Programmatic Environmental Impact Report (Final PEIR) assessed the potential environmental impacts of the proposed Project on the physical, human, and natural environment. A wide variety of resource areas were studied to identify potential impacts, including aesthetics, agriculture and forestry resources, air quality and greenhouse gas emissions, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, wildfire, and additional topics as required by the CEQA Guidelines including significant irreversible environmental changes, growth inducement, cumulative impacts, and alternatives. Measures to avoid, minimize, and mitigate any potential adverse impacts were identified and evaluated in the Draft PEIR.

The Town published the required documents for availability, distribution, and comments on the Draft PEIR, including a 45-day public review and comment period (July 14, 5pm, to August 29, 2022) and held three public meetings (August 8 (6:00pm), August 10 (12:30 and 6:00 pm), 2022). Responsible and trustee agencies, involved federal agencies, interest groups, and members of the public were invited to provide input on the Draft PEIR. Comments were submitted in person, at Town Hall and through www.paradisesewer.com. All input received was documented and addressed in the Final Programmatic Environmental Impact Report.

Financial Impact:

There are no financial impacts associated with this specific action requested. Project funding is addressed separately through various Council Actions and various funding sources.

Attachments:

The Final Programmatic Environmental Impact Report (Final PEIR), Mitigation and Monitoring Plan, and Findings are available for public inspection at Town of Paradise Town Hall, located at 5555 Skyway, Paradise, California, 95938 and www.paradisesewer.com.

Notice of Determination is included as an attachment and will be filed within three days of Town Council Certification of the Final PEIR.

Town of Paradise

Council Agenda Attachment **Agenda Item: 5(b)**

Date: November 7, 2022

The Final Paradise Sewer PEIR may be viewed by visiting the link copied below:

https://paradisesewer.com/virtual-room/

or

A physical printed copy is also available for public viewing at Town Hall, Clerk's Office at
5555 Skyway, Paradise.

TOWN OF PARADISE
RESOLUTION NO. 22-_____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE CERTIFYING THE FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT WITH CEQA FINDINGS FOR SIGNIFICANT ENVIRONMENTAL IMPACTS, AND ADOPTION OF A MITIGATION, MONITORING AND REPORTING PROGRAM FOR THE PARADISE SEWER PROJECT

WHEREAS, the Town has identified the Paradise Sewer Project as that consisting of the design, right of way acquisition and construction for the core collection system, extended collection system, export pipeline and connection to the Town of Chico Water Pollution Control Plant (as more fully described in this Programmatic Environmental Impact Report (PEIR; the "Project") and

WHEREAS, on December 8, 2020, the Town voted unanimously to advance a regional approach for the Paradise Sewer Project by directing staff to perform a full Environmental Impact Report for the Project pursuant to the California Environmental Quality Act ("CEQA"); and

WHEREAS, the Town is the lead agency for the Paradise Sewer Project PEIR pursuant to CEQA; and

WHEREAS, thereafter Town employees and consultants, acting as the Project team, have been actively involved in the preparation of the Draft Programmatic Environmental Impact Report ("Draft PEIR"), and several methods were used to build awareness about the Project, the Notice of Preparation and the subsequent public comment period and scoping meetings; and

WHEREAS, scoping meetings were conducted on May 13 and May 25, 2021 when materials were made available to the public and other public agencies and comments were solicited and obtained; and

WHEREAS, using the established Project website (www.paradisesewer.com) and the Town's social media accounts (Facebook and YouTube), the Project team posted and updated key information regarding environmental review as well as initial project activities; and

WHEREAS, additionally, the Project team submitted notices in local Paradise and Chico media publications, and conducted public and Town Council engagement meetings; and

WHEREAS, on April 30, 2021, the Town filed a Notice of Preparation ("NOP") with the State Office of Planning and Research ("OPR") to determine the scope of environmental review for the Paradise Sewer Project; and

WHEREAS, the Town thereafter prepared a Draft PEIR *(SCH No. 2021050008)* for the Paradise Sewer Project; and

WHEREAS, on July 14, 2022, the Town filed the Notice of Completion ("NOC") informing OPR that the Town had completed the Draft PEIR, and recommending distribution of the Draft PEIR to certain state agencies for review.

WHEREAS, prior to circulating the Draft PEIR for public review, the Town distributed and published the Notice of Availability ("NOA") for the Draft PEIR to all interested groups, to organizations, and individuals; and posted on the Project website.

WHEREAS, the Draft PEIR was available for public review and comment for forty-five (45) days, between July 14, 2022 and August 29, 2022; and

WHEREAS, noticed public meetings were held during the comment period on August 8 (in Chico) and August 10 (in Paradise); notices were sent out by: electronic notifications, legal noticing in paper, and website; and

WHEREAS, the draft PEIR was available at the following locations:

Town Clerk at Paradise Town Hall (5555 Skyway, Paradise)
Butte County Library, Paradise Branch (5922 Clark Rd, Paradise)
Terry Ashe Recreation Center (6626 Skyway, Paradise)
City Clerk at Chico City Hall (411 Main Street, Chico)
Butte County Library, Chico Branch (1108 Sherman Avenue, Chico)
CARD Community Center (545 Vallombrosa Avenue, Chico)
Butte County Clerk (155 Nelson Avenue, Oroville)

WHEREAS, the Town received a total of 51 comments relating to the Paradise Sewer Project Draft PEIR during the public review period, including 11 by email and post, and 40 by use of the website comment link; and

WHEREAS, the Town has evaluated and responded to all of the comments received on the Draft PEIR, as well as those received outside of public review periods; and

WHEREAS, the Town now has prepared the Final Programmatic Environmental Impact Report ("Final PEIR") for the Paradise Sewer Project, which incorporates the Draft PEIR, the written comments, the Town's responses to those written comments, and identifies five proposed text additions to the Draft PEIR; Final PEIR is attached and incorporated as Exhibit “A”; and

WHEREAS, such additions to the Draft PEIR do not constitute new information but more clearly restate an existing requirement; and

WHEREAS, there were no deletions from the Draft PEIR; and

WHEREAS, pursuant to CEQA Guidelines section 15091, the Town has prepared Findings regarding mitigation of the significant adverse environmental impacts that may result from approval and implementation of the Project ("CEQA Findings") which findings are attached and incorporated as Exhibit B; and

WHEREAS, pursuant to CEQA Guidelines section 15091 and 15097, the Town has prepared a Mitigation Monitoring and Reporting Program ("MMRP") for mitigation measures imposed to avoid or mitigate such significant environmental impacts, which MMRP is attached and incorporated as Exhibit C; and

WHEREAS, pursuant to CEQA Guidelines section 15090, the Town Council shall review the Final PEIR and certify that the Final PEIR was prepared in compliance with CEQA; and

WHEREAS, on or about October 26, 2022 the Town gave notice of the public hearing to be held on November 7, 2022 to certify the Final EIR and adopt this Resolution and its attachments by posting on the Town website prior to the hearing; and

WHEREAS, the Town Council has reviewed all documents, exhibits and testimony based upon its independent judgment and has heard all testimony for and against the certification of the Final PEIR.

NOW, THEREFORE, the Town Council resolves and certifies as follows:

1. The Recitals set out above are true and correct.

2. The Final PEIR has been completed in compliance with CEQA.

3. The Final PEIR was presented to the Town Council, which has reviewed and considered all of the information contained in it before taking action.

4. The Final PEIR reflects the Town Council's independent judgment and analysis.

5. The Town Council hereby certifies the Final Programmatic Environmental Impact Report which is incorporated hereto as Exhibit A.

6. The Town Council hereby approves and adopts the CEQA Findings Regarding Significant Environmental Impacts which are attached and incorporated as Exhibit B.

7. The Town Council hereby approves and adopts the Mitigation Monitoring and Reporting Program which is attached and incorporated as Exhibit C. These Mitigation Measures are not merely informational but constitute a binding set of obligations for the Town and responsible parties, which obligations will take effect upon adoption of this Resolution and implementation thereafter of the Paradise Sewer Project.

8. The Town Council further finds that there are no remaining significant and unavoidable impacts identified, as all potential impacts were able to be mitigated to a level of less than significant.

9. Location and Custodian of Documents and the Record of Proceedings

The record of the Town's decision concerning certification of the Final PEIR for the proposed project includes the following:

- Draft PEIR (July 14, 2022)
- Final PEIR (November 2, 2022)
- Appendices and Technical Memoranda to the Draft and Final PEIRs
- All documents and other materials listed as references or incorporated by reference in the Draft PEIR and Final PEIR, including but not limited to the materials identified in the Chapter 7, References, of the Draft and Final PEIRs
- All reports, applications, memoranda, maps, letters, and other documents prepared by the Town's staff and consultants for the proposed Project
- All notices issued by the Town to comply with CEQA, the CEQA Guidelines, or any other law governing the processing and approval of the Project or the Final PEIR
- The Findings for the Project as adopted by the Town Council and all documents cited or referred to therein
- The Mitigation Monitoring and Reporting Program for the Project as adopted by the Town Council
- All documents or other materials submitted by interested people or public agencies in connection with the Project, Draft PEIR or the Final PEIR
- Minutes, recordings, and verbatim transcripts, if any, of the public hearing to be held on November 7, 2022, concerning the Final PEIR and the proposed project
- Any documentary or other evidence submitted to the Town at informational sessions, public meetings, and public hearings concerning the Final PEIR and the project
- Any other materials required to be in the record of proceedings by California Public Resources Code, Section 21167.6(e)
- Any other written materials relevant to the Town's compliance with CEQA and its decision on the merits of the project, including documents that have been released for public review and copies of reports, studies, or other documents relied on in any environmental documentation for the project and either made available to the public during the public comment period or included in the Town's files
- All materials posted on ParadiseSewer.com up to the time of certification of the PEIR.

The custodian of the documents and other materials composing the administrative record of the Town's decision concerning certification of the Final PEIR is the Town Clerk. The location of the administrative record is 5555 Skyway, Town Hall, Engineering Department, Paradise, California, 95969 (California Public Resources Code, Section 21081.6[a][2]).

10. Notice of Determination. Town staff is hereby directed to file a Notice of Determination at the Butte County, City of Chico and Town of Paradise Recorders' Offices in the manner provided by law.

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 7th day of November 2022 by the following vote:

AYES:
NOES:
ABSENT:
NOT VOTING:

TOWN OF PARADISE

By_____
Steve Crowder, Mayor

ATTEST:

By:_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:
Office of the Town Attorney

By:_____
Scott Huber, Town Attorney

Paradise Sewer Project

Final Program Environmental Impact Report

Paradise, California

November 3, 2022

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Appendix I: Public Comments and Responses on Draft PEIR

Terms and Abbreviations

AB	Assembly Bill
AB 52	Assembly Bill 52, Native Americans: California Environmental Quality Act
ABAG	Association of Bay Area Governments
ARB	California Air Resources Board
BACT	Best Available Control Technology
Basin Plan	Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region
BCAG	Butte County Association of Governments
BCAQMD	Butte County Air Quality Management District
BCFD	Butte County Fire Department
BCSO	Butte County Sheriff's Office
B-Line	Butte Regional Transit
BMP	Best Management Practice
B.P.	Before Present
BRCP	Butte Regional Conservation Plan
BTUs	British Thermal Units
Butte LAFCo	Butte Local Agency Formation Commission
CAAQS	California Ambient Air Quality Standards
Cal.	Calibrated
CALFIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARD	Chico Area Recreation and Park District
CCR	California Code of Regulations
CDC	Centers for Disease Control and Prevention
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act

CFD	Chico Fire Department
CFR	Code of Federal Regulations
CGP	Construction General Permit
Chico WPCP	Chico Water Pollution Control Plant
City	City of Chico (governmental entity and geographic location)
CMC	Chico Municipal Code
CNPS	California Native Plant Society
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide equivalent
COVID-19	Coronavirus Disease 2019
County	County of Butte (governmental entity and geographic location)
CPD	Chico Police Department
CRHR	California Register of Historical Resources
CUSD	Chico Unified School District
CWA	Clean Water Act
cy	cubic yard
dB	decibel
dBA	A-weighted decibel
DOC	California Department of Conservation
DOF	California Department of Finance
DOI	US Department of the Interior
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EFH	Essential Fish Habitat (NMFS)
EIR	environmental impact report
EMFAC	Emissions Factor Model
EO	Executive Order
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHSZ	Fire Hazard Severity Zone

FMMP	DOC Farmland Mapping and Monitoring Program
FR	Federal Register
FRA	Federal Responsibility Area
FTA	Federal Transit Administration
GHG	greenhouse gas
GPS	Global Positioning System
GWh	gigawatt-hours
HAPC	Habitat Areas of Particular Concern (NMFS)
HCD	California Department of Housing and Community Development
HDD	horizontal directional drilling
HDR	HDR Engineering, Inc.
HFC-23	fluoroform
HFC-134a	1,1,1,2 tetrafluoroethane
HFC-152a	difluoroethane
Hot Spots Act	AB 2588, Air Toxics “Hot Spots” Information and Assessment Act of 1987
hp	horsepower
HUC	Hydrologic Unit Code
in/sec	inch per second
kV	kilovolt
kWh	kilowatt hours
LAFCo	Local Agency Formation Commission
lb	pounds
Ldn	Day-Night Average Sound Level
Leq	Equivalent Sound Level
Lmax	Maximum Sound Level
LHMP	Butte County Local Hazard Mitigation Plan
LID	Low Impact Development
LOS	level of service
LRA	Local Responsibility Area
LTCRP	Long Term Recovery Plan
LTS	less than significant

LUST	leaking underground storage tank
Lv	Vibration Velocity Level
MBTA	Migratory Bird Treaty Act of 1918
mgd	million gallons per day
µg/m3	micrograms per cubic meter
MM	mitigation measure
MS4	Municipal Separate Storm Sewer System
MT	metric tons
N2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
Natural Strategy	The National Strategy: The Final Phase in the Development of the National Cohesive Wildland Fire Management Strategy
NEPA	National Environmental Policy Act
NH4	methane
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic and Safety Administration
NI	no impact
NO	nitric oxide
NO2	nitrogen dioxide
NOP	Notice of Preparation
NOx	nitrogen oxide
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NHRP	National Register of Historic Places
O3	ozone
OHWM	ordinary highwater mark
Pac	USFWS Information for Planning and Consultation system
Pb	lead
PEIR	Program Environmental Impact Report

PFD	Paradise Fire Department
PFYC	Potential Fossil Yield Classification
PG&E	Pacific Gas and Electric Company
PID	Paradise Irrigation District
PM2.5	particulate matter 2.5 micrometers and smaller
PM10	particulate matter 10 micrometers and smaller
PPD	Paradise Police Department
PPV	Peak Particle Velocity
PRC	Public Resources Code
Proposed Project	Paradise Sewer Project
PRPD	Paradise Recreation and Park District
PUSD	Paradise Unified School District
PVC	polyvinyl chloride
RHNA	Regional Housing Needs Allocation
RMS	Root Mean Square
ROG	reactive organic gases
ROW	right-of-way
RTP/SCS	Butte County 2020 Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Central Valley Regional Water Quality Control Board
SB	Senate Bill
SI	significant impact
S/M	significant impact but mitigable to a less-than-significant level
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO2	sulfur dioxide
SOI	sphere of influence
SOx	sulfur oxides
SR	California State Route
SRA	State Responsibility Area
SRPAC	Sewer Regionalization Project Advisory Committee
SSA	Sewer Service Area

SSSGO	Sanitary Sewer Systems General Order
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
Tanner Act	Toxic Air Contaminant Identification and Control Act
TCR	tribal cultural resource
THPO	Tribal Historic Preservation Officer
Town	Town of Paradise (governmental entity and geographic location)
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Surveys
VdB	vibration decibel
VMT	vehicle miles traveled
WIFIA	Water Infrastructure Finance and Innovation Act
Williamson Act	California Land Conservation Act of 1965
zone	Town of Paradise Onsite Wastewater Management Zone

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ES1 Executive Summary

This Program Environmental Impact Report (PEIR) has been prepared by the Town of Paradise (Town), California, which is the lead agency for the Paradise Sewer Project (Proposed Project) in accordance with the California Environmental Quality Act (CEQA). Per CEQA, the lead agency for a project is the "public agency with principal responsibility for carrying out or approving a project. The Lead Agency will decide whether an EIR (Environmental Impact Report) or Negative Declaration will be required for the project and will cause the document to be prepared" (CEQA Guidelines Section 15367).

The City of Chico (City), the Butte Local Agency Formation Commission (Butte LAFCo), the Central Valley Regional Water Quality Control Board (RWQCB), Butte County (County), and the California Department of Fish and Wildlife (CDFW) are considered Responsible Agencies under CEQA based on their discretionary approval power over some aspects of the Proposed Project and would consider use of this PEIR for their CEQA compliance.

This PEIR addresses the potential environmental effects of construction, operation and maintenance of the Proposed Project.

ES1.1 Project Background

For a number of years, the Town has pursued a municipal solution for wastewater treatment to address failed septic systems that have degraded local groundwater quality and constrained affordable housing, essential community services, and related economic growth. Reliance on septic systems has resulted in two areas of concern: environmental impacts and economic impediment. Failed septic systems release untreated wastewater into groundwater or at the ground surface, resulting in environmental degradation and public health risk due to water contamination or exposure to untreated wastewater. Economically, the lack of a sewer system has suppressed the development of a sustainable business community by limiting the size and types of businesses that can affordably operate in the community. Development of affordable housing and workforce housing also has been hindered as larger housing facilities require more sewer treatment capacity than a traditional septic system can provide within the available parcel sizes. As a result of these concerns, the Town worked diligently for more than 50 years, even prior to its incorporation in 1979, to identify a feasible wastewater treatment solution for the community, with a priority to provide service to those commercial and densely populated residential areas with failed and failing septic systems.

Results of a Phase I wastewater management study conducted for the Town in 1983 showed evidence of high levels of fecal coliform and septic system effluent in the water supply, resulting in degradation of water quality (Montgomery 1983). This study recommended that a sewer system or centralized wastewater management facility be considered for the Town (Montgomery 1983). Since 1983, numerous wastewater management studies have been prepared for the Town. On October 25, 1990, via Town of Paradise Resolution No. 90-47, the Town Council officially formed a Wastewater Design Assessment District for the purpose of developing a wastewater collection, treatment, and disposal facility. The proposed sewer system was to serve only the core commercial area of the community. In a letter dated May 4, 1992, the RWQCB approved the Town's plans to establish an "Onsite Wastewater Management Zone" (zone) to address public health and environmental concerns noted in previous

studies (RWQCB 1992). The purpose of the formation of this zone, which remains in existence today, was to identify, permit, inspect, monitor, and regulate repairs and new construction of on-site wastewater systems that are required for new development (Town of Paradise 2022a). As of 2021, the zone permits and regulates more than 11,000 various wastewater systems. The collective individual septic systems vary in complexity, from standard septic tanks and absorption fields to small biological wastewater treatment systems (Town of Paradise 2022a). If the Proposed Project were implemented, the zone would remain active for those parcels that do not connect or have not yet connected to the sewer system.

In 2017, the Town completed a feasibility study, which evaluated advancing a sustainable wastewater solution for the benefit of the Town's economy, environment, and community. The *Town of Paradise Sewer Project, Alternatives Analysis and Feasibility Report: Determining a Preferred Option for Implementation* (Bennett Engineering 2017) analyzed several options, including a "No Project" option, and identified the most feasible solution and next steps. Three local options and the Chico Water Pollution Control Plant (Chico WPCP) regional connection option were analyzed to address sewer service reliability problems and select the best alternative for the Town to carry forward to district formation, preliminary design, and environmental review. The socioeconomic study projected benefits to the Town and region, including an additional 161 jobs, additional $12.8 million in sales and output to the region in all sectors, regional long-term impact of $68 million in private and public investment, and $56 million increase in the property tax base (Bennett Engineering 2017). The study also predicted a 5 to 13 percent property value increase for parcels within the sewer district. The regional connection to the Chico WPCP was recommended by the study as the best long-term solution for the Town (Bennett Engineering 2017).

On November 8, 2018, the Camp Fire severely impacted the Town. More than 26,000 Town residents were displaced; 90 percent of structures in the Town, including more than 11,000 homes and 1,000 businesses, were burned to the ground; and, most tragically, 85 people lost their lives. The 2018 Camp Fire affected the Town's business and management operations as resources were redirected toward recovery, which temporarily delayed further development of a municipal wastewater solution for the Town. Concurrently, private septic systems within the Town were found to be damaged by the fire, which in turn further degraded local groundwater quality and compounded the pre-fire sewer needs. These additional impacts from the Camp Fire again constrained affordable housing, essential community services, and overall economic growth, while the Town endeavored to rebuild without a municipal sewer system in place.

In late 2019, the Town re-evaluated the previous study performed by Bennett Engineering in 2017 to explore a wastewater collection system in light of the additional impacts resulting from the 2018 Camp Fire, including septic system replacements, re-population within the sewer service area, and sewer impacts that had continued to occur since the 2017 study.

The Town continued to study wastewater discharge and treatment alternatives, including local treatment and disposal, as well as a regional treatment alternative at the Chico WPCP. In 2020, the Town received an *Evaluation of Wastewater Treatment Plant Options, Town of Paradise, Butte County* memorandum from the RWQCB. In the memorandum, RWQCB stated that the regional option presents

an objectively more sustainable long-term solution to the Town's wastewater infrastructure needs (RWQCB 2020).

The Town performed a detailed analysis of alternatives, in coordination with the City and RWQCB, from an environmental impact, cost, and operational standpoint. In partnership with the RWQCB and City, the regional approach to providing sewer service to the Town, by connecting to the existing Chico WPCP, was pursued over alternative options to build a new stand-alone treatment facility for the Town.

During these studies, it was also determined that the estimated average wastewater conveyance and treatment need for the sewer service area would be 0.464 million gallons per day (mgd). This flow rate would accommodate current repopulation and possible future growth, consistent with the current *Town of Paradise 1994 General Plan* and *Town of Paradise 2022–2030 Housing Element Update* (Town of Paradise and Quad Consultants 2008, Town of Paradise 2022a). The Town is preparing this PEIR to determine the feasibility of a regional wastewater treatment solution to fulfill this 0.464 mgd wastewater treatment need.

ES1.2 Project Location

Paradise is within eastern Butte County, California, in the western foothills of the Sierra Nevada Mountains. Its topography is characterized by intervening ridges and valleys sloping to the southwest, with elevations ranging from around 1,080 to 2,320 feet. The Town is bordered on the east by the western branch of the Feather River and on the west by Little Butte Creek. It is approximately 12 miles east of Chico, 20 miles northwest of Oroville, and 90 miles north of Sacramento. The Town is connected to Chico via Skyway, a Butte County roadway, and to Oroville via California State Route (SR) 191, which is known as Clark Road upon entering the Town from the south.

Chico, also in Butte County, sits on the Sacramento Valley floor, close to the foothills of the Sierra Nevada range to the east. Chico's terrain is generally flat, with increasingly hilly terrain beginning at the eastern City limits. Chico is traversed by two creeks: Big Chico and Little Chico Creeks. These waterbodies discharge into the Sacramento River. SRs 32 and 99 comprise Chico's regional transportation network. SR 32 connects Chico residents to Glenn and Plumas Counties to the west and east, respectively. SR 99 connects residents to Tehama and Sutter Counties to the north and south, respectively. Chico is the most populous city in Butte County, with a population of 102,892 in January 2022 (California Department of Finance [DOF] 2022).

The project location is shown in Figure ES-1.

ES1.3 Project Need and Objectives

Paradise is the largest town in California that relies solely on septic systems for the treatment and disposal of its wastewater (BCAG 2019a). Relying on private septic systems due to the lack of a municipal sewer collection system has a twofold implication: (1) the effect on the human and natural environment, and (2) the effect on the area's economy and recovery from the 2018 Camp Fire.

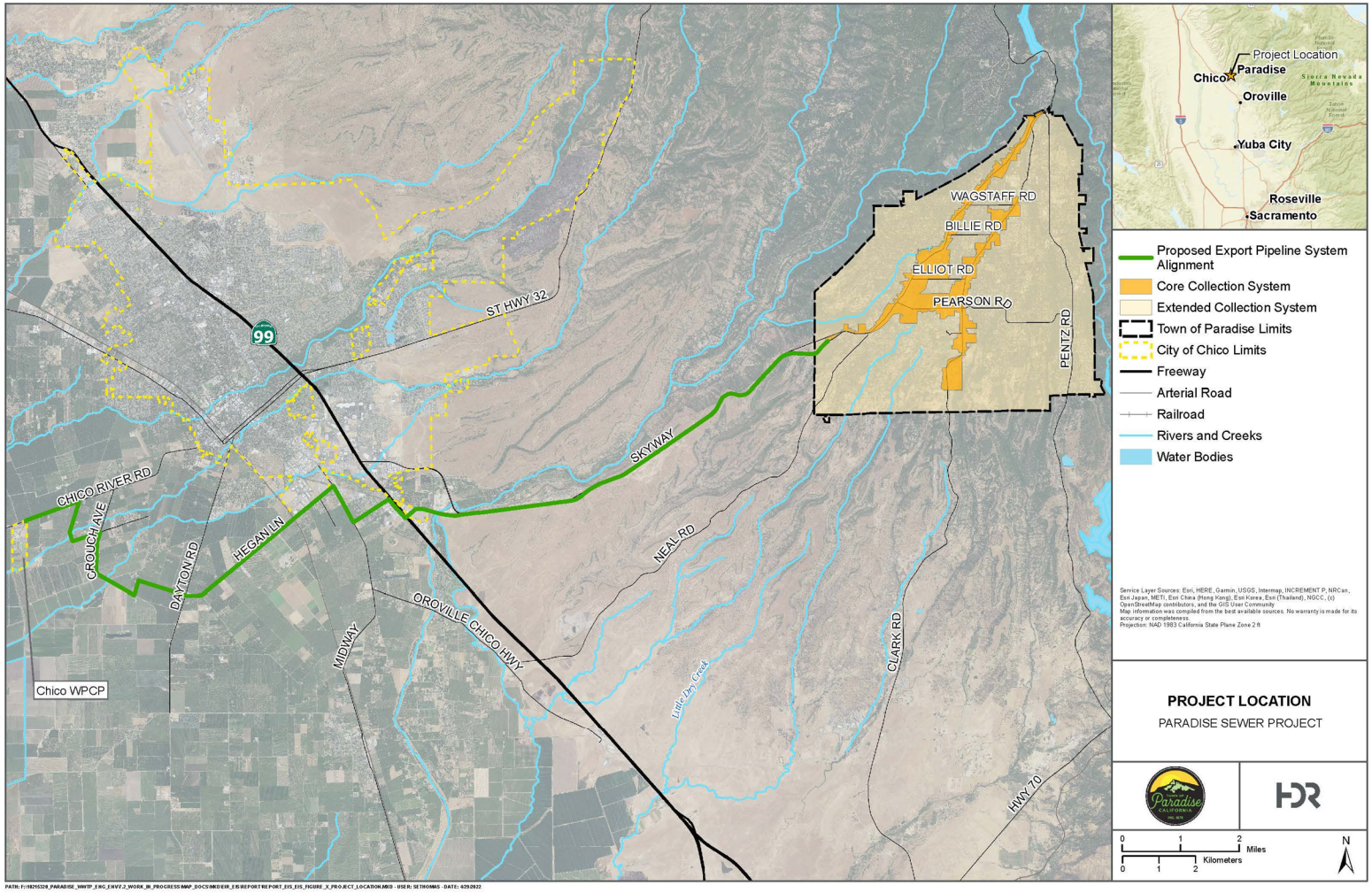

Figure ES-1. Proposed Project Location

The lack of reliable sewer infrastructure, due to the probability of failure and limitations on treatment and discharge within the current septic system network, poses an environmental threat to groundwater and surface water quality. When a septic system fails, it can either contaminate the groundwater underneath it or surface water nearby, creating environmental concerns for nearby streams and lakes as well as polluting the drinking water supply. Prior to the 2018 Camp Fire, the Town struggled to support a thriving economy, in part due to the lack of sewer availability. Conditions since the 2018 Camp Fire are amplified with even fewer businesses able to open or reopen due to septic failures or required upgrades that are cost prohibitive. Commercial parcels in Town are generally small in size and concentrated in a core commercial area that provides limited space for septic tanks and leach fields. These restrictions are compounded by siting restrictions such as high groundwater and poor drainage due to the local soil composition. As a result, existing Town businesses have been severely constrained due to their septic system discharge exceeding the available capacity of the land itself, while new businesses are often forced to open elsewhere due to the limitations placed on them to operate with an on-site septic system. Three primary objectives and associated goals drove the development of the Proposed Project:

- Provide long-term, efficient, reliable treatment of wastewater in a cost-effective, environmentally beneficial manner to current and returning Town residents, in a manner acceptable to the RWQCB and other permitting agencies:
    - Accommodate regrowth while reducing further environmental degradation of groundwater and surface water from failing septic systems
    - Reduce the public health risk associated with failing septic systems
- Generate economic recovery by eliminating septic-related capacity limitations, as well as the general burden of on-site wastewater management for businesses:
    - Promote the return or arrival of essential community services and businesses by removing restrictions caused by on-site septic systems
- Provide for the ability to construct and maintain affordable housing, specifically multi-family housing:
    - Support centralizing affordable housing to Paradise's urban core, along major evacuation routes

ES1.4 Required Permits and Approvals

The required federal, State, and local permits and approvals to move the Proposed Project forward are listed in Table ES-1.

Table ES-1. Anticipated Required Permits and Approvals

Agency and Jurisdiction	Permit, Approval, or Clearance	Relevance
Federal		
US Army Corps of Engineers: Clean Water Act	Section 404 Permit	Permanent or temporary placement and/or removal of material in waters of the US or state, including wetlands
US Fish and Wildlife Service: Endangered Species Act	Section 7 Consultation, Letter of Concurrence	Presence of federally listed plant and wildlife species and critical habitat within the impact area if unable to avoid through siting of horizontal directional drilling or temporary disturbance areas
National Marine Fisheries Service: Endangered Species Act, Magnuson Stevens Essential Fish Habitat	Section 7 Consultation, No Effect Determination	Intent to pursue no effect determination through avoidance of federally listed anadromous fish and critical habitat within the impact area
State Historic Preservation Officer: Section 106 of the National Historic Preservation Act (NHPA)	Concurrence on adequacy of identification effort, National Register of Historic Places eligibility determinations, and Finding of Effect	Aligned with federal permits and consultations
Native American Tribes: • Konkow Valley Band of Maidu • Mechoopda Indian Tribe	Tribal consultation per Section 106 of the NHPA	Tribal consultation, aligned with Assembly Bill 52, Native Americans: California Environmental Quality Act (AB 52) consultation
State		
Native American Tribes: • Konkow Valley Band of Maidu • Mechoopda Indian Tribe	Tribal consultation per AB 52	Tribal consultation, aligned with the CEQA process
State Water Resources Control Board	NPDES Construction Stormwater General Permit	Land disturbance exceeding thresholds
CDFW **(Responsible Agency)**	• Section 2081 Incidental Take Permit • Lake and Streambed Alteration Agreement Both applications require a completed CEQA clearance	• Presence of state-listed (threatened) Swainson's hawks nesting within the impact area • Three trenchless stream crossings
California Department of Transportation	Section 660 of the California Streets and Highways Code	Specific to the trenchless crossing of Highway 99 by the export pipeline
Local		
Butte County **(Responsible Agency)**	Approval for installation and operations and maintenance of the export pipeline and any appurtenant facilities located within County rights of way; **specifically, for encroachment permits within County rights of way.**	Specific to the proposed export pipeline that would be constructed within Butte County ROW

Agency and Jurisdiction	Permit, Approval, or Clearance	Relevance
Private Landowner	Permanent or temporary easements	Specific to the proposed export pipeline installation on two private parcels in City limits when pipeline would leave Skyway and to connect portions of the sewer system to each other within the Core Collection Area
City of Chico **(Responsible Agency)**	Approval to connect the sewer system to the Chico WPCP	Specific to the export pipeline connection to the Chico WPCP
RWQCB **(Responsible Agency)**	• Water Quality Certification for dredge or fill impacts • Sanitary Sewer General Order permit	• Permanent or temporary placement and/or removal of material in waters of the US or state, including wetlands; three proposed trenchless crossing could trigger the need for a Water Quality Certification due to risk of frac-out during construction. • The Town will need coverage under the General Order as an owner/operator of a collection system that is longer than 1 mile
Butte LAFCo **(Responsible Agency)**	Approval to extend the Chico sewer service area	Extension of the Chico sewer service area to include Town
Other		
Union Pacific Railroad (UPRR)	Permit or Easement Agreement	Specific to the export pipeline use of an abandoned UPRR parcel when leave Skyway and trenchless export pipeline crossing of active UPRR track

ES1.5 Proposed Project Components

The Proposed Project would consist of three primary components: Core Collection System, Export Pipeline System, and Extended Collection System. The first two components are analyzed in this PEIR at a project level because sufficient information is available about the characteristics, timing, and locations of these proposed components. Because the Extended Collection System is conceptual in definition and the characteristics, timing, and/or locations of the necessary buried gravity and pressure lines, maintenance holes, and pump stations are not available at the time of PEIR preparation, the Extended Collection System build-out is analyzed at a programmatic level in this PEIR.

Although not a physical change to the environment and, therefore, not required to be included in this PEIR (CEQA Guidelines 15064(d)), the Proposed Project would require the City and Town to enter into an inter-municipal agreement to capture the contractual terms for the provision of wastewater treatment services from the Chico WPCP to the Town (Government Code Section 56133) and a formal agreement or other mechanism for the construction and maintenance of facilities within the Butte County-maintained rights-of-way.

Approval from the Butte County LAFCo is required for the extension of services beyond the boundaries of Chico to allow the City to provide wastewater treatment services to the Town (Government Code Section 56133); therefore, this action is considered in this PEIR.

The following sections describe each of the three Project components and associated construction-related activities, where applicable.

ES1.5.1 Core Collection System

Location and Description. The infrastructure proposed to serve Paradise's sewer service area within a portion of the Town is called the Core Collection System, which aligns with what is defined as the Sewer Service Area (SSA) in the *Town of Paradise 2022 Housing Element*. The Core Collection System would support the centralized businesses and housing in Town, including approximately 1,500 parcels along the Skyway, Clark Road, and Pearson Road corridors (approximately 13 percent of the 11,500 total parcels within Town limits). Construction of the Core Collection System would disturb approximately 10.67 acres. The Core Collection System is shown in Figure ES-2.

The Proposed Project would add an additional 0.109 mgd of wastewater from the Town to the Chico WPCP influent at the time of initial connection (estimated for late 2026). The estimated maximum wastewater conveyance and treatment need for the sewer service area is 464,000 gallons per day (0.464 mgd). This accounts for current and future estimated growth consistent with the current *Town of Paradise General Plan* and *Town of Paradise 2022-2040 Housing Element Update*, and would be realized over a projected 30-year planning horizon (Town of Paradise and Quad Consultants 2008, Town of Paradise 2022a).

The Core Collection System would be sized to serve parcels within the Town's sewer service area and would consist of:

- A system of gravity sewers, which would use energy resulting from a difference in elevation to remove wastewater;
- Small pump stations used to move wastewater to higher elevations to allow subsequent transport by gravity flow;
- Force (pressurized) mains, which are pressurized sewer pipes that convey water under pressure from the discharge side of the pump and are often used where gravity is not enough to move wastewater through a sewer line; and
- A system of gravity sewers, which would use energy resulting from a difference in elevation to remove wastewater.

Most of the Core Collection System components would be constructed within the existing Town right-of-way (ROW). Temporary private easements could be required to install components of the Core Collection System, such as pipelines or pump stations. Because of the varied topography within the sewer service area, pump stations and pressurized force mains would be required to pump flows out of valleys and other low-lying areas to adjacent gravity sewers.

The Core Collection System would consist of approximately 157,000 feet of 6- to 8-inch-diameter gravity sewers, 29,000 feet of 2- to 4-inch-diameter force mains, and up to 28 pump stations. The

pipelines would be buried approximately 3 to 15 feet below the ground surface, depending on local topography and sewer system design features and constraints. At individual parcels (residential dwellings and businesses), public sewer laterals (typically 4 inches in diameter) would extend from the Core Collection System's gravity sewer main to the property line, transitioning to a private sewer lateral within the parcel, leading to the structure.

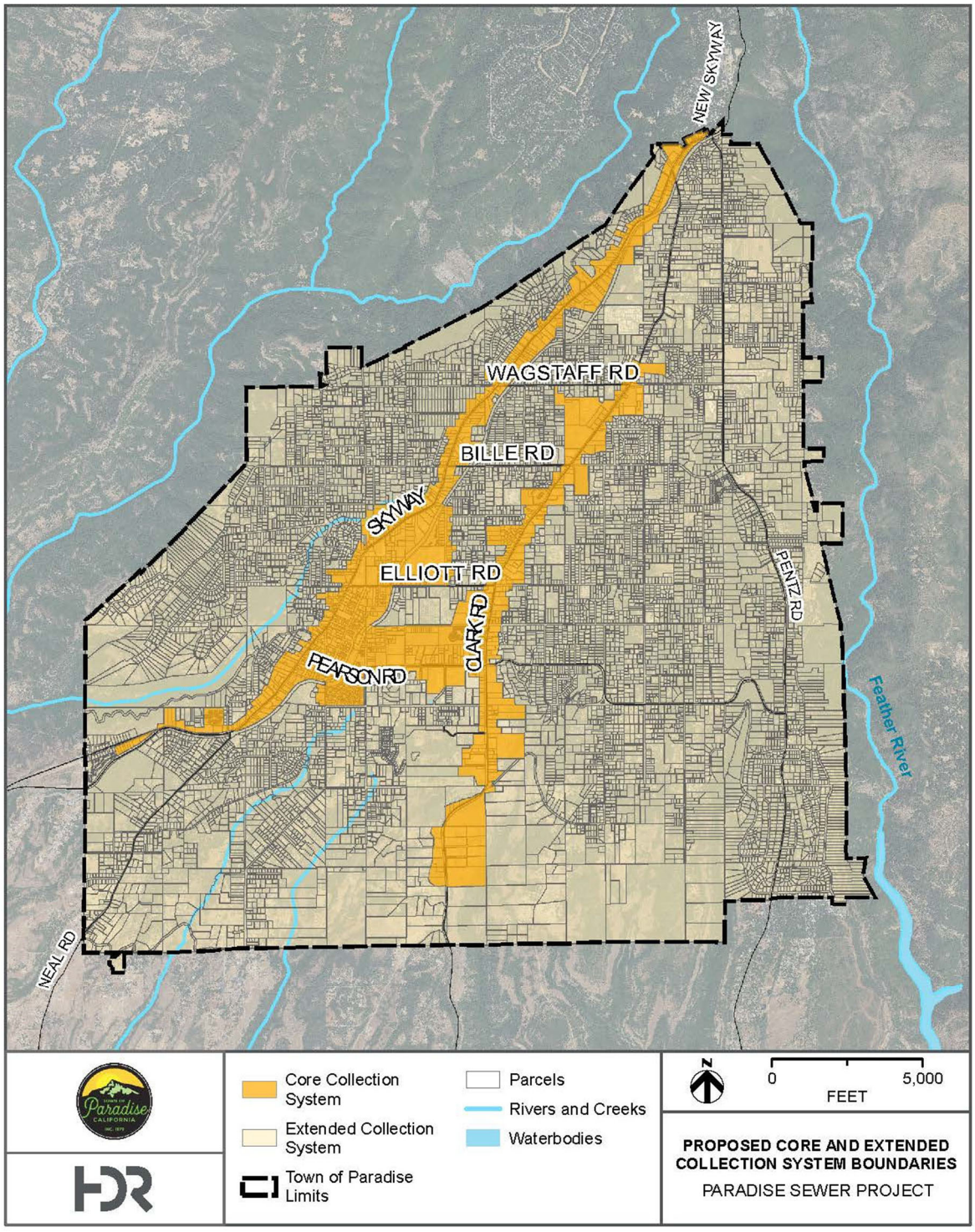

Figure ES-2. Town of Paradise Proposed Core and Extended Collection System Boundaries

Construction Methods. Construction within the Town's ROW would use open-cut trenching methods to install the pipes and structures that comprise the Core Collection System. Open cut trenching is a method of installation that requires opening up the surface of the ground to install, repair or replace a new structure, such as a pipe, conduit, or cable. Where located within public streets, portions of the Town's ROW would serve as a temporary construction zone, with restricted access to the ROW to allow trenching equipment to dig trenches. Work crews would install the pipe and structures, then backfill the excavation, restore the ground surface to its previous or better conditions and re-establish full access to the area. The required maintenance holes and pump stations would involve similar construction methods of open cut, installation, backfill, and restoration.

Materials. The following excavated and fill materials are anticipated for Core Collection System construction (HDR 2022): export of 169,400 cubic yards of soil and import of 62,600 cubic yards of fill material. Other materials that would be used in the Core Collection System construction (HDR 2022) include: polyvinyl chloride (PVC) pipe and miscellaneous fittings, pre-built pump stations and associated mechanical/electrical components, temporary and permanent paving (asphalt), and backfill material.

Schedule. Based on an anticipated 22-month construction period for the Core Collection System, an average of 750 round-trip truck trips distributed across an average of 11 crews working at a given time would be generated each working day during construction (HDR 2022). Based on an anticipated 22-month construction period, installation of the Core Collection System would require multiple crews to be working at the same time (HDR 2022).

Easement Requirements. The majority of the Core Collection System would be installed within the Town's ROWs (i.e., Town streets, existing public ROW). However, small segments of the Core Collection System may need to cross private parcels to install components of the Core Collection System, such as pipelines or pump stations. In those cases, easements would be acquired from the property owners.

ES1.5.2 Export Pipeline System

Location and Description. The proposed Export Pipeline System would start at the southern end of the Core Collection System as a gravity sewer line and would continue southwest approximately 18 miles to the City for connection to the Chico WPCP. In total, construction of the Export Pipeline System would disturb approximately 5.95 acres. The system would be primarily constructed within Butte County public ROW, except for approximately 5,700 feet (1.1 miles) of pipeline in southern Chico on privately owned parcels and at the connection with the Chico WPCP . In the southern Chico location, the proposed pipeline alignment leaves the Butte County public ROW at Skyway and runs first along an inactive Union Pacific Railroad (UPRR)-owned parcel before crossing two private parcels located within the City limits just east of SR 99. This segment comprising the UPRR parcel and the two private parcels in the City is the only section along the proposed Export Pipeline System that is not in the public ROW, other than the connection with the Chico WPCP. The segment for connection to the Chico WPCP would fall within the WPCP site, which is City property. Further, the crossing of the two private parcels and the final connection at the Chico WPCP are the only segments of the Proposed Project that would fall within City boundaries. Figure ES-3 shows the Export Pipeline System route.

The Proposed Export Pipeline System would include the following sub-components:

- **Ridge Gravity Section**: The Export Pipeline System begins with the Ridge Gravity Section. In this section, the wastewater flows by gravity and no pump stations would be required. To handle both the initial low wastewater flows and future build out flows, two separate gravity sewer pipes, with an accompanying fiber-optic conduit for pipeline operations, will be installed within the County ROW.
- **Transition Chamber**: The Transition Chamber would provide the necessary transition of the wastewater flow from the steep Ridge Gravity Section to the Gravity Force Main Section that runs along the flatter portions of the valley floor, connecting the Gravity Force Main Section to the Chico WPCP. The Transition Chamber would be installed along Skyway, just before the pipeline reaches the City limits. The chamber would be a below-ground (likely cylindrical) structure with a small box-like structure above ground to house electronics associated with measurement devices within the chamber.
- **Gravity Force Main Section**: Flow leaving the Transition Chamber would be pressurized based on the gravity flow from the Ridge Gravity Section, and the pipe would flow full, creating a beneficial force main based on the hydraulic behavior of the sewer, so the effluent can reach the Chico WPCP. The Gravity Force Main Section would consist of a pipe, with an accompanying fiber-optic conduit. The pipeline would be installed along existing roads within the County ROW, or within permanent sewer easements obtained from private property owners, if necessary.
- **Maintenance Holes**: Approximately 80 maintenance holes, which are required for the maintenance of the pipelines, would be placed along the Ridge Gravity and Gravity Force Main Sections.
- **Flow Control and Metering Structure**: A Flow Control and Metering Structure, located at or near the Chico WPCP, would consist of two below-ground circular chambers (or similar) next to each other. Similar to the Transition Chamber, a small, above-ground, box-like structure would house electronics associated with the flow control and measurement devices installed below ground. The first below-ground chamber would be dry (the wastewater would remain within the pipe that is exposed within the chamber) and would contain a magnetic flow meter and a pressure gauge on the pipeline. The second chamber would be wet, with the wastewater discharging into the chamber via a modulating plug valve. A modulating plug valve would keep the Transition Chamber and Gravity Force Main Sections full, to maintain the hydraulic function of the Gravity Force Main Section. In this chamber, the wastewater would travel through the modulating valve, discharge into the open chamber, and then flow by gravity from the second chamber to the existing Influent Sewer Junction Box A at the Chico WPCP. This would be the terminus of the Export Pipeline System.

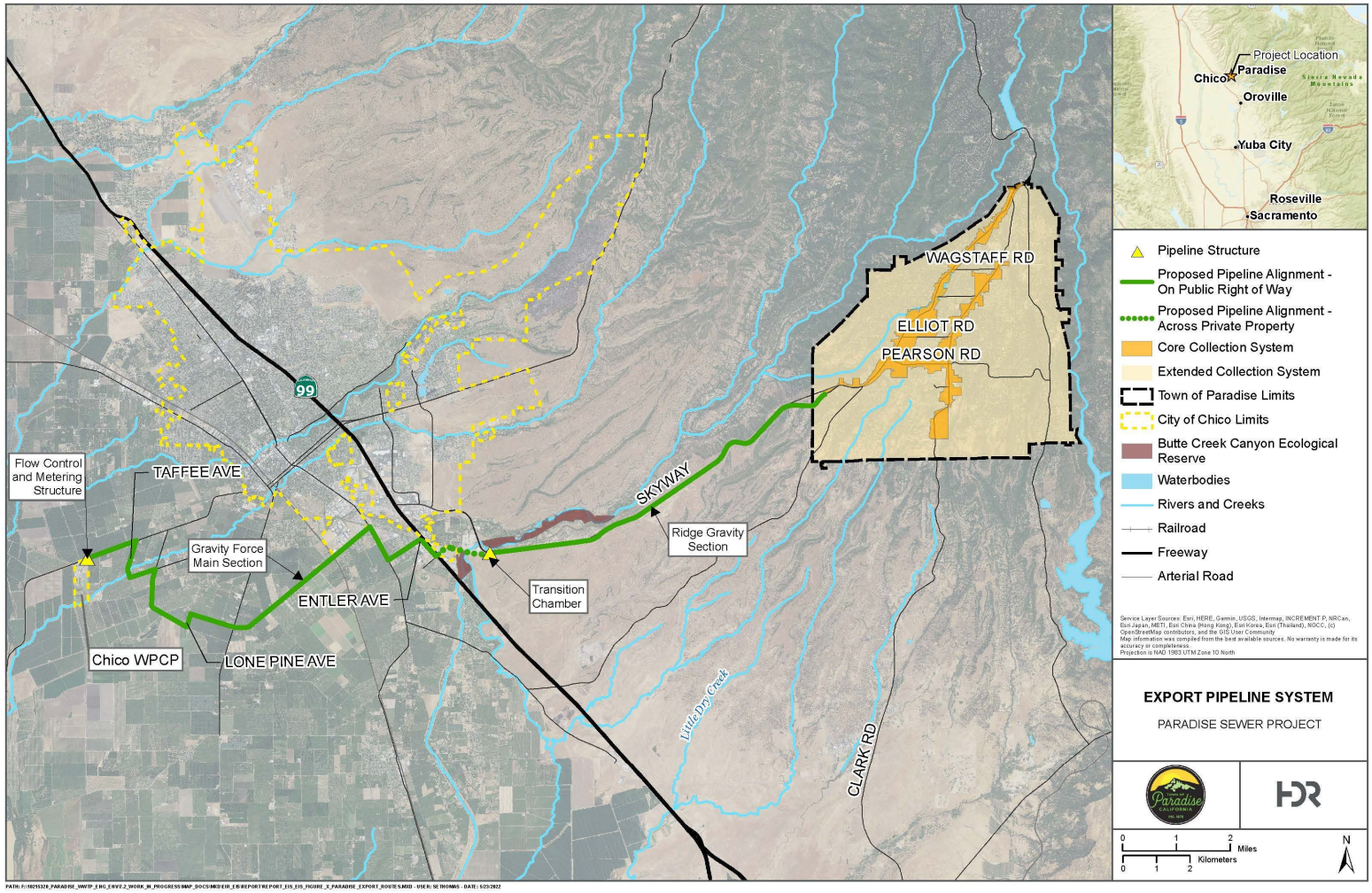

Figure ES-3. Export Pipeline System

- **Fiber-optic Conduit:** The Proposed Project includes two below-ground structures along the Export Pipeline System: a Transition Chamber and a Flow Control and Metering Structure. These two structures include instruments that would monitor various parameters of the wastewater, such as water levels, valve positions, and wastewater flow rate. To reliably communicate the signals from those electrical instruments to the Town and the Chico WPCP, the Proposed Project would include installation of a fiber-optic conduit in the same trench as the Export Pipeline System. The conduit would be made of metal, PVC, or fiberglass braiding, and would be placed above the pipelines.
- **Chico WPCP Connection**: The southern end of the Export Pipeline System would connect to the existing Chico WPCP. This connection would involve using an existing stub-out pipe or drilling a hole in an existing below-ground concrete box at the facility and connecting the new pipeline. Consistent with existing operations, the wastewater would be treated at the Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser. It is anticipated that the Town's connection would fall within the requirements of the current National Pollutant Discharge Elimination System (NPDES) permit.

Construction Methods. The Export Pipeline System would generally be constructed using open-cut methods (also known as open-trench method). The construction sequence would consist of (1) backhoe excavation; (2) shoring systems installation for trench excavation protection to achieve the excavation depth; (3) pipe installation; and (4) trench backfill placement, with subsequent shoring system removal and ground surface restoration.

A trenchless construction method is proposed at five locations (Butte Creek and Butte Creek Canyon Ecological Reserve, Comanche Creek, Little Chico Creek, SR 99, and UPRR) along the proposed Export Pipeline System route. The trenchless crossings would be constructed using either horizontal directional drilling (HDD) or microtunneling methods, depending on the feature being crossed. Both methods would involve excavated pits at either end of the crossing to allow pipe installation beneath the feature (e.g., creek, highway, railroad), and avoiding the disruption of excavation at the surface of the specific feature location.

Materials. The following excavated and fill materials are anticipated for Export Pipeline System construction (HDR 2022): export of 60,800 cubic yards of soil and import of 22,900 cubic yards of fill material. Other materials that are anticipated to be used on the Export Pipeline System construction (HDR 2022) include: PVC pipe and miscellaneous fittings, concrete maintenance holes, precast concrete cylinders, metal carrier pipe, temporary and permanent paving (asphalt), and backfill material.

Schedule. Installation of the Export Pipeline System would occur over an 18-month construction period and would require multiple crews to be working at the same time.

Easement, Encroachment, or Access Permission Requirements. The Skyway segment of the Export Pipeline System is located within the County public ROW; therefore, construction would require a form of access agreement with general and special County conditions, as well as an ongoing access agreement for maintenance activities. Once the pipeline alignment departs from Skyway to head towards the Chico WPCP, it would remain within an inactive UPRR rail corridor parcel before bisecting two private parcels, owned by a single landowner; these crossings would require ROW acquisitions

from UPRR and the private property owner. The total length of pipeline that would be on private parcels is approximately 5,700 feet (1.1 miles). For crossing the private parcels, the Town would purchase both temporary (construction) and permanent easements from the parcel owner. The construction easements would provide sufficient space to install the export pipeline as well as for construction vehicles to move across the parcels and reach public roads. The permanent easements would be necessary to allow future access to the pipelines, should maintenance work be required. The pipeline would then cross SR 99, requiring a Caltrans encroachment permit, and finally reconnect to the County public ROW at Entler Avenue. The pipeline would follow County public roads to the Chico WPCP, again requiring County permits. Along this segment, the pipeline makes a trenchless crossing of an active UPRR rail corridor, requiring an additional UPRR encroachment permit.

ES1.5.3 Extended Collection System

The Extended Collection System would be an extension of the Core Collection System that would allow collection of sewage from parcels outside the Core Collection System, within the Town limits. The Extended Collection System is shown in Figure ES-2. The flow from the Extended Collection System and Core Collection System combined would be limited to the total discharge agreed to between the Town and City, which is currently set at 0.464 mgd, the estimated build-out of the sewer service area. However, the overall purpose of the Proposed Project is not to serve the entire Town. Areas will continue to exist that are served by the existing District. Instead, the Extended Collection System will provide an opportunity for other property owners within Town limits to connect, particularly those owners with properties near the Core Collection System boundaries that aim to serve higher density uses, such as commercial or multi-family housing. In addition, no portion of the Extended Collection System would extend beyond the Town limits in any case. No sewer service connections would be considered outside the Town and pursuant to the principals of agreement with Chico, the project is not designed or intended to serve properties in unincorporated Butte County.

The Extended Collection System would consist of force mains, gravity trunk lines, and additional pump stations. It would likely be constructed as multiple smaller efforts, with geographically similar clusters of parcels within the Town limits being treated as separate individual projects. The methods and materials used to construct the Extended Collection System would be similar to the Core Collection System. If an Extended Collection System is implemented in the future, it is assumed that similar crew composition and sizes as well as construction equipment would be used, but for shorter durations.

ES1.6 Proposed Schedule

Construction of the Core Collection System would occur over approximately 22 months, with mobilization beginning in August 2024 and completion by May 2026. The Export Pipeline System would be constructed over an 18-month period beginning in August 2024 and ending in January 2026. The Core Collection System and the Export Pipeline System would go through their own individual startup periods, to confirm operation of each one individually. The entire Project would then go through a 2-month system start-up period in June and July 2026. Construction of the Extended Collection System would occur following completion of construction of the Core Collection System and Export Pipeline System, and would be expected to occur between 2026 and 2056.

The Proposed Project within the Core Collection System area would be operational in 2026, with consideration of the Extended Collection System connections through 2056. While the Proposed Project would be in place and able to receive inflow and discharge to the Chico WPCP in 2026, actual sewer flow would be discharged into the pipeline as the private properties connect to it. Initially, the Proposed Project would add 0.109 mgd of wastewater from the Town to the Chico WPCP influent. The full build-out flow of 464,000 gallons per day (0.464 mgd) may not be realized until 2057 or beyond.

ES1.7 Proposed Staging, Traffic Management, and Access Points

Figure ES-4 shows the location of the potential staging areas. Up to 11 staging areas for equipment and materials have been identified for potential use by the contractor to maximize access to work areas and store material. These areas have also been selected because they avoid effects on sensitive environmental resources. Staging areas would have temporary fencing installed to provide a secure storage area and might require minor grading to create a level work surface. No permanent paving would be done. Any unpaved areas temporarily used for construction staging would be returned to their original or better condition. If staging areas are located on public property, encroachment permits would be obtained from the public agency that owns the property. If staging areas are located on private property, temporary construction easements would be acquired from the private property owner.

No permanent road closures would result from construction of the Proposed Project. Temporary full road closures are not anticipated; however, could occur, if necessary for public safety for a short duration (approximately 2 to 4 hours). No road closures are planned within City limits. For locations where the pipeline is being installed along existing Town or County public ROW, temporary, single-lane road closures with traffic controls around the work areas could occur along the following roads:

- Skyway
- Entler Avenue
- Midway
- Hegan Lane
- Elk Avenue
- Lone Pine Avenue
- Crouch Avenue
- Chico Avenue
- Taffee Avenue
- Chico River Road

The Export Pipeline System would be primarily constructed within the County public ROW, except for approximately 5,700 feet (1.1 miles) of pipeline construction in southern Chico. Where the proposed pipeline alignment leaves the Butte County public ROW at Skyway, it would remain within an inactive UPRR corridor parcel before bisecting two private parcels located within the City limits. For all construction, trucks moving equipment in and out, hauling away excess material, and importing material would move across the parcels within boundaries outlined in temporary construction easements to reach the public roads or remain within public ROW. Trucks hauling loose materials, such as soil and gravel, would be covered to prevent damage to other vehicles.

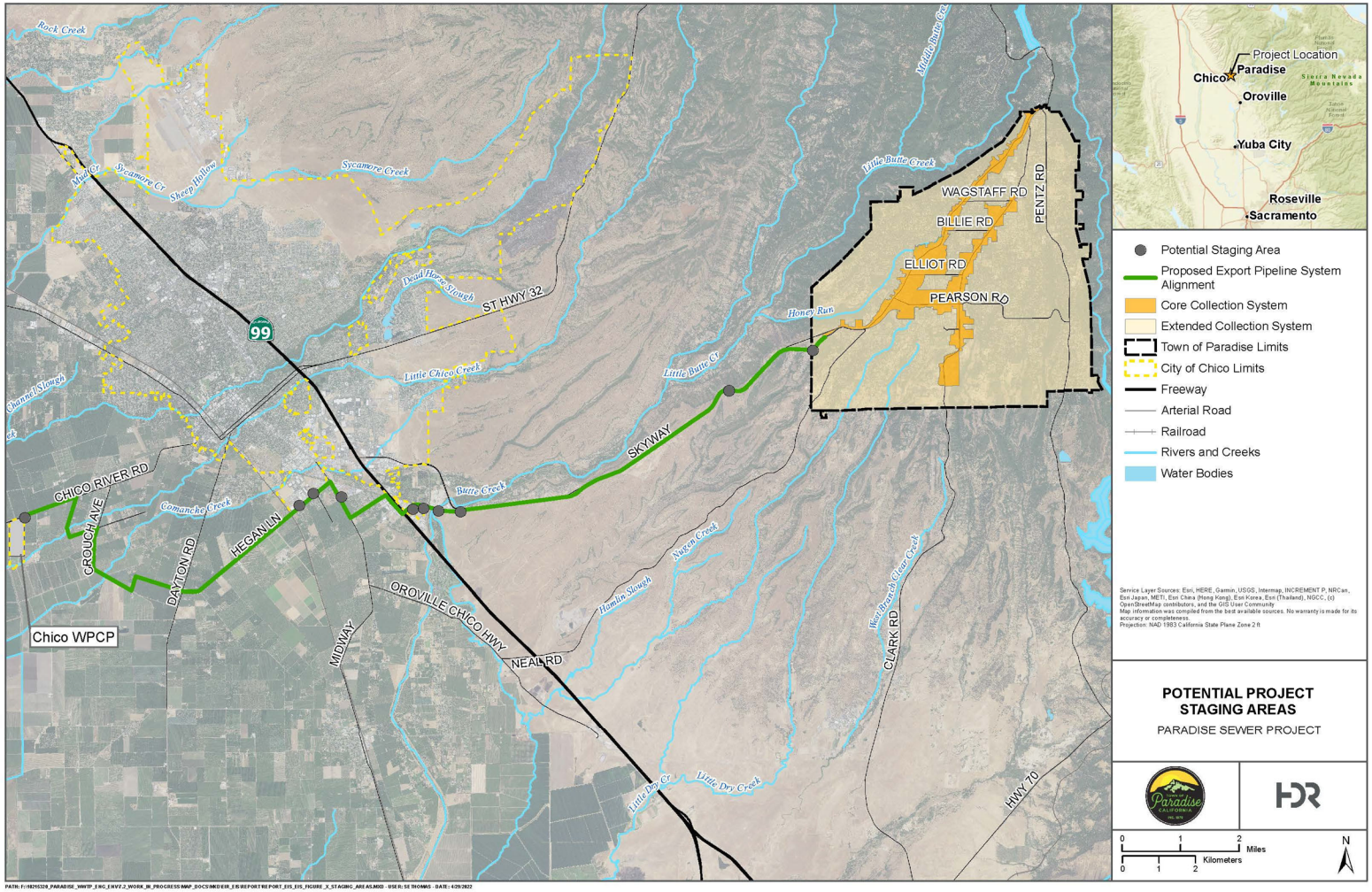

Figure ES-4. Potential Staging Areas

ES1.8 Proposed Operation and Maintenance

The Town would own, operate, and maintain the Core Collection System, Export Pipeline System and Extended Collection System. The Town may hire additional staff to handle these operation and maintenance activities. The wastewater operations team would include the following support positions, some of which may be provided by current Town staff: administrative and reception staff, accounting staff, three field crew/utility staff, and one on-site service technician. The existing Public Works director would serve in the management role over sewer functions.

The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Systems General Order, or SSSGO) was adopted by the SWRCB in May 2006 to provide a consistent statewide approach for reducing sanitary sewer overflows (including leakages). The SSSGO applies to all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. Since the Town's collection system will have more than one mile of sewer pipe, and the Town will own and operate the collection system, the Town will comply with the SSSGO. The RWQCB will oversee the permitting of the Town's collection system under the SSSGO. Per the SSSGO, and subject to its terms, the Town will develop a sewer system management plan. The sewer system management plan will include policies, procedures and activities covering the planning, management, operation and maintenance of the collection system. As part of this sewer system management plan, the Town must also develop and implement an overflow emergency response plan to identify measures to protect public health and the environment. Pursuant to the SSSGO, the Town will be required to report sanitary system overflows to the RWQCB using an electronic reporting system. Review and approval by the City and County of the Town's proposed sewer system management plan would be required prior to start of operations.

In addition to the sewer system management plan and related requirements, and prior to the start of operations, the Town will adopt applicable ordinances and establish internal administrative procedures to permit and regulate future property owner connections to the Proposed Project .

ES1.9 Project Alternatives

The following four alternatives were selected for comparative analysis in this PEIR:

- **No Project Alternative**: The No Project Alternative is required by CEQA and consists of the circumstances under which the Proposed Project does not proceed.
- **Entler Avenue Hybrid Alternative**: Proposed Project with alternative pipeline alignment for crossing SR 99.
- **Crouch Avenue Alternative**: Proposed Project with alternative pipeline alignment for crossing Little Chico Creek.
- **Entler Avenue Hybrid and Crouch Avenue Alternative**: Proposed Project with alternative pipeline alignment for crossing SR 99 and alternative pipeline alignment for crossing Little Chico Creek.

The following sections describe each of the four alternatives.

ES1.9.1 No Project Alternative

Under the No Project Alternative, the Town would not construct a Core Collection System, an Export Pipeline System, or an Extended Collection System. The Town would continue to rely on private, individual septic systems for wastewater management.

ES1.9.2 Entler Avenue Hybrid Alternative

The Entler Avenue Hybrid Alternative would include the same Core Collection System within the Town and the same Export Pipeline System along Skyway but would provide an alternative route between Skyway and Entler Avenue (see Figure ES-5). This alternative would cross Butte Creek with trenchless HDD at the same location as the Proposed Project but would cross SR 99 north of the Proposed Project alignment, crossing the California Highway Patrol property and another private parcel. Similar to the Proposed Project, the Entler Avenue Hybrid Alternative would cross SR 99 with a trenchless crossing aligned with Norfield Avenue. The pipeline would then rejoin the Proposed Project alignment along Entler Avenue. The total length of this alternative segment is approximately 2,622 feet. All other components of the Proposed Project would remain the same as defined in Section ES1.5.

ES1.9.3 Crouch Avenue Alternative

The Crouch Avenue Alternative would include the same Core Collection System within the Town and the same Export Pipeline System along Skyway but would provide an alternative route for the pipeline to cross Little Chico Creek (see Figure ES-6). After the Proposed Project alignment would cross Comanche Creek and turn north along Crouch Avenue, the Crouch Avenue Alternative would continue along Crouch Avenue to Chico River Road, crossing Little Chico Creek along the way. Little Chico Creek would be crossed using trenchless technology via HDD methods. The Crouch Avenue Alternative would then turn west to rejoin the Proposed Project alignment as it travels west along Chico River Road to the Chico WPCP. The total length of this alternative segment is approximately 7,353 feet. All other components of the Proposed Project would remain the same as defined in Section ES1.5.

ES1.9.4 Entler Avenue Hybrid and Crouch Avenue Alternative

The Entler Avenue Hybrid and Crouch Avenue Alternative would include the same Core Collection System within the Town and the same Export Pipeline System along Skyway but would provide alternative routes for the pipeline to cross Highway SR 99 and Little Chico Creek. This alternative comprises a combination of the Entler Avenue Hybrid and Crouch Avenue alternatives discussed above. The total length of the combined alternative segments is approximately 9,975 feet. All other components of the Proposed Project would remain the same as defined in Section ES1.5.

ES1.10 Environmental Impacts from the Proposed Project

Table ES-2 summarizes direct and indirect impacts from construction and operation of the Proposed Project.

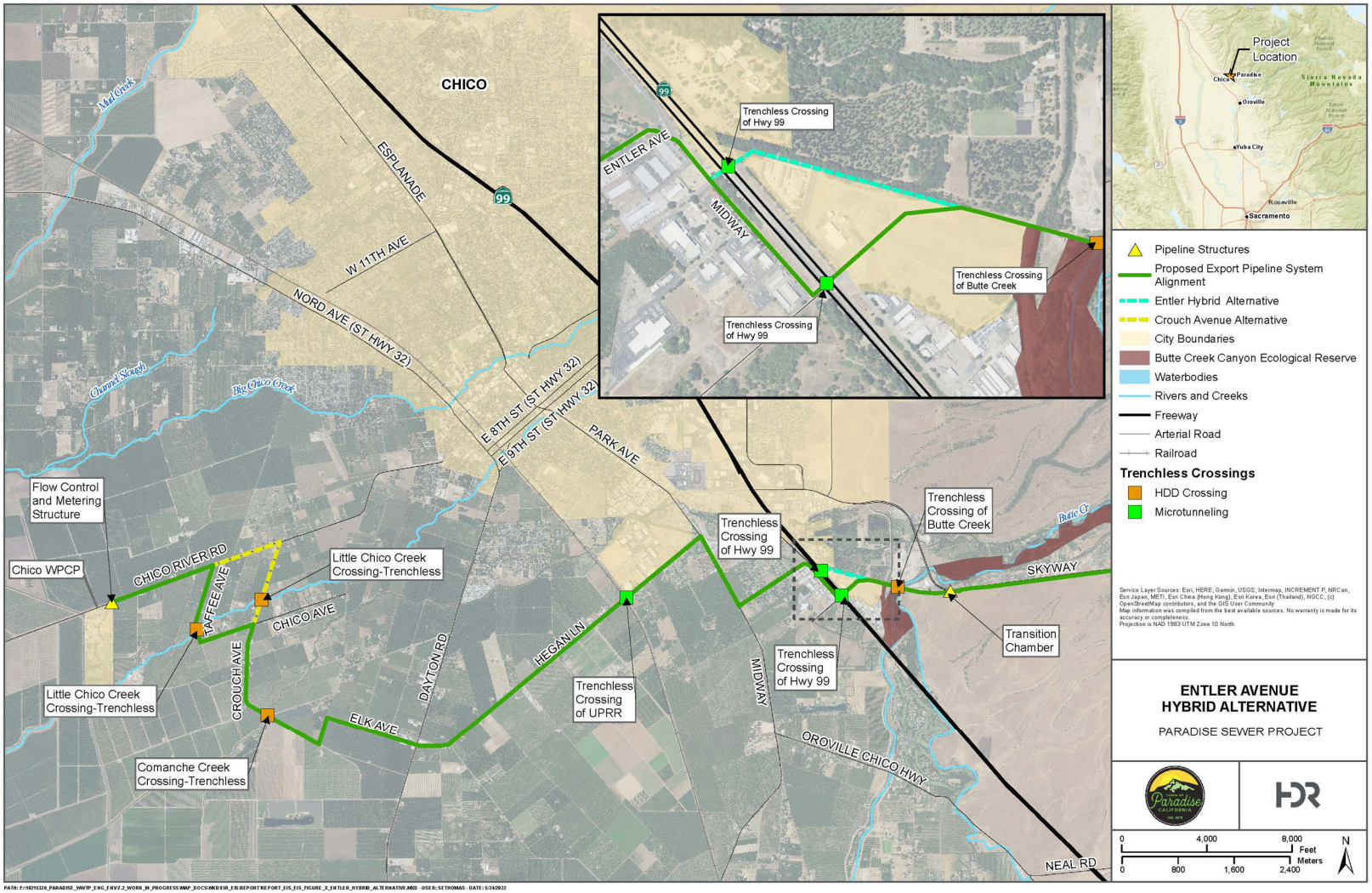

Figure ES-5. Entler Avenue Hybrid Alternative

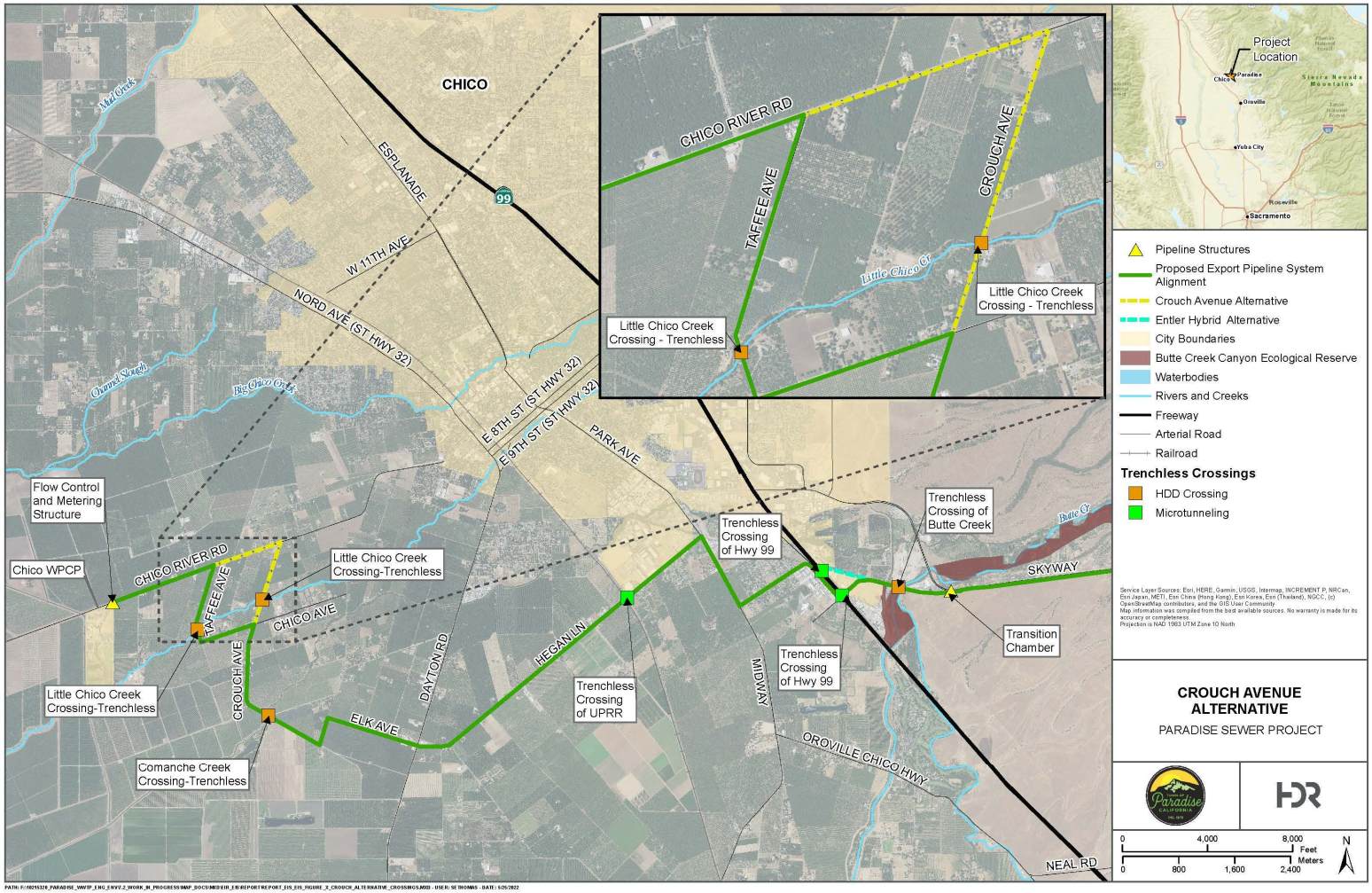

Figure ES-6. Crouch Avenue Alternative

Table ES-2. Summary of Proposed Project Impacts

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Agriculture and Forestry Resources			
Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use	No Impact	Not Applicable	No Impact
Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract	No Impact	Not Applicable	No Impact
Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC § 12220(g)), timberland (as defined by PRC § 4526), or timberland zoned Timberland Production (as defined by California Government Code § 51104(g))	No Impact	Not Applicable	No Impact
Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use	No Impact	Not Applicable	No Impact
Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Air Quality			
Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Biological Resources			
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Plant Species	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-2: Special-status Plant Surveys MM-BIO-3: Special-status Plant Avoidance MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training MM-BIO-5: Restoration of Temporarily Disturbed Areas	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Vernal Pool Crustaceans	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Valley Elderberry Longhorn Beetle	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-9: Mapping of Elderberry Shrubs and Section 7 Consultation MM BIO-10: No Net Loss of Elderberry Shrubs MM-BIO-11: Elderberry Transplanting MM BIO-12: Avoidance Area MM-BIO-13: Chemical Use MM-BIO-14: Mowing	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Fishes	Significant Impact	MM-BIO-15: Frac-Out Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-status Amphibians and Reptiles	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas MM-BIO-16: Western Pond Turtle Visual Encounter Surveys MM-BIO-17: Foothill Yellow-legged Frog Surveys MM-BIO-18: California Red-legged Frog Surveys. MM-BIO-19: Conduct Construction Activities during the Active Period for Giant Garter Snakes. MM-BIO-20: Minimize Potential Effects on Giant Garter Snake Habitat.	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: MBTA and FGC-Protected Birds and Raptors	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-21: MBTA and FGC-Protected Bird and Raptor Surveys MM-BIO-22: Protocol Swainson's Hawk Surveys MM-BIO-23: Nest Avoidance	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Bats	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-24: Bat Surveys	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: American Badger	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-25: American Badger Detection Surveys	Less-Than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-5: Restoration of Temporarily Disturbed Areas MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas	Less-Than-Significant Impact
Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-5: Restoration of Temporarily Disturbed Areas MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas MM-BIO-26: State or Federally Protected Wetlands Mitigation	Less-Than-Significant Impact
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites	No Impact	Not Applicable	No Impact
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	No Impact	Not Applicable	No Impact
Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	No Impact	Not Applicable	No Impact
Cultural Resources			
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	Significant Impact	MM-CUL-1: Targeted archaeological monitoring MM-CUL-2: Follow inadvertent discovery procedures	Less-Than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Energy			
Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	No Impact	Not Applicable	No Impact
Geology, Soils, and Paleontological Resources			
Impact GEO-1(a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	No Impact	Not Applicable	No Impact
Impact GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	No Impact	Not Applicable	No Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Significant Impact	MM-GEO-2: Inadvertent Discovery Protocol	Less-Than-Significant Impact
Greenhouse Gas Emissions			
Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of GHG	No Impact	Not Applicable	No Impact
Hazards and Hazardous Materials			
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	Significant Impact	MM-HAZ-1: Vehicle Equipment Access and Fueling	Less-than-Significant Impact
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment	Significant Impact	MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan	Less-than-Significant Impact
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	No Impact	Not Applicable	No Impact
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Significant Impact	MM-HAZ-3: Road Closure Restrictions MM-HAZ-4: Rapid Demobilization Plan MM-HAZ-5 : Evacuation Warning Procedures MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	Significant Impact	MM-HAZ-1: Vehicle Equipment Access and Fueling MM-HAZ-7: Incorporate Fire Prevention Measures MM-HAZ-8: Incorporate Public Safety Measures MM-HAZ-9: Wildland Fire Area	Less-than-Significant Impact
Hydrology and Water Quality			
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	Significant Impact	MM-HAZ-1: Vehicle and Equipment Access and Fueling MM-HYD-1: Stormwater Management and Treatment Plan MM-HYD-2: Construction Best Management Practices MM-BIO-15: Frac-out Plan	Less-than-Significant Impact
Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HYD-3(a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on or off-site	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan	Less-than-Significant
Impact HYD-3(b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan MM-HYD-3: Flood Protection Plan	Less-than-Significant Impact
Impact HYD-3(c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan MM-HYD-3: Flood Protection Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact HYD-3(d): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Impede or redirect flood flows	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation	Significant Impact	MM-HYD-3: Flood Protection Plan	Less-than-Significant Impact
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan	Less-than-Significant Impact
Land Use and Planning			
Impact LU-1: Physically divide an established community	No Impact	Not Applicable	No Impact
Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	No Impact	Not Applicable	No Impact
Noise and Groundborne Vibration			
Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	Significant Impact	MM-NSE-1: Minimize Construction Noise	Less-Than-Significant Impact
Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels	Significant Impact	MM-NSE-1: Minimize Construction Noise	Less-Than-Significant Impact
Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Population and Housing			
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	No Impact	Not Applicable	No Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Public Services			
Impact PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact PS-1(b): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Recreation			
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Transportation			
Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	No Impact	Not Applicable	No Impact
Impact TRA-4: Result in inadequate emergency access	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Tribal Cultural Resources			
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC §21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC § 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC §5024.1. In applying the criteria set forth in subdivision (c) of PRC §5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.	Significant Impact	MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe MM-TCR-2: Tribal Cultural Monitoring	Less-than-Significant Impact
Utilities and Service systems			
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	Significant Impact	MM-UTIL-1: Minimize Utility and Service System Disruptions	Less-Than-Significant Impact
Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years	No Impact	Not Applicable	No Impact
Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	No Impact	Not Applicable	No Impact
Impact UTIL-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	No Impact	Not Applicable	No Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	No Impact	Not Applicable	No Impact
Wildfire			
Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	Significant Impact	MM-HAZ-3: Road Closure Restrictions MM-HAZ-4: Rapid Demobilization Plan MM-HAZ-5: Evacuation Warning Procedures MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	Significant Impact	MM-HAZ-1: Vehicle and Equipment Access and Fueling MM-HAZ-7: Incorporate Fire Prevention Measures MM-HAZ-8: Incorporate Public Safety Measures MM-HAZ-9: Wildland Fire Area	Less-than-Significant Impact
Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	Significant Impact	MM-HAZ-1: Vehicle and Equipment Access and Fueling MM-HAZ-7: Incorporate Fire Prevention Measures MM-HAZ-8: Incorporate Public Safety Measures MM-HAZ-9: Wildland Fire Area	Less-than-Significant Impact
Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	Significant Impact	MM-HYD-1: Stormwater Management Plan MM-HYD-3: Flood Protection Plan MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact

ES1.11 Environmental Impacts from the Project Alternatives

Table ES-3 summarizes the impacts of the alternatives, as described in Section ES1.9, and compares it with the Proposed Project impacts.

Table ES-3. Comparison of Proposed Project Alternative Impacts

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Agriculture and Forestry Resources					
Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Air Quality					
Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people	LTS	LTS (+)	LTS (=)	LTS (=)	LTS (=)
Biological Resources					
Impact BIO-1: Substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS	S/M	NI (-)	S/M (+)	S/M (=)	S/M (+)
Impact BIO-2: Substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	S/M	NI (-)	S/M (+)	S/M (=)	S/M (+)
Impact BIO-3: Substantial adverse effect on state or federally protected wetlands	S/M	NI (-)	NI (-)	S/M (+)	S/M (+)
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	NI	NI (=)	NI (=)	NI (=)	NI (=)
Cultural Resources					
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Energy					
Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	NI	NI (=)	NI (=)	NI (=)	NI (=)
Geology, Soils, and Paleontological Resources					
Impact GEO-1(a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	NI	SU (+)	NI (=)	NI (=)	NI (=)
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Greenhouse Gas Emissions					
Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of GHG	NI	NI (=)	NI (=)	NI (=)	NI (=)
Hazards and Hazardous Materials					
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	NI	NI (=)	NI (=)	NI (=)	NI (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Hydrology and Water Quality					
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HYD-3(a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on or off-site	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-3(b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-3(c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact HYD-3(d): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Impede or redirect flood flows	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HYD-4: In flood hazard, risk release of pollutants due to Project inundation	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Land Use and Planning					
Impact LU-1: Physically divide an established community	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	NI	NI (=)	NI (=)	NI (=)	NI (=)
Noise and Groundborne Vibration					
Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	S/M	NI (-)	S/M (=)	S/M (-)	S/M (=)
Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels	S/M	NI (-)	S/M (=)	S/M (-)	S/M (=)
Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels	LTS	NI (-)	NI (-)	LTS (+)	LTS (+)
Population and Housing					
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	NI	NI (=)	NI (=)	NI (=)	NI (=)
Public Services					
Impact PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(b): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Recreation					
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Transportation					
Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact TRA-4: Result in inadequate emergency access	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Tribal Cultural Resources					
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Utilities and Service Systems					
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact UTIL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	NI	NI (=)	NI (=)	NI (=)	NI (=)
Wildfire					
Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Note: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

ES1.12 Areas of Known Controversy

CEQA Guidelines Section 15123 states that an EIR must identify areas of known controversy that may have been raised by other agencies, the public, or other stakeholders. Areas of communicated controversy related to the Proposed Project or identified in the PEIR scoping process include, but are not limited to:

- Growth-inducing impacts, specifically in the City of Chico and rural Butte County outside Town and City limits.
- Reconsideration of local treatment plant construction instead of the proposed connection to the Chico WPCP, which was evaluated in 2017 and 2020.

ES1.13 Issues to be Resolved

CEQA Guidelines Section 15123 calls for the lead agency to include issues to be resolved in the EIR, including the choice among alternatives and whether or how to mitigate significant effects. Issues to be resolved related to the Proposed Project or PEIR include, but are not limited to, the following:

- Political details of connecting the export pipeline to the Chico WPCP. The Town and the City will enter into an inter-municipal agreement that will capture the mutually determined details of the connection. SRPAC (discussed previously in Section 1.3.2) has developed a principles of agreement document, which captures the overall approaches to various aspects of the connection and will be turned into the formal inter-municipal agreement, which is being completed in parallel with this CEQA process.
- Encroachment permits and applicable agreements from Butte County, as needed, for **field investigations and** installation of the pipeline system located within County rights-of-way.
- Applicable easements from private landowners.
- Establishing Town administrative procedures to permit future connections to the Proposed Project core collection system.
- Establishing Town administrative procedures to permit future connections to the Proposed Project extended collection system.
- Establishing sewer standards and regulations for the Town, including operations and maintenance for the core wastewater collection system and export pipeline Project components, as well as the extended collection system service area within Town limits being considered programmatically in this PEIR.

ES1.14 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(c) requires an EIR to discuss significant effects, including those that can be mitigated but not reduced to a level of insignificance. The CEQA Guidelines state that: “[w]here there are impacts that cannot be alleviated without imposing an alternative design, their implications, and reasons why the project is being proposed, notwithstanding their effect, should be described.”

Significant impacts would occur for the following resource topic areas: biological resources; cultural resources; geology, soils and paleontological resources; hazards and hazardous materials; hydrology and water quality; noise and groundborne vibration; public services; transportation; tribal cultural

resources; utilities and service systems; and wildfire. However, as shown in Table ES-2, all impacts could be mitigated to a less than significant level, and no significant and unavoidable impacts are anticipated.

ES1.15 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an "environmentally superior" alternative be selected among the alternatives that are evaluated in the EIR. Generally, the environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. For the purpose of this analysis, the alternatives considered are:

- Proposed Project
- No Project
- Entler Avenue Hybrid Alternative – Proposed Project with alternative pipeline alignment for crossing SR 99
- Crouch Avenue Alternative – Proposed Project with alternative export pipeline alignment for crossing Little Chico Creek.
- Entler Avenue Hybrid and Crouch Avenue Alternative – Proposed Project with alternative pipeline alignment for crossing SR 99 and alternative pipeline alignment for crossing Little Chico Creek.

Based on the results of the alternatives analysis, the Crouch Avenue Alternative would be the environmentally superior alternative because fewer impacts would occur on air quality, noise and groundborne vibration, and biological resources (special-status species and sensitive communities) when compared to the Proposed Project and other action alternatives. However, as noted above, the Crouch Avenue Alternative would also result in a greater level of impacts on state or federally protected wetlands than the Proposed Project. Since impact findings for the Proposed Project and all action alternatives with mitigation incorporated show less than significant impacts or no impacts for all resource areas, selection of any of the three action alternatives would not significantly alter the potential for effects of implementing the Proposed Project.

1. Introduction

This Program Environmental Impact Report (PEIR) has been prepared in accordance with the California Environmental Quality Act (CEQA), which is found in the California Public Resources Code (PRC), Division 13; and with the CEQA Guidelines, which are found in the California Code of Regulations, Title 14, beginning with Section 15000. This PEIR has been prepared by the Town of Paradise, California (Town), which is the lead agency for the Paradise Sewer Project (Proposed Project). Per CEQA, the lead agency for a project is the public agency with primary responsibility for carrying out or approving the project as well as implementing CEQA requirements. This PEIR addresses the potential environmental effects of construction and operation of the Proposed Project, which is briefly described below and defined in detail in Chapter 2 of this PEIR.

1.1 CEQA Review and Decision-Making Process

1.1.1 Overview

As the public agency proposing to approve and implement the Proposed Project, the Town is the lead agency under CEQA. The City of Chico (City), Butte Local Agency Formation Commission (Butte LAFCo), Central Valley Regional Water Quality Control Board (RWQCB), Butte County (County), and California Department of Fish and Wildlife (CDFW) are considered Responsible Agencies under CEQA based on their discretionary approval over aspects of the Proposed Project and their utilization of this PEIR for their CEQA compliance. Specifically:

- **City of Chico:** Connection of the proposed wastewater collection and export pipeline components to the Chico Water Pollution Control Plant (Chico WPCP) will require a decision by the City.
- **Butte LAFCo:** State law requires that Butte LAFCo approve services provided outside a public agency's service area. Therefore, the Proposed Project will require the City and Town to approve an inter-municipal agreement to facilitate the extension of wastewater treatment services from the Chico WPCP to the Town. Butte LAFCo will then make its decision regarding whether to approve the service extension. Details on this extension are included in Chapter 2 of this PEIR.
- **RWQCB:** The RWQCB will rely on this CEQA analysis to make its decision regarding whether to issue a Clean Water Act Section 401 water quality certification for the three proposed water crossings if wetlands, waters of the US, or waters of the State are impacted by the Proposed Project.
- **Butte County**: The County will rely on this CEQA analysis to make its decision on project elements impacting County-owned and maintained rights of way (ROW), **including encroachment permits for field investigations and pipeline installation and operations**.
- **CDFW:** CDFW will rely on this CEQA analysis to make its decision regarding whether to issue a Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement for the three proposed water crossings. If an incidental take permit is required for potential take of the state-listed Swainson's hawk, this CEQA process would also support that decision process.

According to CEQA Guidelines 15002, “the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.”

As stated in the CEQA Guidelines Section 15121(a), “an EIR is an informational document which will inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize significant effects, and describe reasonable alternatives to the project.”

1.1.2 Scope of this Program Environmental Impact Report

This EIR functions as a PEIR but includes project-level analysis for those components where sufficient information is available to do so. The Proposed Project for this PEIR is the implementation of the Paradise Sewer Project, namely (1) the construction and operation of a new wastewater collection system for a core area within the Town limits and (2) the construction, operation, and maintenance of an export pipeline from the Town to the City WPCP (Figure 1-1). This PEIR presents a project-level analysis of these two components, detailed descriptions of which are provided in Chapter 2 *Project Description*. The scope of this PEIR does not include removal or remediation of the existing private septic systems.

The Proposed Project also includes a potential future component that is less defined but is connected in action to the Proposed Project: the construction, operation, and maintenance of an extended wastewater collection service area that would allow landowners with parcels within Town limits, but outside of the initial core collection area, to apply for connection to the proposed sewer system, up to the limits of the sewer system and Chico WPCP capacity. The overall purpose of the Proposed Project is not to serve the entire Town; areas will continue to exist that are served by the existing Onsite Wastewater Management Zone. Instead, the Extended Collection System will provide an opportunity for other property owners within Town limits to connect. The details of extending the sewer system to additional property owners, including the implementation process and final boundaries of service, are not currently defined; therefore, this component is considered at a programmatic level of review.

According to the CEQA Guidelines Section 15168(a), a lead agency should prepare a PEIR when it proposes: (1) a series of related actions that are linked geographically; (2) logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program; or (3) individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways.

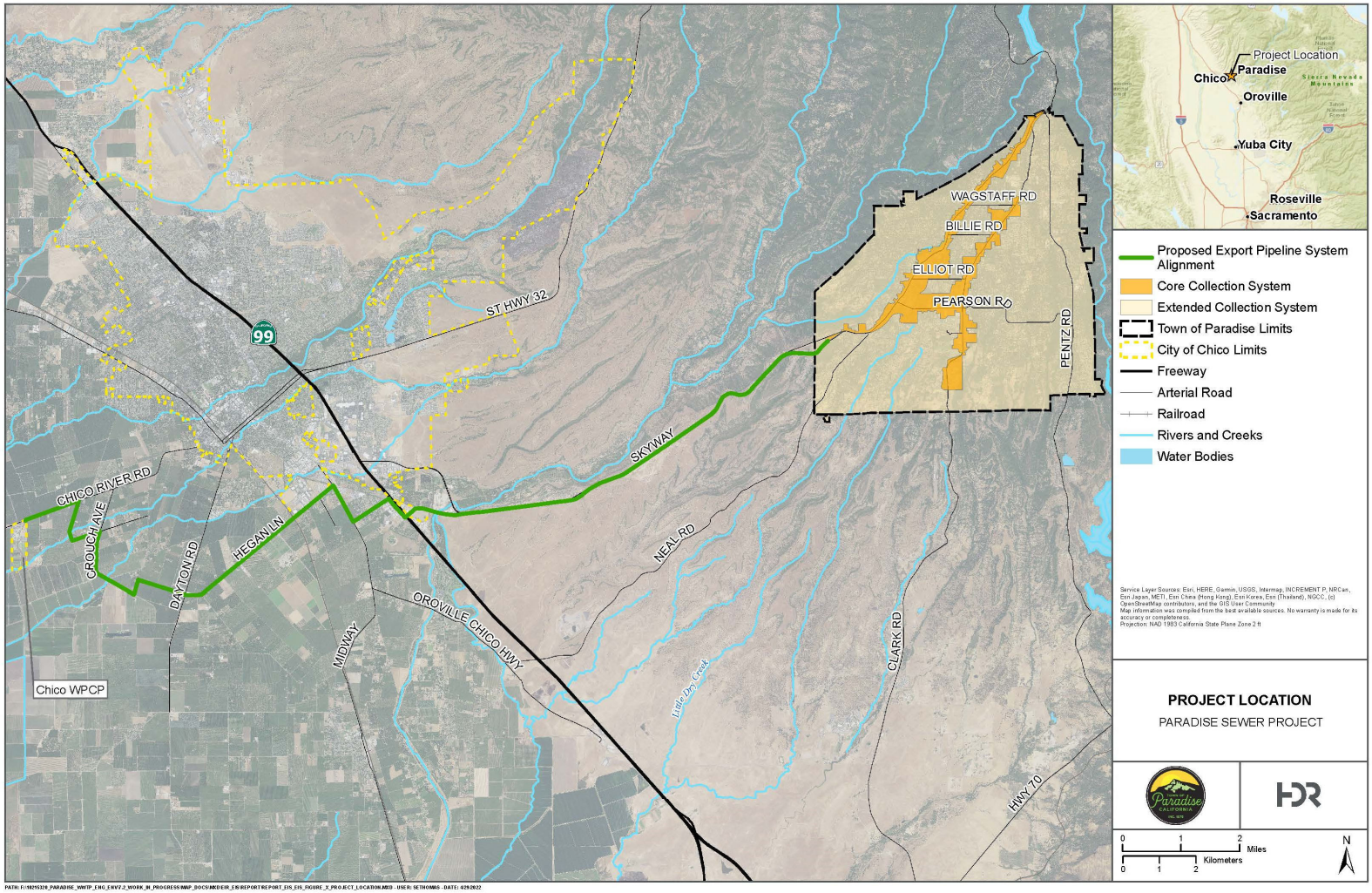

Figure 1-1. Project Location

A PEIR "may be prepared on a series of actions that can be characterized as one large project and are related ... in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program" (CEQA Guidelines Section 15168(a)(3)). Because the construction, operation, and maintenance of an extended wastewater collection system is connected and within the context, capacity, and framework of the overall project, the Town is including this action at a programmatic level of analysis in this PEIR to optimize the purpose and scope of this CEQA process as laid out in CEQA Guidelines Section 15168(b).

As such, this PEIR presents two different levels of analysis for different project components. It presents a detailed project-level analysis of the Proposed Project components that consist of the wastewater collection system in the core collection area and export pipeline because sufficient information is available about the characteristics, timing, and locations of these activities. It also presents a more general programmatic analysis of extending the wastewater collection service area beyond the core area to other landowners within Town limits, for which detailed information on the characteristics, timing, and/or locations was not available at the time of PEIR preparation.

1.2 Required Permits and Approvals

The required federal, State, and local permits and approvals to move the Proposed Project forward are listed in Table 1-1.

Table 1-1. Anticipated Required Permits and Approvals

Agency and Jurisdiction	Permit, Approval, or Clearance	Relevance
Federal		
US Army Corps of Engineers: Clean Water Act	Section 404 Permit	Permanent or temporary placement and/or removal of material in waters of the US or state, including wetlands
US Fish and Wildlife Service: Endangered Species Act	Section 7 Consultation, Letter of Concurrence	Presence of federally listed plant and wildlife species and critical habitat within the impact area if unable to avoid through siting of horizontal directional drilling or temporary disturbance areas
National Marine Fisheries Service: Endangered Species Act, Magnuson Stevens Essential Fish Habitat	Section 7 Consultation, No Effect Determination	Intent to pursue no effect determination through avoidance of federally listed anadromous fish and critical habitat within the impact area
State Historic Preservation Officer: Section 106 of the National Historic Preservation Act (NHPA)	Concurrence on adequacy of identification effort, National Register of Historic Places eligibility determinations, and Finding of Effect	Aligned with federal permits and consultations
Native American Tribes: • Konkow Valley Band of Maidu • Mechoopda Indian Tribe	Tribal consultation per Section 106 of the NHPA	Tribal consultation, aligned with Assembly Bill 52, Native Americans: California Environmental Quality Act (AB 52) consultation
State		
Native American Tribes: • Konkow Valley Band of Maidu • Mechoopda Indian Tribe	Tribal consultation per AB 52	Tribal consultation, aligned with the CEQA process

Agency and Jurisdiction	Permit, Approval, or Clearance	Relevance
State Water Resources Control Board	NPDES Construction Stormwater General Permit	Land disturbance exceeding thresholds
CDFW **(Responsible Agency)**	• Section 2081 Incidental Take Permit • Lake and Streambed Alteration Agreement Both applications require a completed CEQA clearance	• Presence of state-listed (threatened) Swainson's hawks nesting within the impact area • Three trenchless stream crossings could trigger the need for a Lake and Streambed Alteration Agreement due to risk of frac-out during construction.
California Department of Transportation	Section 660 of the California Streets and Highways Code	Specific to the trenchless crossing of Highway 99 by the export pipeline
Local		
Butte County **(Responsible Agency)**	Approval for installation and operations and maintenance of the export pipeline and any appurtenant facilities located within County rights of way**; specifically, for encroachment permits within County rights of way.**	Specific to the proposed export pipeline that would be constructed within Butte County ROW
Private Landowner	Permanent or temporary easements	Specific to the export pipeline installation on two private parcels in City limits when pipeline would leave Skyway and to connect portions of the sewer system to each other within the Core Collection Area
City of Chico **(Responsible Agency)**	Approval to connect the sewer system to the Chico WPCP	Specific to the export pipeline connection to the Chico WPCP
RWQCB **(Responsible Agency)**	• Water Quality Certification for dredge or fill impacts • Sanitary Sewer General Order permit	• Permanent or temporary placement and/or removal of material in waters of the US or state, including wetlands; three proposed trenchless crossing could trigger the need for a Water Quality Certification due to risk of frac-out during construction. • The Town will need coverage under the General Order as an owner/operator of a collection system that is longer than 1 mile
Butte LAFCo **(Responsible Agency)**	Approval to extend the Chico sewer service area	Extension of the Chico sewer service area to include Town
Other		
Union Pacific Railroad (UPRR)	Permit or Easement Agreement	Specific to the export pipeline use of an abandoned UPRR parcel when leave Skyway and trenchless export pipeline crossing of active UPRR track

1.3 Agency Coordination and the Public Involvement Process

1.3.1 Public Scoping

CEQA encourages an early consultation or scoping process to help identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed and considered in an EIR, and to help resolve the concerns of affected regulatory agencies, organizations, and the public. Scoping is

designed to explore issues for environmental evaluation, ensuring that important considerations are not overlooked and uncovering concerns that might otherwise go unrecognized.

Therefore, the first step in the EIR process is to solicit public input regarding the scope and content of environmental information to be included in the EIR. As the CEQA lead agency, the Town circulated a Notice of Preparation (NOP) from May 3 to June 3, 2021 (Appendix A NOP Scoping Report). The NOP notified the public that the PEIR was being prepared and provided information regarding the public comment period and how the public could provide comments on the scope of the PEIR, project location, project background, project description, and the probable environmental effects of the Proposed Project. The NOP was posted at the State Clearinghouse (SCH# 2021050008) and circulated to public agencies and other interested parties in compliance with CEQA Guidelines Section 15082(a). The NOP was also posted on the project website at www.paradisesewer.com. Due to restrictions under State of California Executive Order N-33-20, scoping for the Proposed Project occurred under Coronavirus Disease 2019 (COVID-19) restrictions; therefore, electronic postings, virtual meetings and physical mailings were the appropriate venues for information distribution.

The Town received comment letters from the following organizations in response to the NOP:

- Butte LAFCo, dated May 20, 2021
- CDFW, dated May 24, 2021
- Central Valley Flood Protection Board, dated May 28, 2021
- Native American Heritage Commission (NAHC), dated May 3, 2021
- Paradise Irrigation District, dated June 4, 2021
- Butte County Department of Development Services, dated May 27, 2021

The Town hosted two virtual public scoping meetings to seek public and stakeholder input on the environmental scope of the Proposed Project. The first virtual public meeting took place on May 13, 2021, and included 29 public attendees. The second virtual public meeting took place on May 25, 2021, and included 14 public attendees. Public meeting attendees were encouraged to ask questions and provide input on the Proposed Project and process. Nine comments were provided during the public meetings. Commonly asked questions were related to potential Proposed Project costs to property owners within the Town and if the Proposed Project would be able to handle future growth in the Town. Additionally, several commenters requested more information about current funding sources for the Proposed Project, the pipeline route, and recommendations for property owners considering constructing septic tank systems before Proposed Project construction. Comments were also received via email (1 comment) and on the project website (14 comments) during the public scoping period. Overall, 26 individual commenters submitted 68 comments during the public scoping period. After the scoping period, and as COVID-19 restrictions allowed, the Town continued to accept comments via in-person meetings and email.

Appendix A includes a scoping report that summarizes comments received in response to the NOP and at the public scoping meetings.

1.3.2 Sewer Regionalization Project Advisory Committee Coordination

As a means of advancing the concept of the Town discharging its wastewater to the Chico WPCP, the Paradise Town Council and Chico City Council formed a Sewer Regionalization Project Advisory Committee (SRPAC). The SRPAC consists of two Council members each from the City and Town (totaling four members). The role of the SRPAC has been to develop principles of agreement for the City to provide the Town with wastewater treatment services; this effort has been completed. These principles of agreement will now be used to create an inter-municipal agreement to be approved by both the Town and City Councils. The prerequisites for, and required contents of, an inter-municipal agreement for regulation of waste received from other jurisdictions are defined in the Chico, California Code of Ordinances, Code 15.40.285. The SRPAC will also monitor overall progress of the Proposed Project, including the PEIR process and associated public comment periods, and will provide updates and recommendations to the two councils. The RWQCB facilitates SRPAC activities and meetings, which are generally held bimonthly and publicly noticed.

1.3.3 Stakeholder Engagement

The Town met with Responsible Agencies, stakeholder agencies, stakeholders, and the public during the planning process to clarify concerns, identify opportunities, refine the Proposed Project definition, and otherwise optimize the planning process. Engagements included:

- The Town met with Butte LAFCo to discuss the proposed extension of the City's sewer service area and the approval process.
- The Town met with the RWQCB to discuss its interest in the Proposed Project, agreements with the City and funding opportunities. The Town otherwise participates regularly in the RWQCB's SRPAC meetings, as discussed in Section 1.3.2.
- The Town met with the City to discuss concurrent planning of the Chico WPCP improvements.
- The Town Public Works/Engineering Department, which is leading the Proposed Project, met with Susan Hartman of the Town's Planning Department to discuss the Town's existing Onsite Wastewater Management Zone district (which covers existing septic tank systems) and the status of *The Town of Paradise 1994 General Plan As Amended Through 2008* (*Town of Paradise General Plan* or *General Plan*; Town of Paradise and Quad Consultants 2008) update, including the Housing Element update in progress at that time.
- The Town met separately with County Supervisors Tod Kimmelshue, Bill Connelly, and Doug Teeter to introduce and provide clarity regarding Proposed Project components. Another meeting was held for the same purpose with County Supervisors Debra Lucero and Tami Ritter, as well as County staff members Paula Daneluk and Joshua Pack.
- The Town offered opportunities for community group presentations on its website. Rotary Club of Chico and the Chico Chamber of Commerce each requested presentations and were provided with project--specific presentations and facilitation for questions/answer sessions.
- Each month, the Town provided written progress updates and presentations as requested to Butte LAFCo, Butte County Board of Supervisors, and the Town Council for their regular agendas.
- The Proposed Project received formal letters of support from the following organizations/ agencies:

- 3Core
- Butte County Board of Supervisors
- Chico Chamber of Commerce
- League of California Cities Sacramento Valley Division
- North Valley Community Foundation
- Paradise Citizen's Alliance
- Paradise Chamber of Commerce
- Paradise Irrigation District
- Paradise Unified School District
- Rebuild Paradise Foundation
- Valley Contractor's Exchange

The Paradise Sewer Project website (www.paradisesewer.com) includes an open invitation for stakeholders and the public to engage on the Proposed Project. The Town met with various stakeholders to provide clarity, receive comments or concerns, or provide updates on the process.

1.3.4 Tribal Consultation

PRC 21080.3.1 and Assembly Bill 52, Native Americans: California Environmental Quality Act (AB 52) require formal consultation with California Native American tribes during the CEQA process for projects that have an NOP filed on or after July 1, 2015, because "California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources" (PRC 21080.3.1[a]). "California Native American tribe" refers to a Native American tribe located in California that is on the contact list maintained by the California NAHC (PRC 21073). The purpose of tribal consultation is to determine, as part of the CEQA review process, whether tribal cultural resources (TCRs) are present within a project area, and if so, whether the project will significantly impact those resources. If TCRs may be significantly impacted, then consultation will also help determine the most appropriate way to avoid or mitigate those impacts.

To fulfill obligations pursuant to PRC 21080.3.1(b) and (c), on April 26, 2021, the Town requested assistance from the NAHC to identify California Native American tribes that are traditionally and culturally affiliated with the Proposed Project area. On April 27, 2021, the NAHC provided a list of California Native American tribes in support of these efforts. The Town sent notification letters via certified mail on May 10, 2021, to each of the contacts identified by NAHC, providing a brief description of the Proposed Project and an opportunity to request consultation.

Chairperson Jessica Lopez of the Konkow Valley Band of Maidu noted via a telephone call on May 14, 2021, the Tribe's desire to consult on the Proposed Project. Tribal Historic Preservation Officer (THPO) Kyle McHenry of the Mechoopda Indian Tribe confirmed via a telephone call and email on May 25, 2021, the Tribe's desire to consult on the Proposed Project. Chairperson Lopez and THPO McHenry agreed to a joint consultation meeting with the Town, and an initial consultation meeting was held virtually on August 10, 2021. The Town agreed to provide additional information so the Konkow Valley Band of Maidu and the Mechoopda Indian Tribe could review their respective internal databases and other information for potential TCRs within the Proposed Project area, and the Town provided the requested information via email on August 16, 2021. The Town and HDR Engineering, Inc. (HDR), the

Town's consultants, provided confidential meeting notes to all participants of this meeting, as well as materials requested for further review by the Tribes.

A subsequent joint consultation meeting was coordinated via email and phone calls, and a meeting was held virtually on September 9, 2021. Both Tribes indicated they had reviewed the materials provided by the Town. THPO McHenry identified a concern for potential Proposed Project-related impacts in sensitive areas and requested incorporation of measures for the Proposed Project to retain Tribal Cultural Monitors during construction activities in sensitive areas designated by the Tribes. Chairperson Lopez stated a concern for sensitive plant species that may be considered TCR and requested relevant biological assessment information for review to provide any necessary information related to TCR identification or impact avoidance. The Town agreed to provide the biological assessment information, as well as the draft TCR section language to both Tribes for review.

Additional phone calls and emails were exchanged, and as a result, updates were made to the cultural resources report to address concerns regarding the potential for rediscovery of cultural resources that had been previously recorded but not relocated during survey. Matthew Gramps-Williford, Vice Chair and Cultural Resources Director of the Konkow Valley Maidu Band, requested an in-person consultation meeting with the Town and HDR. The meeting was held on December 20, 2021, at the Town's offices. Chairperson Lopez concluded AB 52 consultation on January 13, 2022, and THPO Kyle McHenry concluded AB 52 consultation on January 14, 2022, with the understanding that communication between the Town and the Konkow Valley Band of Maidu and Mechoopda Indian Tribe will continue with regard to the commitments made in this PEIR, which include coordination with both Tribes for identifying sensitive areas and Tribal Cultural Monitoring during construction. As part of continued communication, the Town reached out to the Tribes on April 7, 2022, via email from HDR, to solicit input and hear concerns regarding potential impacts to TCRs caused by a change to the pipeline alignment for the Proposed Project.

1.3.5 Draft Environmental Impact Report

The Town has issued a Notice of Availability to provide agencies and the public with formal notification that the Draft PEIR is available for review and comment. Stakeholders and the public may request printed copies of the Draft PEIR and selected appendices at the following websites: Town of Paradise or Town of Paradise Sewer Project. Printed copies of the Draft PEIR and all appendices are available for review at the following locations:

- Town Clerk at Paradise Town Hall (5555 Skyway, Paradise, CA 95969)
- City Clerk at Chico (411 Main Street, Chico, CA 95928)
- Butte County Library, Chico Branch (1108 Sherman Ave, Chico, CA 95926)
- Butte County Library, Paradise Branch (5922 Clark Rd, Paradise, CA 95969)

The Town is circulating this Draft PEIR for a 45-day public review and comment period (July 14, 2022 to August 29, 2022) and will host three public meetings during this period; two meetings will be held in Paradise and one meeting will be held in Chico (dates and times of meetings will be posted at paradisesewer.com). The purpose of public circulation and the public meetings is to provide agencies and interested individuals with opportunities to comment on Draft PEIR contents.

Comments should be emailed or postmarked at the earliest possible date; written comments or questions concerning this Draft PEIR should be mailed or emailed during this review period and should be directed to the name and address listed below: comments should be e-mailed or postmarked at the earliest possible date, but no later than 45 calendar days from release of the Draft PEIR (August 29, 2022), to:

Marc Mattox, Director of Public Works
Town of Paradise
5555 Skyway
Paradise, CA 95969
530-872-6291 Ext. 125
mmattox@townofparadise.com

Written comments received on the Draft PEIR will be included and addressed in the Final PEIR.

1.3.6 Final Program Environmental Impact Report

The Town will be considering adoption of the Final PEIR at an open Town Council meeting to be held on November 7, 2022. The Final PEIR is hosted online at Town of Paradise or Town of Paradise Sewer. Printed copies of the Draft PEIR and all appendices are available for review at the following locations:

- Town Clerk at Paradise Town Hall (5555 Skyway, Paradise, CA 95969)
- City Clerk at Chico (411 Main Street, Chico, CA 95928)
- Butte County Library, Chico Branch (1108 Sherman Ave, Chico, CA 95926)
- Butte County Library, Paradise Branch (5922 Clark Rd, Paradise, CA 95969)

If adopted and certified at the Town Council meeting on November 7, a Notice of Determination will be filed with the County, City and Town clerks within five (5) working days after approval of the project. The Notice of Determination would be posted at the clerk offices for a period of 30 days (November 8, 2022 to December 8, 2022); a hardcopy of the full Final PEIR will be available at paradisesewer.com and at the locations noted above. “The filing of the Notice of Determination… and the filing and posting of the Notice of Determination for local agencies, start a 30-day statute of limitations on court challenges to the approval under CEQA” (CEQA Guidelines 15094 (g)).

1.4 Areas of Known Controversy

CEQA Guidelines Section 15123 states that an EIR must identify areas of known controversy that may have been raised by other agencies, the public, or other stakeholders. Areas of communicated controversy related to the Proposed Project or identified in the PEIR scoping process include, but are not limited to:

- Growth-inducing impacts, specifically in the City of Chico and rural Butte County outside Town and City limits.
- Reconsideration of local treatment plant construction instead of the proposed connection to the Chico WPCP, which was evaluated in 2017 and 2020.

1.5 Issues to be Resolved

CEQA Guidelines Section 15123 calls for the lead agency to include issues to be resolved in the EIR, including the choice among alternatives and whether or how to mitigate significant effects. Issues to be resolved related to the Proposed Project or PEIR include, but are not limited to, the following:

- Political details of connecting the export pipeline to the Chico WPCP. The Town and the City will enter into an inter-municipal agreement that will capture the mutually determined details of the connection. SRPAC (discussed previously in Section 1.3.2) has developed a principles of agreement document, which captures the overall approaches to various aspects of the connection. The principles of agreement will be turned into the formal inter-municipal agreement.
- Approval by Butte LAFCo for the service extension beyond the boundaries of Chico to allow the City to provide wastewater treatment services to the Town (Section 2.5 Project Components).
- Permits and applicable agreements from the County, as needed, for installation and maintenance of the pipeline system located within County rights of way (ROW).
- Applicable easements from private landowners.
- Establishing administrative procedures for public connection to the core wastewater collection system.

- Establishing administrative procedures for the Town to permit future connections to the Proposed Project extended collection system.
- Establishing sewer standards and regulations for the Town, including operations and maintenance for the core wastewater collection system and export pipeline Project components, as well as the extended service area within Town limits being considered programmatically in this PEIR.

1.6 Organization of the Environmental Impact Report

The content and format of this PEIR are designed to meet the requirements of CEQA and the CEQA Guidelines Sections 15122 through 15132. This PEIR is organized into the following chapters:

- **Executive Summary:** Presents an overview of the Proposed Project, summarizes the impacts of the Proposed Project and mitigation measures, summarizes the alternatives being considered, and discusses known areas of controversy and any issues to be resolved.
- **Chapter 1, Introduction:** Explains the CEQA process, describes the scope and purpose of this PEIR, explains the approach to both the project and programmatic levels of environmental analysis, provides information on the review and approval process, and outlines the organization of this PEIR.
- **Chapter 2, Project Description:** Provides information about the location, setting, and background of the Proposed Project; identifies project-specific objectives; and provides a detailed description of the Proposed Project components and its construction and operation.
- **Chapter 3, Environmental Impact Analysis:** Explains the general approach used in impact analysis and provides the environmental setting, impacts, and mitigation measures for the topics identified for detailed analysis in this PEIR. Section 3.1.5, Impacts Found to Be Not Significant, describes the topics that do not warrant further analysis. Subsequent sections pertain to the environmental resource topics for which a detailed analysis is provided, and each section presents information in three parts: environmental setting, method of analysis, and impact analysis. Materials cited in each resource area are listed following that specific section; a full list of references for all resources is also included in Chapter 7, References.
- **Chapter 4, Other CEQA Considerations:** Evaluates additional topics required to be included in an EIR, including irreversible impacts, significant and unavoidable impacts, growth-inducing impacts, and cumulative impacts.
- **Chapter 5, Alternatives:** Evaluates alternatives to the Proposed Project that would eliminate or substantially reduce significant impacts identified in this PEIR while reasonably attaining Proposed Project objectives. Alternatives that were reviewed but eliminated from further consideration in the PEIR are also discussed.
- **Chapter 6, List of Preparers:** Identifies individuals who were involved in preparing this PEIR.
- **Chapter 7, References:** Provides a comprehensive list of all reference materials cited in this PEIR.
- **Appendices:** Contains additional information used in preparing this EIR.
    - **Appendix A:** NOP Scoping Report
    - **Appendix B:** Town of Paradise 1994 General Plan Resolution and Amendments

- **Appendix C:** Regulatory Framework
- **Appendix D:** Emissions Modeling
- **Appendix E:** Vegetation Community Descriptions and Special-Status Species Accounts
  - **Attachment 1:** Aquatic Resources and Vegetation Communities Mapbook
  - **Attachment 2:** Database Queries
  - **Attachment 3:** Sensitive Biological Resources Table
- **Appendix F:** Swainson's Hawk Survey and Elderberry Shrub Mapping Report
- **Appendix G:** Tribal Consultation
- **Appendix H:** Pump Station Energy Consumption Calculation
- **Appendix I:** Public Comments and Responses on Draft PEIR

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2. Project Description

The Town is proposing to construct, operate, and maintain a new sewer collection system within the Town limits, with an export pipeline from the Town to the Chico WPCP. The Proposed Project would allow for the replacement of individual septic systems within the Town's sewer service area that are managed, owned, and maintained by individual property owners. This Proposed Project further includes the provision of wastewater treatment services from the City to the Town, to be approved by Butte LAFCo.

Specifically, the Proposed Project would consist of three primary components. The first two components (Figure ES-1) are analyzed at a project level because sufficient information is available regarding the characteristics, timing, and locations of these proposed facilities. The third component is analyzed at a programmatic level. The three components include the following and are detailed further in Section 2.5:

1. **Core Collection System:** The Core Collection System would consist of pipelines and 28 small pump stations (also referred to as lift stations) to serve approximately 1,500 individual parcels within the Town's core sewer service area. The Core Collection System would include construction of sewer mains (buried gravity and pressure lines), sewer laterals extending from sewer mains to individual properties, maintenance holes, and pump stations along the sewer mains. Most of the facilities would be located within the Town right-of-way (ROW), although limited temporary or permanent easements may be required from private landowners to install components of the Core Collection System, such as pipelines or pump stations. The parcels served would include Residential, Commercial, Industrial, Community Service, Public Institutional, and Recreational land use designations.
2. **Export Pipeline System:** The 18-mile Export Pipeline System is proposed to convey wastewater from the Core Collection System to the Chico WPCP. The Export Pipeline System would be comprised of the sewer pipeline, a transition chamber, a flow control and metering structure, a fiber-optic conduit that will run the length of the pipeline, and maintenance holes. There are no pump stations required along the Export Pipeline System. Most of the sewer pipeline would be installed by open-trench construction methods, with five trenchless (tunneled) crossings at locations described in Section 2.5.2. The Export Pipeline System would terminate with connection to the existing Chico WPCP.
3. **Extended Collection System:** The Extended Collection System would be an extension of the Core Collection System that would allow parcels within the Town limits to connect to the sewer system up to the capacity of the system infrastructure and the Town's allocation within the Chico WPCP capacity. The number of pump stations would be dependent on the locations of the sewer connections within the Town boundaries.

   The Extended Collection System is conceptual in definition; the characteristics, timing, and/or locations of the necessary buried gravity and pressure lines, maintenance holes, and pump stations are not available at the time of this PEIR preparation; therefore, the Extended Collection System build-out is analyzed at a programmatic level. Once the Extended Collection

System construction is defined, the Town would consider whether subsequent CEQA documentation is required.

Although not a physical change to the environment, and therefore, not assessed in this PEIR, the Proposed Project would require multiple agency agreements and approvals. The City and Town will enter into an inter-municipal agreement to define the contractual terms for the provision of wastewater treatment services from the Chico WPCP to the Town. The prerequisites for, and required contents of, an inter-municipal agreement for regulation of waste received from other jurisdictions are defined in the Chico, California Code of Ordinances, Code 15.40.285. Further, as discussed in Section 1.3.2, Sewer Regionalization Project Advisory Committee, the SRPAC has developed principles of agreement for the City to provide the Town with wastewater treatment services. These principles of agreement will now be used to create the inter-municipal agreement to be approved by both the Town and City Councils. In addition, the proposed Export Pipeline System will also require a formal agreement or other mechanism for the construction and maintenance of facilities within the Butte County-maintained rights-of-way.

Finally, Butte LAFCo must approve the extension of services beyond the boundaries of Chico to allow the City to provide wastewater treatment services to the Town. Government Code Section 56133(a) provides that “a city or district may provide new or extended services by contract or agreement outside its jurisdictional boundary only if it first requests and receives written approval from the commission of the county (LAFCo) in which the affected territory is located”. Provisions for extension of service requests are found in Government Code Section 56133 and in Section 4.5 of the LAFCo Policies and Procedures. Service extensions outside of an agency's Sphere of Influence may only be approved by a LAFCo to respond to “an existing or impending threat to the health or safety of the public or the residents of the affected territory” (Government Code Section 56133[c]). Should the sewer service extension be approved by Butte LAFCo for the proposed sewer service area within the Town’s boundary, any future adjustments to that boundary or additional sewer connections would require the consent of the City as the contracted provider and Butte LAFCo as the approving authority for the service extension request.

The project does not include removal of the existing septic systems which would be replaced by the Proposed Project sewer system.

2.1 Project Location

Paradise is within eastern Butte County, California, in the western foothills of the Sierra Nevada Mountains. Topography is characterized by intervening ridges and valleys sloping to the southwest, with elevations ranging from around 1,080 to 2,320 feet. The Town is bordered on the east by the western branch of the Feather River and on the west by Little Butte Creek. It is approximately 12 miles east of Chico, 20 miles northwest of Oroville, and 90 miles north of Sacramento. The Town is connected to Chico via Skyway, a Butte County roadway, and to Oroville via California State Route (SR) 191, which is known as Clark Road upon entering the Town from the south (Figure ES-1).

Chico, also in Butte County, sits on the Sacramento Valley floor, close to the foothills of the Sierra Nevada range to the east. Chico’s terrain is generally flat, with increasingly hilly terrain beginning at the

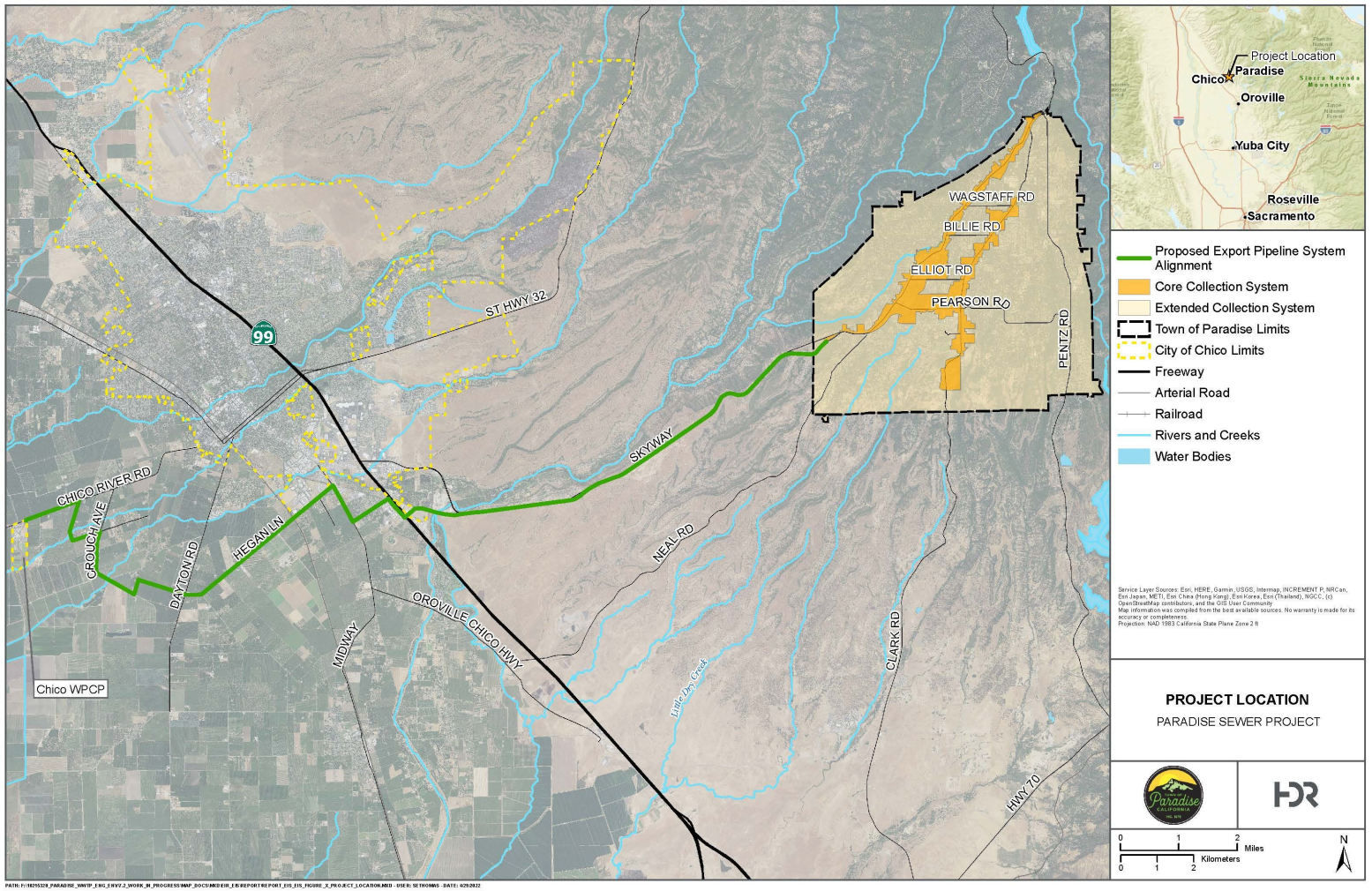


Figure 2-1. Proposed Project Location

eastern City limits. Chico is traversed by two creeks: Big Chico and Little Chico Creeks. These waterbodies discharge into the Sacramento River (Figure ES-1). SRs 32 and 99 comprise Chico's regional transportation network. SR 32 connects Chico residents to Glenn and Plumas Counties to the west and east, respectively. SR 99 connects residents to Tehama and Sutter Counties to the north and south, respectively. Chico is the most populous city in Butte County, with a population of 102,892 in January 2022 (California Department of Finance [DOF] 2022).

2.2 Project Background

Paradise's population peaked at 26,465 in 2000 (Biggest US Cities 2022) and it has long been considered a "bedroom" community (a residential suburb inhabited largely by people who commute to a nearby city for work) to Chico. For a number of years, the Town has pursued a municipal solution for wastewater treatment to address failed septic systems that have degraded local groundwater quality and constrained affordable housing, essential community services, and overall economic growth. Reliance on septic systems has resulted in two areas of concern: environmental impacts and economic impediment. Failed septic systems can release untreated wastewater into groundwater at the ground surface or cause pipe failures in buildings, resulting in environmental degradation and public health risk due to water contamination or exposure to untreated wastewater. Economically, the lack of a sewer system has suppressed the development of a sustainable business community by limiting the size and types of businesses that can affordably operate in the community. Development of affordable housing and workforce housing has also been hindered as larger housing facilities require more sewer treatment capacity than a traditional septic system can provide within the available parcel sizes. Considering these concerns, the Town worked diligently for more than 50 years, even prior to its incorporation in 1979, to identify a feasible wastewater treatment solution for the community, with a priority to provide service to those commercial and densely populated residential areas with failing septic systems.

2.2.1 Pre-Fire History

In 1983, James M. Montgomery, Consulting Engineers, conducted a Phase I wastewater management study for the Town to identify existing and potential water quality or public health problems associated with the continued use of individually managed on-site wastewater treatment systems (Montgomery 1983). Results of this study showed evidence of high levels of fecal coliform and septic system effluent in the water supply, resulting in degradation of water quality. Therefore, this study recommended that a sewer system or centralized wastewater management facility be considered for the Town (Montgomery 1983).

This Phase I report found that the most severe water quality degradation occurred in the Upper and Middle Honey Run and Lower Skyway basins underlying the Town, which encompass approximately 1,000 acres of dense commercial development (Montgomery 1983). The report recommended that centralized wastewater management facilities be considered for these areas. The principal objective of a subsequent supplementary Phase I report titled *Wastewater Management Study Supplementary Phase I Report* (Tchobanoglous 1984), was to further assess the need for centralized wastewater management facilities along the Skyway corridor, where there was evidence of localized deterioration of water quality. This report also recommended that as the Town continued to develop, centralized

facilities should be located along portions of the Central Skyway area, primarily due to the hydrogeological limitations of the area. The report concluded that the Town needed to develop a long-range plan for "providing centralized wastewater management in the central Skyway area, as future commercial development may not be possible without a wastewater treatment facility" (Tchobanoglous 1984).

In 1985, the *Wastewater Management Plan Phase II Report* evaluated alternatives and provided recommendations to manage wastewater disposal (R.A. Ryder & Associates 1985). While the first two Phase I reports focused primarily on Skyway, this report adds that Clark Road commercial and industrial areas would also need treatment in the future due to shallow soils and the increased capacity for density in the future (R.A. Ryder & Associates 1985).

Continued study of the feasibility of different types of treatment and collection were the subject of a later report (Kennedy/Jenks/Chilton 1989). The recommendation was to proceed with the formation of a Special Assessment District to fund the design and construction of a conventional gravity sewer system for Skyway and Clark commercial corridors within Paradise, with an aerated lagoon system and an advanced treatment system for further treatment prior to discharge (Kennedy/Jenks/Chilton 1989).

On October 25, 1990, via Town of Paradise Resolution No. 90-47, the Town Council officially formed a Wastewater Design Assessment District for the purpose of developing a wastewater collection, treatment, and disposal facility. The proposed sewer system was to serve only the core commercial area of the community. However, in 1992, plans to continue with the sewer system were stopped due to a proposed assessment and related political recall, coupled with the Town having a viable plan to self-govern and restrict septic systems on site (Town of Paradise 2012).

In a letter dated May 4, 1992, the RWQCB approved the Town's plans to establish an "Onsite Wastewater Management Zone" to address public health and environmental concerns noted in previous studies (RWQCB 1992). The purpose of the formation of this zone, which remains in existence today, was to identify, permit, inspect, monitor, and regulate repairs and new construction of on-site wastewater systems that are required for new development (Town of Paradise 2022a). At its inception, the maximum number of new equivalent units allowed in the zone was 3,040, with an approximate flow of 0.9 million gallons per day (mgd). This was in addition to the number of existing systems to be served by the zone at the time, which was approximately equal to 10,500, with an approximate flow equal to 1.5 mgd (RWQCB 1992). As of 2021, the zone currently permits and regulates more than 11,000 various wastewater systems. The collective individual septic systems vary in complexity, from standard septic tanks and absorption fields to small biological wastewater treatment systems (Town of Paradise 2022a). Because the core collection area includes only a small percentage of the 11,000 existing wastewater systems, and connection to the sewer system by other properties in Town, but outside of the core collection area, is only part of a proposed future program under consideration at this time, the wastewater management zone would remain in place for those parcels which would not or had not yet connected to the sewer system.

In 1994, the Town released the *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008). The version of the General Plan being used in this PEIR includes amendments through 2008, hence the 2008 publishing date. References to multi-family housing, particularly affordable housing and promoting economic development and development that would include public

services and infrastructure can be found in Chapter 4.0 (Quad Consultants 2008). The Town also confirmed “it is an objective of the General Plan to fully implement and sustain the operations of the town onsite wastewater management district” (Town of Paradise and Quad Consultants 2008). Amendments to the *Town of Paradise General Plan* since 1994 can be found in Appendix B Town of Paradise 1994 General Plan Resolution and Amendments and are assumed incorporated when referenced in this document.

After establishing a self-regulating wastewater management zone for the individual septic systems, the Town’s desire to provide a municipal sewer treatment infrastructure in the high-risk septic failure areas remained. In 2000, The Town published a *Downtown Revitalization Master Plan*, which identified inadequate septic systems and capacity deficiencies on many commercial properties as a key deterrent to increased business activity (Town of Paradise 2000). As a result, the Town issued a *Downtown Revitalization Area Clustered Wastewater Treatment System(s) Master Plan* (Town of Paradise 2004); however, it was not implemented due to a variety of factors, including funding and availability of suitable land for disposal sites. Another study, *Final Wastewater Treatment & Collection Feasibility Study for the Town of Paradise Downtown Community Cluster System*, was prepared (NorthStar Engineering 2010). This report analyzed the feasibility and cost associated with the construction of a community wastewater collection system designed to serve a defined area that would transport the wastewater to an off-site location. All the economic analyses conducted through 2010 had concurred that eliminating reliance on individual septic systems would allow businesses to develop and expand based upon the needs of the business and customer demand, instead of being subject to the strict limitations of on-site wastewater disposal.

On August 2, 2011, the Town Council considered and discussed a Council Agenda Summary prepared by key Town staff, providing an outline of three primary conceptual options for a community wastewater system for the Town’s downtown area and other Town commercial corridors. These three options included: (1) a Septic Tank Effluent Pump collection system with construction of a secondary treatment plant located within Town limits; (2) partnership with the owner of an 18-hole golf course located on lower Skyway, including wastewater re-use for the golf course irrigation and a potential future housing development project; and (3) an arrangement between the jurisdictions of the City and Town to allow the Town to tie into the City’s existing sewer collection system. At the conclusion of the Town Council meeting, the council directed staff to further research the advantages and disadvantages for Options 2 and 3 (partnership with golf course owner and arrangement with the City, respectively). Since 2011, Option 2 evolved into four separate local alternatives being assessed by the Town; results of these assessments are included in Section 5.2 of this document. Option 3 has advanced as the current Proposed Project.

Concurrent to and since the Town’s numerous wastewater management studies, public health, economic, and environmental impacts associated with septic system usage continue to persist.

One example of a system limitation is the long-standing challenges faced by restaurants forced to rely on temporary holding tanks. In a 2017 alternative analysis and feasibility study conducted for the Town, it was reported that “businesses without access (to a sewer system) must operate a holding tank to be pumped on a regular basis and hauled to a septage receiving facility. Commercial property owners that cannot afford these options will likely have businesses fail as they cannot be re-sold without a viable

Figure 2-2. Pine Grove Mobile Home Park Effluent

sewer system. This is the fate for many of the businesses in the main corridors of the Town as systems fail" (Bennett Engineering 2017). In some cases, restaurants have been forced to pump their tanks every week or two weeks, which is cost-prohibitive, partially due to the inability to expand their businesses due to small parcel restrictions. This contributed to some restaurant closings, such as at La Comida's Paradise location, which closed in September 2018 (Urseny 2018).

An example of a system failure would be the pervasive issues at a local mobile home park. In late 2000 and early 2001, Pine Grove Mobile Home Park began experiencing systemic failures associated with their on-site wastewater disposal system. These failures resulted in surfacing effluent and significant public health hazards. Historical documentation of this location indicates numerous warnings, citations, and corrective actions were required. The mobile home park was also a source for complaints of these hazards adjacent to a seasonal stream and children's park. In 2007, an alternative septic system was installed; however, issues with the site continued. In 2015, multiple complaints were received and subsequently observed by wastewater professionals. Inspections revealed the system was failing, causing wastewater overflows and backups through showers and toilets (Figure 2-2). On May 15, 2015, the Town received a Code Enforcement complaint from a public health nurse related to an entire family at the property experiencing symptoms of cryptosporidium contamination (fecal-oral parasites). The Pine Grove Mobile Home Park was entirely destroyed in the 2018 Camp Fire, making attempts at septic resolution infeasible.

As recently as 2017, the Town completed another feasibility study, which evaluated advancing a sustainable wastewater solution for the benefit of the Town's economy, environment, and community. The *Town of Paradise Sewer Project, Alternatives Analysis and Feasibility Report: Determining a Preferred Option for Implementation* (Bennett Engineering 2017) analyzed several options, including a "No Project" option, and identified the most feasible solution and next steps. Three local options and the Chico WPCP regional connection option were analyzed to address sewer service reliability problems and select the best alternative for the Town to carry forward to district formation, preliminary design, and environmental review. Some of the additional efforts included in this study that prior studies did not include were public outreach and engagement, and a socioeconomic study to assess both the beneficial economic aspects of building a major infrastructure project and the negative economic aspects of the "No Project" option. The socioeconomic study projected benefits to the Town and region, including an additional 161 jobs, additional $12.8 million in sales and output to the region in all sectors,

regional long-term impact of $68 million in private and public investment, and $56 million increase in the property tax base (Bennett Engineering 2017). The study also predicted a 5 to 13 percent property value increase for parcels within the sewer district. The regional connection to the Chico WPCP was recommended by the study as the best long-term solution for the Town (Bennett Engineering 2017).

2.2.2 Post-Fire History

On November 8, 2018, the Camp Fire severely impacted the Town. More than 26,000 Town residents were displaced; 90 percent of structures in the Town, including more than 11,000 homes and 1,000 businesses, were burned to the ground; and, most tragically, 85 people lost their lives.

Prior to the 2018 Camp Fire, the Town population was 26,423, making it the second most populated city in the County and the largest unsewered community in California (Butte County Association of Governments [BCAG] 2019a). Following the 2018 Camp Fire, population estimates dropped 83 percent to 4,474 in 2019 (DOF 2021a); in 2021, the recovering population had only grown to 6,046 residents (DOF 2021b). Although this demonstrated a 35 percent population increase over 2 years (2019 to 2021), it still reflected a 77 percent drop in population from pre-fire conditions. The 2018 Camp Fire affected the Town's business and management operations as resources were redirected toward recovery, which temporarily delayed further development of a municipal wastewater solution for the Town. Concurrently, private septic systems within the Town were found to be damaged by the fire, which in turn further degraded local groundwater quality and compounded the pre-fire sewer needs. These additional impacts from the Camp Fire again constrained affordable housing, essential community services, and overall economic growth, while the Town endeavored to rebuild without a municipal sewer system in place.

In response to the 2018 Camp Fire, the Town was gifted the funds for a contract through the North Valley Community Foundation and Butte Strong Fund to prepare a *Long-Term Community Recovery Plan* (LTCRP) (Town of Paradise 2019). LTCRP efforts represented one of the most comprehensive planning and response efforts in response to a community disaster, capturing the intensity and need of public participation and visioning for a path forward.

The community engagement process began with a meeting in February 2019. In total, seven listening sessions and community meetings were held to solicit feedback and input from residents regarding developing a community vision and setting Town goals for recovery. With feedback from these meetings and other documented engagement tools, the LTCRP was presented to the community and Town Council on June 25, 2019.

Throughout the process, it was apparent that while the Camp Fire had changed many of the Town's priorities and needs, the perceived and actual need for a centralized wastewater solution had not changed. The Paradise Sewer Project is identified as a "Tier 1 Recovery Priority Project" in the LTCRP, which included those plans that were considered "catalyst projects that serve as important interventions for the long-term recovery from the physical damage of the disaster" (Town of Paradise 2019). The LTCRP states "A sewer system should be installed in commercial areas to incentivize economic growth and reduce environmental impacts. It could allow for clustered uses, such as restaurants and apartments, that are currently not feasible" (Town of Paradise 2019).

Starting in late 2019 and through 2020, the Town re-evaluated the most recent *Town of Paradise Sewer Project, Alternatives Analysis and Feasibility Report: Determining a Preferred Option for Implementation* (Bennett Engineering 2017) to explore a wastewater collection system in light of the additional impacts resulting from the 2018 Camp Fire. New considerations included a more expansive need for septic system replacements, incorporation of and consistency with the LTCRP findings and recommendations, including how repopulation within the sewer service area would proceed and how to address those ongoing sewer impacts that had continued to exacerbate since the 2017 study.

The Town continued to study wastewater discharge and treatment alternatives, including local treatment and disposal, as well as a regional treatment alternative at the Chico WPCP. In 2020, the Town received an *Evaluation of Wastewater Treatment Plant Options, Town of Paradise, Butte* County memorandum from the RWQCB (2020). In the memorandum, the RWQCB recognized that the Town was considering both a local treatment and disposal option as well as the option to connect to the Chico WPCP; documentation of a qualitative evaluation and comparison of the two options by the RWQCB was included in the memorandum (RWQCB 2020). A summary of the findings states "… it is the opinion of the Board's technical staff that the regionalization option presents an objectively more sustainable long-term solution to the Town's wastewater infrastructure needs. Due to the apparent overwhelming advantages of the regionalization option, it is the Board's strong recommendation for the Town to conserve limited financial resources and focus its feasibility analysis on the regionalization option" (RWQCB 2020).

Following a detailed analysis of alternatives, and in coordination with the City and RWQCB, the environmental impacts, costs, and operations of the alternatives were considered. In partnership with the RWQCB and City, the regional approach to providing sewer service to the Town, by connecting to the existing Chico WPCP, was pursued over alternative options to build a new stand-alone treatment facility for the Town. Section 5.2 describes the reasoning for rejecting as infeasible the local alternatives as part of this environmental review process.

During these studies, it was also determined that the estimated average wastewater conveyance and treatment need for the sewer service area would be 464,000 gallons per day (0.464 mgd). This would accommodate current repopulation and possible future growth, consistent with the current *Town of Paradise General Plan* and *Town of Paradise 2022–2030 Housing Element Update* (Town of Paradise and Quad Consultants 2008; Town of Paradise 2022a). The Town is preparing this PEIR to determine feasibility of a regional wastewater treatment solution to fulfill this 0.464 mgd wastewater treatment need.

2.3 Project Need and Objectives

2.3.1 Project Need

Based on the number of developed and developable parcels, Paradise is the largest town in California that relies solely on septic systems for the treatment and disposal of its wastewater (BCAG 2019a). Relying on private septic systems due to the lack of a municipal sewer collection system has a twofold implication: (1) the effect on the human and natural environment, and (2) the effect on the area's economy and recovery from the 2018 Camp Fire. The Camp Fire, which occurred in the Town and

some surrounding areas in the County, was one of the most destructive wildfires in California history. The Camp Fire resulted in the loss of 85 lives, nearly 19,000 structures, the more than 150,000 acres over a period of 2 weeks as well as $9 billion in insurance claims (Town of Paradise 2022a).

The lack of reliable sewer infrastructure, due to the probability of failure and limitations on treatment and discharge within the current septic network, poses an environmental threat to groundwater and surface water quality, and has been shown to have a recurring impact within the Town's sewer service area. The Proposed Project's Core Collection System area is consistent with the Town's sewer service area, as defined in the *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008). When a septic system fails, it would either contaminate the groundwater underneath it or surface water nearby, creating environmental concerns for nearby streams and lakes as well as polluting the drinking water supply. In extreme cases, a failing septic system may leak improperly treated sewage into the environment, leading to the spread of diseases such as hepatitis and dysentery. In other cases, improperly treated septic system effluent may percolate into underlying groundwater, feeding an excessive amount of nitrates into the water supply. Research on septic system failure is limited, but some research indicates that septic systems should be studied more carefully. "In 2013, the Centers for Disease Control and Prevention (CDC) looked at nearly four decades of data on disease outbreaks linked to drinking untreated groundwater. The data was drawn from 248 outbreaks that were reported to the CDC between 1971 and 2008. Of the 172 cases in which a source of contamination was determined, 67 percent were linked to a septic tank or an improperly designed well" (Circle of Blue 2015).

Prior to the 2018 Camp Fire, the Town struggled to support a thriving economy, in part due to the lack of sewer availability. Currently, for any property in the Town, the degree and intensity of use of a parcel is limited to the capacity to safely dispose of wastewater on site. Commercial parcels in Town are generally smaller in size and concentrated in a core commercial area that provides limited space for septic tanks and leach fields. These restrictions are compounded by siting restrictions such as high groundwater and poor drainage due to the local soil composition. As a result, existing Town businesses were severely constrained due to their septic system discharge exceeding the available capacity of the land itself, while new businesses were often forced to open elsewhere due to the limitations placed on them to operate with an on-site septic system. Higher water usage businesses like restaurants, bakeries, coffee shops, and nail and hair salons are particularly affected, resulting in very limited local businesses in these categories.

Following the impact of what is reported to be the "globe's costliest natural disaster in 2018" (Associated Press 2019), conditions since the 2018 Camp Fire are amplified with even fewer businesses able to open or reopen due to septic failures or required upgrades that are cost prohibitive.

As Paradise residents continue to seek goods and services elsewhere, they take their tax dollars with them. This has resulted in approximately 73 percent retail leakage in food and beverage establishments according to the *Camp Fire Regional Economic Impact Analysis Final Report* (Economic & Planning Systems and Industrial Economics 2021). Even lower water-usage business categories such as home furnishings and appliance, clothing, and general merchandise stores suffered 61 percent, 98 percent, and 71 percent retail leakage, respectively.

2.3.2 Project Objectives and Goals

The intent of the Proposed Project is to provide a municipal wastewater management solution that would reduce public health and environmental concerns caused by failed or failing septic systems, and support economic recovery and sustainability following the 2018 Camp Fire.

Three primary objectives and associated goals piloted the development of the Proposed Project:

- Provide long-term, efficient, reliable treatment of wastewater in a cost-effective, environmentally beneficial manner to current and returning Town residents, in a manner acceptable to the RWQCB and other permitting agencies:
    - Accommodate regrowth while reducing further environmental degradation of groundwater and surface water from failing septic systems
    - Reduce the public health risk associated with failing septic systems
- Generate economic recovery by eliminating septic-related capacity limitations, as well as the general burden of on-site wastewater management for businesses:
    - Promote the return or arrival of essential community services and businesses by removing restrictions caused by on-site septic systems
- Provide for the ability to construct and maintain affordable housing, specifically multi-family housing:
    - Support centralizing affordable housing to Paradise's urban core, along major evacuation routes

The first primary objective of the Proposed Project is to provide a cost-effective, long-term sewage management solution that supports local and regional water quality preservation as well as reduces risk to public health. From a health and safety standpoint, failed or failing septic systems create a public health risk due to the potential for direct or indirect public contact with wastewater. The California State Water Resources Control Board's (SWRCB) *2010 Update to Strategic Plan 2008-2012* (SWRCB 2010), demonstrates its focus on improving water quality in the state with two goals: one targets protection of groundwater in high-use basins; and the second focuses on comprehensively addressing the relationship between water supply, water quality, and climate change (SWRCB 2010, Goals 2 and 4). The document also describes SWRCB's Strategic Priority Actions, and in a discussion on wastewater infrastructure and sustainability, states:

> *The need for updated and new infrastructure is particularly critical for small communities with very limited resources. The State Water Board will emphasize a renewed focus on small community wastewater projects and make it a priority to help ensure that small and/or disadvantaged communities have the resources needed to protect water quality and public health related to wastewater (SWRCB 2010).*

The Town's current practice of collecting wastewater and processing it through individual septic tanks and soil absorption disposal systems (referred to as leach fields) in a geologically constrained foothill

community has a direct impact on both water quality and water supply when systems fail. As a result, the Town has been coordinating with the City and the RWQCB to respond to the existing threat to the health and safety of the public, specifically Town residents. The Proposed Project and alternatives were developed, in part, as a result of this coordination. Removing the need for septic systems in areas where septic systems have failed, or are projected to fail, would directly respond to the goals and priorities identified in SWRCB's Strategic Plan. According to the *Town of Paradise Sewer Project Alternatives Analysis and Feasibility Report*, even before the Camp Fire occurred, "on Skyway alone, 122 septic systems had failed in the last years or are predicted to fail in the next 10 years (Bennett Engineering 2017).

The second objective of the Proposed Project is to enable the recovery and sustainability of the Town's economy, thus providing essential community services. The lack of a reliable wastewater solution was a limiting factor to projected Town growth prior to the 2018 Camp Fire and remains a major barrier to existing and new commercial business in the Town. Fewer businesses in the Town also means fewer in-Town jobs, particularly in the retail and service industries. These types of jobs and the businesses that provide them are critical in a "bedroom community"-like Paradise to support the returning population and keep the local economy sustainable.

Multi-family housing recovery and development within the Town is the third objective of the Proposed Project. The reliance on private septic systems has always hindered the development of multi-family housing in the Town, as larger housing developments require wastewater infrastructure that exceeds the capacity of a traditional onsite septic system. Those housing developments that were able to navigate this barrier did so at great expense, with the cost of necessary wastewater treatment serving as a barrier to most multifamily projects. This has reduced the number of affordable housing units in Town and has contributed to an ongoing housing shortage in the Town and County. Per the *Camp Fire Regional Economic Impact Analysis Final Report* (Economic & Planning Systems and Industrial Economics 2021), "The Town lost almost 90 percent of its supply of single family detached homes, over 70 percent of its supply of single-family attached and other multifamily residential units, and all 2,100 mobile home units." Some reconstruction did occur in 2019, including 648 temporary residential units (Fehr and Peers 2021). Before the 2018 Camp Fire, Paradise provided housing for a workforce whose work was distributed throughout the County. BCAG states that in 2018, the County had a job to housing unit ratio of 0.83, while in 2020 the ratio jumped to 0.96 as a result of the housing loss associated with the Camp Fire (BCAG 2019b). After the 2018 Camp Fire, property owners who would otherwise build or re-build multi-family developments have been unable to do so partially due to the constraints of on-site septic system capacity. This loss of affordable housing development has caused a workforce shortage in surrounding communities due to the lack of available housing. A regional economic impact analysis of the 2018 Camp Fire found that "the ability of the Region to replace workers and re-balance income distribution hinges on its ability to plan for and successfully construct an adequate supply of new, affordable housing, particularly in Butte County" (Economic & Planning Systems and Industrial Economics 2021).

Additionally, as a recipient of a Home Investment Partnerships Program grant from the California Department of Housing and Community Development, the Town is required to offer a certain number of low-income housing units. The Town is currently unable to meet that requirement because of the existing septic system constraints, which are unable to support housing development densification.

Development of low-income, multi-family housing made possible by a sewer system could help the Town comply with these regulations, while also addressing the County's workforce shortage and providing affordable housing to the community.

2.4 Existing Wastewater Treatment Facilities

2.4.1 Town of Paradise

Currently, the Town has nearly 11,500 parcels (California State University Chico 2020). All of those parcels rely on private wastewater treatment facilities, which primarily consist of individual, privately owned septic tanks and leach fields. Larger private septic tank systems serving commercial, institutional, and multi-family properties are also used. Each property owner contracts with a private septage hauling company to periodically pump out their septic tanks and haul the septage away. A representative individual conventional septic system, typical of those which serve a majority of the Town, is shown in Figure 2-3.

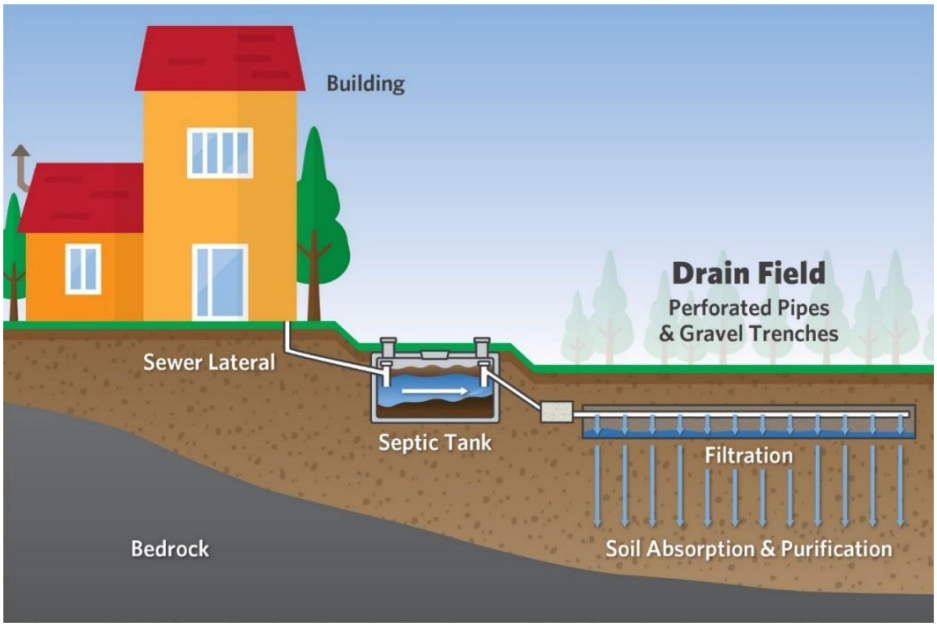


Figure 2-3. Individual Conventional Septic System

Residential septic tanks typically hold 1,000 to 1,500 gallons of septage and are pumped out every 5 to 10 years. Industrial or high flow commercial facilities are larger, include holding tanks, and are pumped several times per year. In a properly sized, installed, and well-maintained septic tank with ideal soil and groundwater conditions, solids, including microorganisms and nutrients, remain in the septic tank, and liquid (effluent) discharges to the soil through the leach field (drain field). Effluent from the septic tank enters the leach field within the soil layer through discharge pipes and gravel, where physical, chemical, and biological processes within the soil provide further treatment and disposal of the wastewater. However, septic tank effluent still contains large quantities of pathogenic microorganisms and nutrients when discharged into the soil, which are problematic in poor soil conditions, high groundwater, or compromised systems. Failed leach field filtration systems represent a portion of the known septic

system failures and associated soil degradation; present the largest concern for individual septic systems; and can often contribute to additional failures, including effluent discharge at the ground surface.

Septage from the Town currently is hauled by truck to one of the following locations:

- A receiving station at the Neal Road Recycling and Waste Facility, a landfill just south of the Town (approximately 2 miles southeast of the Proposed Project); from there, a single company (Thrifty Rooter) hauls the septage to Thrifty Rooter's septage treatment facility near Lincoln, California (approximately 71 miles south of the Proposed Project); and
- NorCal Environmental Solutions, a facility in Orland, California, 35 miles west of the Town.

2.4.2 Chico Water Pollution Control Plant

The Chico WPCP is located approximately 5 miles southwest of the City on 120 acres of land. The City owns and operates the property and the Chico WPCP. The Chico WPCP sewer service area is composed of the incorporated area of Chico and some parcels within unincorporated Butte County, adjacent to the City limits. The Proposed Project does not include changes to the current Chico WPCP sewer service area or the availability of sewer service to residents of the City, other than the addition of the Town's sewer service discussed below.

The Chico WPCP is a 12 mgd capacity, secondary treatment, activated sludge, wastewater plant with future expandability of up to 15 mgd (City of Chico 2021a). The Chico WPCP treats incoming wastewater through screening (large solids removal), grit removal, primary clarification, activated sludge treatment with secondary clarification, and chlorination/dechlorination. The sludge (biosolids) portion of the wastewater is treated by anaerobic digestion, followed by mechanical dewatering. The resulting biosolids are then hauled directly from the Chico WPCP for land application in unincorporated Sacramento County, California. The treated wastewater from the Chico WPCP is discharged to the Sacramento River through a submerged outfall diffuser and is regulated in accordance with National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079081 (Order No. R5-2016-0023). The annual average flow coming into the Chico WPCP is 6.3 mgd (Chico WPCP monitoring data, RWQCB 2021). The Proposed Project would add an additional 0.109 mgd of wastewater from the Town to the Chico WPCP influent at the time of initial connection (estimated for 2026) and 0.464 mgd at build-out (estimated for 2057) and would not increase nor substantially decrease the availability of sewer service within the City or County (see more details in Section 2.5.1 Core Collection System and assessment of effects in Section 3.18.4, Impact Analysis [Utilities and Service Systems]). Therefore, the Town's connection falls within the requirements of this NPDES permit. Any requirements to modify the Chico WPCP NPDES permit would occur with future expansion of the facility to the 15 mgd capacity; it is not anticipated that modifications to the permit would be required with implementation of the Proposed Project since it does not require a change in the current facility's capacity or primary infrastructure.

A Cooperative Funding Agreement between the Town and City was executed for the purpose of assessing impacts of a potential Town connection to the Chico WPCP. The *Regionalization Planning Report for the Paradise Sewer Project* (Carollo Engineers 2022) reviewed the Chico WPCP operating needs and plant capacity, including the proposed Town connection in the year 2026. Results of this

assessment have indicated that the potential 0.464 mgd Town discharge to the WPCP is within the existing plant's capacity (12 mgd). The study further identified that due to estimated future wastewater flow increases to the Chico WPCP based on the City's current and future population, including the estimated Town sewer discharge in 2026, the City would need to implement a project at the WPCP, consisting of the addition of a fourth secondary clarifier. This clarifier would be installed within the footprint of the existing plant, adjacent to three existing secondary clarifiers. The fourth clarifier is required whether Paradise connects to the Chico WPCP or not. Considering the Town's maximum of 0.464 mgd flow anticipated to connect to the City's WPCP in 2026, the fourth clarifier would be needed in 2028. Without the Town's additional flow, the fourth clarifier is needed in 2029. The City would evaluate this clarifier project in a separate CEQA process; therefore, it is not a part of the Proposed Project addressed in this PEIR.

2.5 Proposed Project Components

As stated at the beginning of this chapter, the Proposed Project would consist of three primary components: Core Collection System, Export Pipeline System, and Extended Collection System. The first two components are analyzed in this PEIR at a project level because sufficient information is available about the characteristics, timing, and locations of these proposed components. Because the Extended Collection System is conceptual in definition and the characteristics, timing, and/or locations of the necessary buried gravity and pressure lines, maintenance holes, and pump stations are not available at the time of PEIR preparation, the Extended Collection System build-out is analyzed at a programmatic level in this PEIR. Once the Extended Collection System construction is defined, the Town would consider whether subsequent CEQA documentation is required.

Although not a physical change to the environment and, therefore, not required to be included in this PEIR (CEQA Guidelines 15064(d)), it is recognized that the Proposed Project would require the City and Town to enter into an inter-municipal agreement to capture the contractual terms for the provision of wastewater treatment services from the Chico WPCP to the Town (Government Code Section 56133) and a formal agreement or other mechanism for the construction and maintenance of facilities within the Butte County-maintained rights-of-way.

Also, as described in the introduction of Chapter 2 Project Description, the Butte LAFCo must approve the extension of services beyond the boundaries of Chico to allow the City to provide wastewater treatment services to the Town (Government Code Section 56133); therefore, this is considered in this PEIR.

Subsections 2.5.1 and 2.5.2 describe the two Proposed Project components that would be assessed at a project level of review, including associated construction methods; equipment, crews, and materials; and easement requirements for the Core Collection System and Export Pipeline System.

Section 2.5.3 provides a description of the Extended Collection System, which is assessed at a programmatic level of review, as stated above.

2.5.1 Core Collection System

2.5.1.1 Location and Description

The infrastructure proposed to serve Paradise's sewer service area within the Town is called the Core Collection System. This component aligns geographically with what is defined as the Sewer Service Area (SSA) in the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a). The Core Collection System would support the centralized businesses and housing in Town, including approximately 1,500 parcels along the Skyway, Clark Road, and Pearson Road corridors (Figure ES-2; approximately 13-percent of the 11,500 total parcels within Town limits). Construction of the Core Collection System would disturb approximately 10.67 acres.

The parcels identified for the Core Collection System represent those with the highest probability for groundwater degradation associated with more concentrated uses, poor soils, high groundwater, and limited parcel sizes. The Proposed Project would add an additional 0.109 mgd of wastewater from the Town to the Chico WPCP influent at the time of initial connection (estimated for 2026; Section 2.6, Proposed Schedule). The estimated maximum wastewater conveyance and treatment need for the sewer service area is 464,000 gallons per day (0.464 mgd). This sewer estimate accounts for current and future estimated growth consistent with the current *Town of Paradise General Plan* and *Town of Paradise 2022-2030 Housing Element Update*, and would be realized over a projected 30-year planning horizon (Town of Paradise and Quad Consultants 2008; Town of Paradise 2022a). The Core Collection System and Extended Collection System combined is limited to the 0.464 mgd maximum and would be included in the inter-municipality agreement between the Town and City.

The Core Collection System would be sized to accommodate the Town population within the 30-year planning horizon (Town of Paradise 2022a), with the capacity to serve parcels within the Town's sewer service area and would consist of:

- Force (pressurized) mains, which are pressurized sewer pipes that convey water under pressure from the discharge side of the pump and are often used where gravity is not enough to move wastewater or stormwater runoff through a sewer line;
- Small pump stations used to move wastewater to higher elevations to allow subsequent transport by gravity flow; and
- A system of gravity sewers, which would use energy resulting from a difference in elevation to remove wastewater.

Most of the Core Collection System components would be constructed within the existing Town ROW. Temporary private easements could be required to install components of the Core Collection System, such as pipelines or pump stations. Remediation and disposition of existing on-site septic tanks and leach fields would be the responsibility of the individual parcel owner, as described further below. Because of the varied topography within the sewer service area, pump stations and pressurized force mains would be required to pump flows out of valleys and other low-lying areas to adjacent gravity sewers. Figure 2-5 presents examples of pump stations (one large and one small) that could be placed, as required, along the Town or County roadway ROW. Figure 2-6 shows the sewer main and sewer laterals proposed alignment within the Core Collection System area.

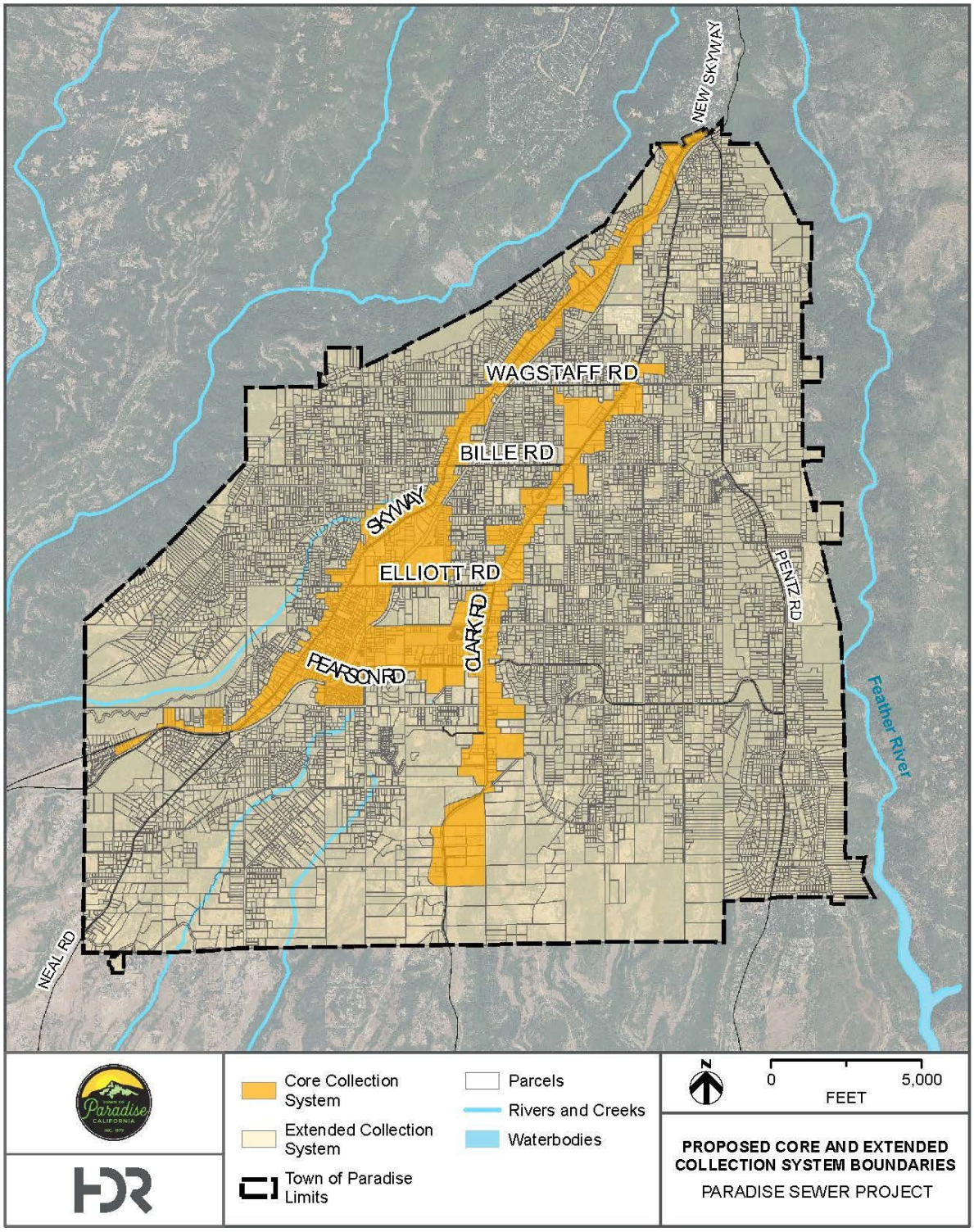


Figure 2-4. Town of Paradise Proposed Core and Extended Collection System Boundaries

Figure 2-5. Examples of Below-grade Pump Stations (left: large, approximately 8 feet in diameter; right: small, approximately 3 feet in diameter)

The Core Collection System would consist of approximately 157,000 feet of 6- to 8-inch-diameter gravity sewers, 29,000 feet of 2- to 4-inch-diameter force mains, and up to 28 pump stations. The pipelines would be buried approximately 3 to 15 feet below the ground surface, depending on local topography and sewer system design features and constraints. At individual parcels (residential dwellings and businesses), public sewer laterals (typically 4 inches in diameter) would extend from the Core Collection System's gravity sewer main to the property line, transitioning to a private sewer lateral within the parcel, leading to the structure (Figure 2-7). As part of the Proposed Project, the portion of the sewer lateral extending from the core collection system to the cleanout, and the cleanout itself, will be installed; the Town will be responsible for maintaining those portions of the sewer lateral. The private owner will be responsible for installing and maintaining the remainder of the sewer lateral up to the building, using the cleanout as the point of connection. The cleanout provides a direct access point to the sewer lateral, and is installed for the purpose of cleaning or clearing a clog located along the sewer lateral. A cleanout looks like a capped pipe sticking a few inches above the ground. The cleanout allows the Town and private owner to maintain their respective portions of the sewer lateral.

If there is an opportunity to construct multiple segments of the Core Collection System at the same time, construction methods can be accelerated to construct the segments simultaneously. Construction of the Core Collection System pump stations and sewer force mains would occur at the same time as the gravity sewers. Construction of the gravity sewer mains in the Core Collection System would likely be completed in segments, block by block, or multiple blocks at a time, starting from the downstream end of the system (at the southwestern edge of the Town) and working upstream, based on standard construction methods and installation of gravity sewers.

The Core Collection System would transition to the Export Pipeline System at the southwestern edge of Town, on the Skyway (Figure ES-1). The connection of a parcel's sewer to the Proposed Project would eliminate the need for an individual parcel to use an on-site septic system and leach field. The transition

to the Core Collection System for existing structures with functioning septic system and no plans for substantial building expansion would be at a property owner's discretion, although the Town is pursuing

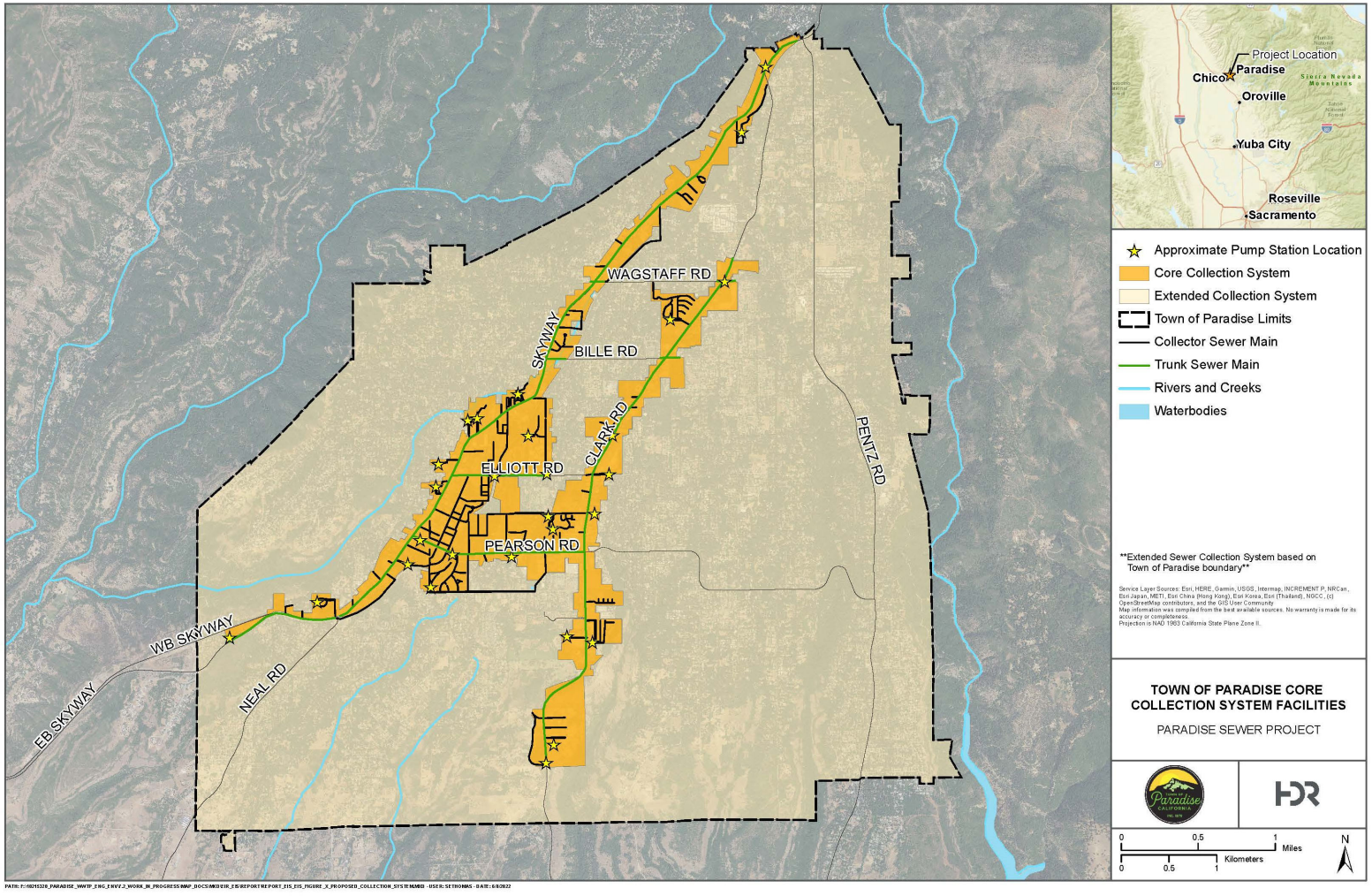


Figure 2-6. Core Collection System

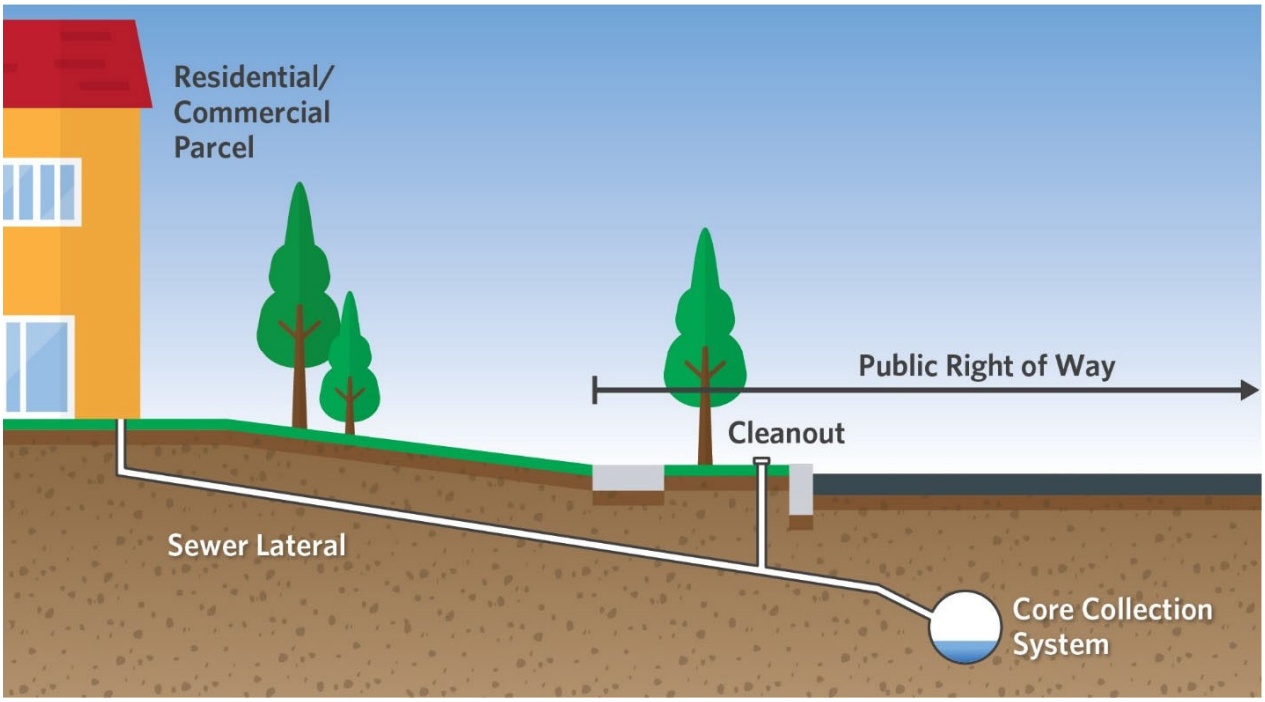


Figure 2-7. Connection to Core Collection System

Table 2-1. Core Collection System Pipeline Measurements

Collection System Feature	Approximate Pipe Length (feet)	Pipe Diameter (inches)
Gravity Sewers	157,000	6–8
Force Mains	29,000	2–4
Sewer Laterals (approximately 1,500)	30–50 each (varies)	4–6 (varies)

grants to incentivize sewer connection within the Core Collection System area. Those properties in the Core Collection System area that would be required to connect to the sewer system would include: (1) new construction that generates wastewater, (2) an existing structure with a failed onsite wastewater system, as determined by the Onsite Sanitary Official, or (3) structure expansions greater than 750 square feet for residential or 1,000 square feet for commercial; this criteria is consistent with exemption thresholds included in Chapter 12.20 of the Town's *Municipal Code for Improvements – Right of Way Dedication* (Town of Paradise 2022b). A sewer ordinance would be adopted by the Town and is anticipated to include the same parameters. Remediation and disposition of existing on-site septic tanks and leach fields would be the responsibility of the individual parcel owner, and these actions are not considered in this PEIR as part of the Proposed Project; a parcel's septic system would need to be remediated (abandoned or removed) pursuant to existing regulations as a condition of connecting to the Proposed Project. A process for abandonment of a private septic system has been established under the County's existing standards and the Town's on-site septic management processes. Information is available to the public on the Town's website (https://www.townofparadise.com/septic/page/abandonment-septic-system). Additionally, permitted clustered septic wastewater treatment would

remain allowable within the Town boundaries under the Proposed Project. The clustered septic system combines several discharges, treats the waste in a single treatment plant, and discharges to subsurface land disposal, thereby eliminating adverse impacts associated with the individual septic leach line systems (Town of Paradise 2022a). Although this option can be feasible for larger projects or consortiums of property owners, it is not viable for small individual projects due to relatively high associated costs (Town of Paradise 2022a).

2.5.1.2 Construction Methods

Construction within the Town's ROW would use open-cut trenching methods to install the pipes and structures that comprise the Core Collection System. Open cut trenching is a method of installation that requires opening up the surface of the ground to install, repair or replace a new structure, such as a pipe, conduit, or cable. The excavation is then backfilled, and the surface restored. Section 2.5.2.2 *Construction Methods*, Figure 2-11, shows examples of typical open-cut pipe installation. Where located within public streets, portions of the Town's ROWs would serve as a temporary construction zone, with restricted access to the ROW to allow trenching equipment to dig trenches. Work crews would install the pipe and structures, then backfill the excavation, restore the ground surface to its previous or better conditions, and re-establish full access to the area. The required maintenance holes and pump stations would involve similar construction methods of open cuts, installation, backfill, and restoration.

Water encountered in trenches during Core Collection System construction would be managed according to local and state standards, which may include water collection and storage prior to disposal or reuse (via local temporary sump pumps and Baker Tanks to improve water quality or quantity, as needed). Discharge or reuse may include pre-settlement of solids, and reuse may include use in water trucks for dust control during construction.

2.5.1.3 Equipment, Crews, and Materials

The following construction quantities were estimated for the Core Collection System (HDR 2022).

Construction Crews and Equipment

Table 2-2 summarizes the construction crew size and equipment types required for Core Collection System construction.

Table 2-2. Summary of Construction Crews and Equipment for Core Collection System

Number of Workers Per Crew	Equipment
Asphalt Removal Crew	
1	Sawcutting machine
1	Water truck/trailer
1	Backhoe/loader 95hp, Cat 420
1	Excavator 1.5 cy, 165hp Cat 320
2	Truck tandem 16 cy
1	Skidsteer 80hp
7	**Total Workers**

Crews and Number of Workers Per Crew	Equipment
Small-diameter Pipe Installation Crew	
2	Excavator 1.5 cy, 165hp Cat 320
1	Loader 170hp, Cat 930
2	Concrete truck
1	Roller compactor, walk behind, 20hp
3	Vibratory plate/jumping jack compactor
2	Truck tandem 16 cy
11	**Total Workers**
Asphalt Replacement Crew	
1	Backhoe/loader 95hp, Cat 420
1	Loader 170hp, Cat 930
1	Skidsteer 80hp
1	Water truck/trailer
1	Asphalt paver 75hp
2	Roller compactor, riding, 25T, 170hp
2	Vibratory plate compactor
2	Truck tandem 16 cy
2	Striping truck
13	**Total Workers**
Pump Station Installation Crew	
2	Excavator 2.5 cy, 310hp Cat 336
1	Loader 170hp, Cat 930
1	Roller compactor, walk behind, 20hp
4	Vibratory plate/jumping jack compactor
1	Truck tandem 16 cy
1	Mobile soil-cement mixer, Cement Tech M30, 425hp
1	Excavator 2.5 cy, 310hp Cat 336
1	Loader 170hp, Cat 930, soil processor bucket
12	**Total Workers**

Notes: cy = cubic yard; hp = horsepower

Based on an anticipated 22-month construction period, installation of the Core Collection System would require multiple crews to be working at the same time (HDR 2022). The following is the estimated number of crews working at any given time:

- Asphalt Removal: 1 crew
- Small-diameter Pipe Installation: 7 crews
- Asphalt Replacement: 1 crew
- Pump Station Installation: 2 crews

Excavated and Fill Materials

The following excavated and fill materials are anticipated for Core Collection System construction (HDR 2022):

- Soil exported: 169,400 cubic yards
- Fill material imported: 62,600 cubic yards

Construction Materials

The following materials would be used in the Core Collection System construction (HDR 2022):

- Polyvinyl chloride (PVC) pipe and miscellaneous fittings
- Pre-built pump stations and associated mechanical/electrical components
- Temporary and permanent paving (asphalt)
- Backfill material

Estimated Truck Trips

Based on an anticipated 22-month construction period for the Core Collection System, an average of 750 round-trip truck trips distributed across an average of 11 crews working at a given time would be generated each working day during construction (HDR 2022). This equates to approximately eight trucks per crew per hour, which would be dispersed across multiple locations within the Core Collection System construction area.

2.5.1.4 Easement Requirements

The majority of the Core Collection System would be installed within the Town's ROWs (i.e., Town streets, existing public ROW). However, small segments of the Core Collection System may need to cross private parcels to install components of the Core Collection System, such as pipelines or pump stations. In those cases, temporary or permanent easements would be acquired from the property owners. As noted above, remediation and disposition of existing on-site septic tanks and leach fields would be required to connect to the sewer system and would be the responsibility of the individual parcel owner; therefore, no easement requirements would be associated with septic remediation.

2.5.2 Export Pipeline System

2.5.2.1 Location and Description

The proposed Export Pipeline System would start at the southern end of the Core Collection System as a gravity sewer line and would continue southwest to the City for connection to the Chico WPCP. In total, construction of the Export Pipeline System would disturb approximately 5.95 acres. The system would be primarily constructed within the Butte County public ROW, except for approximately 5,700 feet (1.1 miles) of the 18-mile proposed pipeline construction in southern Chico and at the connection with the Chico WPCP. Where the proposed pipeline alignment leaves the Butte County public ROW at Skyway, east of SR 99, it would remain within an inactive UPRR corridor before bisecting two private parcels located within the City limits. This segment including the UPRR corridor, and the two private parcels is the only segment along the proposed Export Pipeline System that is not in the public ROW. The segment for connection to the Chico WPCP would fall within the WPCP site, which is City property. Further, the crossing of the two private parcels and the final connection at the Chico WPCP are the only segments of the Proposed Project that would fall within City boundaries. Easements for the UPRR and private crossings are discussed in Section 2.5.2.4 *Easement or Access Permission Requirements*. See Figure ES-3 for the pipeline route location, with the section of proposed crossing of private parcels identified.

The proposed Export Pipeline System would include the following sub-components:

- **Ridge Gravity Section:** At the terminus of the Core Collection System, the Export Pipeline System begins with the Ridge Gravity Section. In this section, the wastewater flows by gravity. No pump stations would be required. To handle both the initial low wastewater flows and future build out flows, two separate gravity sewer pipes are needed: one 8 inches in diameter to handle low flows, and one 10 inches in diameter that would accommodate the build out flows. The 10 inch-diameter pipe would be placed directly above the 8-inch-diameter pipe, with an accompanying fiber-optic conduit for pipeline operations. All three items would be installed at the same time and are needed based on the hydraulic parameters of sewer gravity flow. These parameters are dependent on flow velocity, which is in part dictated by the amount of flow in the system and the size of the pipe. Both sewer pipes and conduit would be approximately 7.5 miles in length, installed approximately 10 feet deep, and remain within the County ROW.
- **Transition Chamber:** The Transition Chamber would provide the necessary transition of the wastewater flow from the steep Ridge Gravity Section to the Gravity Force Main Section that runs along the flatter portions of the valley floor, connecting the Gravity Force Main Section to the Chico WPCP. The Transition Chamber would be installed along Skyway, just before the pipeline reaches the City limits. The chamber would be a below-ground (likely cylindrical) structure, approximately 10 to 12 feet in diameter and 10 to 15 feet deep, with a small box-like structure above ground to house electronics associated with measurement devices within the chamber. Examples of what the above-ground structure and the below-ground structure could look like are included in Figure 2-9 and Figure 2-10, respectively.
- **Gravity Force Main Section:** Flow leaving the Transition Chamber would be under pressure based on the gravity flow from the steep Ridge Gravity Section, and the pipe would flow full, creating a beneficial force main based on the hydraulic behavior of the sewer (eliminating the need for a pump station, which is not a part of this system), so the effluent can reach the Chico WPCP. No pump stations would be required. The Gravity Force Main Section would consist of 10.5 miles of a 12 inch-diameter pipe, with an accompanying fiber-optic conduit above, at a minimum depth of 3 feet (depth varies). The pipeline would be installed along existing roads within the County ROW, or within permanent sewer easements obtained from private property owners, if necessary. There is one segment of this section that crosses perpendicularly under SR 99 (in a tunneled crossing), which is a state highway. For that section, approval from the California Department of Transportation (Caltrans) would be obtained.
- **Maintenance Holes:** Along the Ridge Gravity and Gravity Force Main Sections, approximately 80 maintenance holes, which are required for the maintenance of the pipelines, would be spaced approximately 500 feet apart.
- **Flow Control and Metering Structure:** A Flow Control and Metering Structure, located at or near the Chico WPCP, would consist of two below-ground circular chambers (or similar) next to each other, each approximately 8 feet in diameter and 10 to 15 feet deep. Similar in size to the aboveground structure supporting the Transition Chamber described previously and shown in Figure 2-9, a small, above-ground, box-like structure would house electronics associated with the flow control and measurement devices installed below ground. An example of what the

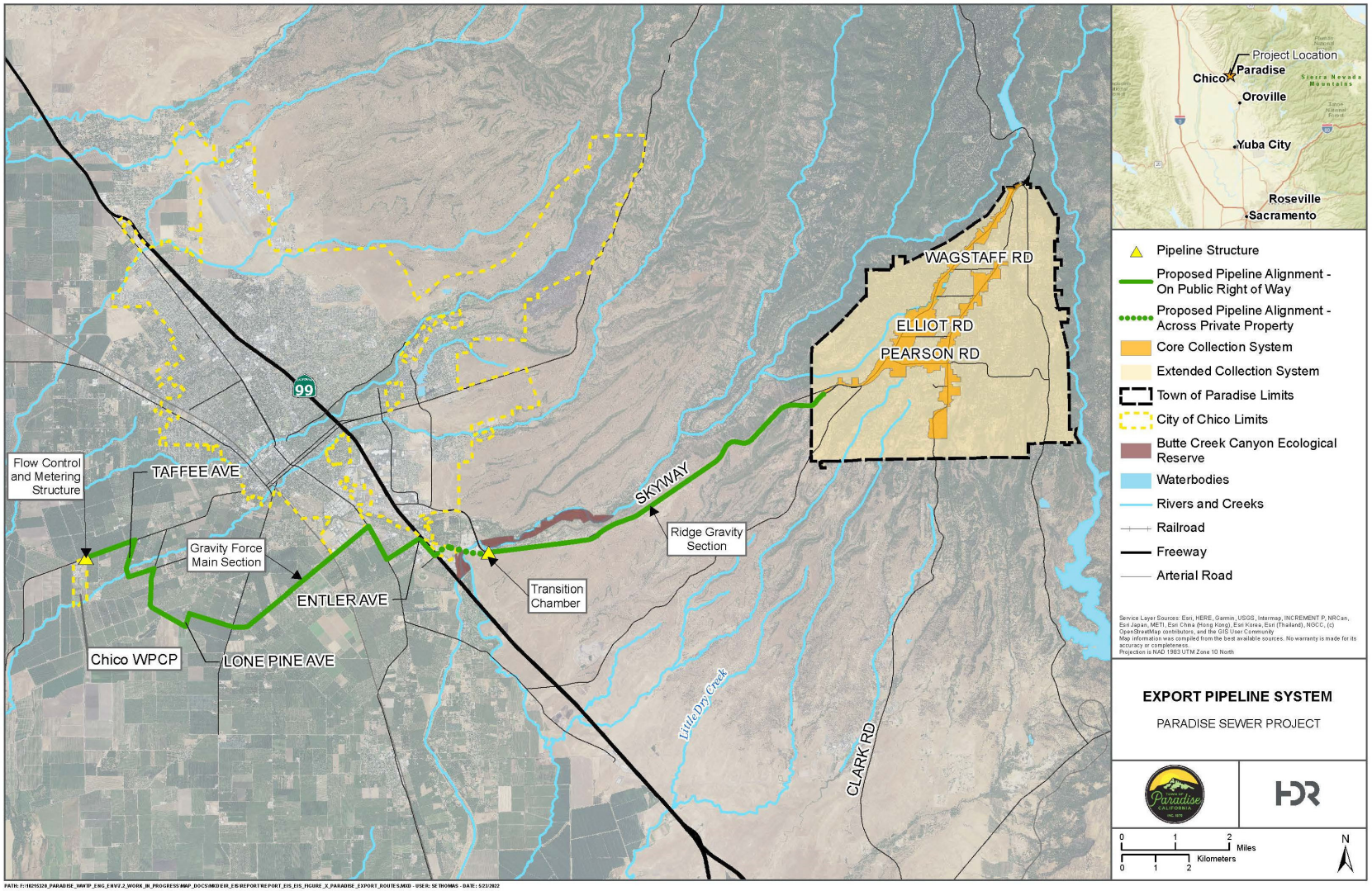
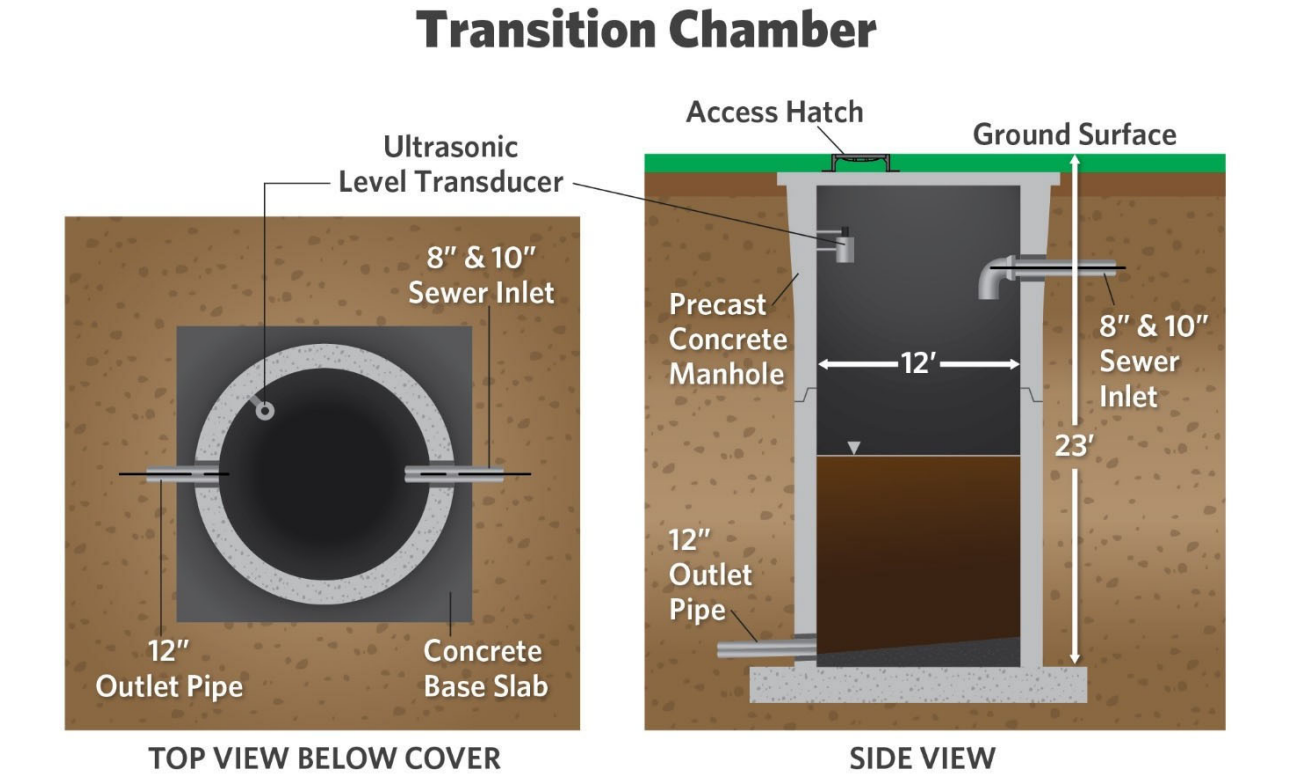


Figure 2-8. Export Pipeline System

Figure 2-9. Example Transition Chamber with Vehicular Bollard Protection



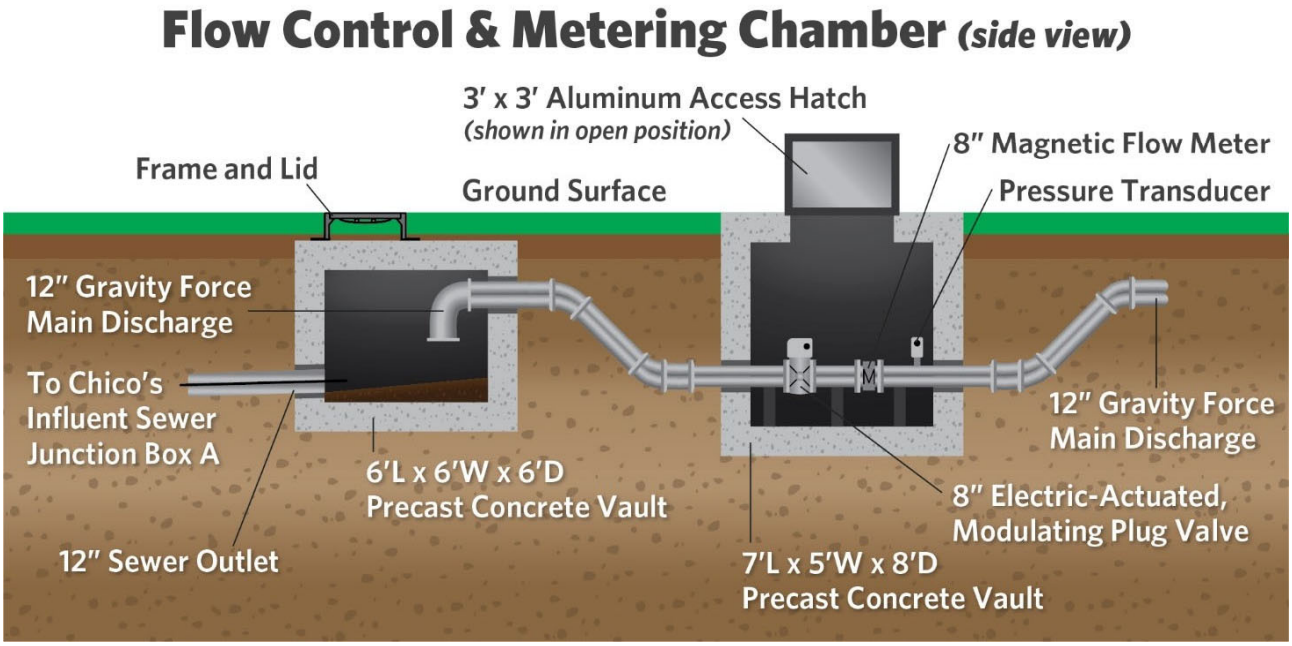


Figure 2-10. Transition Chamber and Flow Control and Metering Chamber Examples

below-ground structure could like is included in Figure 2-10. The first below-ground chamber would be dry (the wastewater would remain within the pipe that is exposed within the chamber) and would contain a magnetic flow meter and a pressure gauge on the pipeline, with the chamber being the access point to this flow meter. The second chamber would be wet, with the wastewater discharging into the chamber via a modulating plug valve. A modulating plug valve would keep the Transition Chamber and Gravity Force Main Sections full, to maintain the hydraulic function of the Gravity Force Main Section. In this chamber, the wastewater would travel through the modulating valve, discharge into the open chamber, and then flow by gravity from the second chamber to the existing Influent Sewer Junction Box A at the Chico WPCP. This would be the terminus of the Export Pipeline System.

- **Fiber-optic Conduit:** As discussed above, the Proposed Project includes two below-ground structures along the Export Pipeline System: a Transition Chamber and a Flow Control and Metering Structure. These two structures include instruments that would monitor various parameters of the wastewater, such as water levels, valve positions, and wastewater flow rate. To reliably communicate the signals from those electrical instruments to the Town and the Chico WPCP, the Proposed Project would include installation of a 2-inch-diameter, fiber-optic conduit in the same trench as the Export Pipeline System. The conduit would be made of metal, PVC, or fiberglass braiding, and would be placed above the pipelines. This component is essential to the extension of the wastewater services from the City to the Town, as it is the mechanism to track flow volume, characteristics, and timing of discharges, and would be used in ongoing evaluation and operation decisions between the Town and City.
- **Chico WPCP Connection:** The southern end of the Export Pipeline System would connect to the existing Chico WPCP. This connection would involve drilling a hole in an existing below-ground concrete box at the facility and connecting the new pipeline. Consistent with existing operations, the wastewater would be treated at the Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser. It is anticipated that the Town's connection would fall within the requirements of the current NPDES permit, as discussed in Section 2.4.2.

Construction of the Export Pipeline System would be divided into segments, with multiple segments under construction at any single point in time. A summary of measurements and installation depths for the proposed Export Pipeline System components is provided in Table 2-3.

Table 2-3. Export Pipeline System Measurements

Export Pipeline System Component	Approximate Diameter	Approximate Length/Number	Approximate Installation Depth (feet)
Ridge Gravity Section	8 and 10 inches	7.5 miles	10
Transition Chamber	10–12 feet	1	10–15
Gravity Force Main Section	12 inches	10.5 miles	3–10
Flow Control and Metering Structure	8 feet	2	10–15
Fiber-Optic Conduit	2 inches	18.0 miles	2–14

2.5.2.2 Construction Methods

Open-Cut

The Export Pipeline System would generally be constructed using open-cut methods (also known as open-trench method; Figure 2-11). The trench would be approximately 5 feet wide and up to 10 feet deep. The construction sequence would consist of (1) backhoe excavation; (2) shoring systems installation for trench excavation protection to achieve the excavation depth; (3) pipe installation; and (4) trench backfill placement, with subsequent shoring system removal and ground surface restoration. Excess soil produced by the excavation would be disposed of consistent with all regulatory requirements. Along the Skyway segment and segments along other county roads, construction activities would generally be limited to the County ROW within and adjacent to those roads. For this analysis, it is expected that approximately 200 to 500 feet of pipeline may be installed per day of construction, with installation rates expected to be at least twice that in the valley areas, where the terrain is flat. Up to 11 staging areas are identified for potential use by the contractor to store pipe, backfill materials, and construction equipment. Staging areas are discussed further in Section 2.7.1.

Figure 2-11. Typical Open-cut Pipe Installation (left: pipe layout; right: open cut and shoring)

Trenchless Crossings

A trenchless construction method is proposed at five locations along the proposed Export Pipeline System route, as shown in Figure 2-12. The trenchless crossings would be constructed using either horizontal directional drilling (HDD) or microtunneling methods, depending on the feature being crossed. Both methods would involve excavated pits at either end of the crossing to allow pipe installation beneath the feature (e.g., creek, highway, railroad), and avoiding the disruption of excavation at the surface of the specific feature location. Table 2-4 provides the potential crossing type at specific locations. The following subsections describe the specifics for these methods.

Table 2-4. Trenchless Crossing Location Details

Location	Anticipated Trenchless Crossing Type	Approximate Crossing Dimensions	Figure Number
Butte Creek and Butte Creek Canyon Ecological Reserve	HDD	1,065' L x 20' D (below creek bed)	Figure 2-14
Comanche Creek	HDD	500' L x 20' D (below creek bed)	Figure 2-15
Little Chico Creek	HDD	500' L x 20' D (below creek bed)	Figure 2-16
State Route 99	Microtunnel	1,100' L x 30' D (below roadway centerline)	Figure 2-18
Union Pacific Railroad	Microtunnel	500' L x 30' D (below rail line centerline)	Figure 2-19

Notes: HDD = Horizontal Directional Drilling; ' = foot; D = depth; L = length

Horizontal Directional Drilling Crossings

HDD crossings are proposed in three locations along the Gravity Force Main Section to avoid affecting creeks and the Butte Creek Canyon Ecological Reserve:

- Butte Creek and Butte Creek Canyon Ecological Reserve (single crossing below both features)
- Comanche Creek
- Little Chico Creek

After excavation of an open pit on either side of the creek, outside the sensitive areas (one launching and one receiving pit, each approximately 10 feet long by 5 feet wide by 5 feet deep), the HDD pipe installation method involves three phases (shown in Figure 2-13):

- **Pilot Hole Drilling:** The HDD machine drills a small-diameter pilot hole on a directional path (guided by a Global Positioning System [GPS] unit) from the launch pit to the receiving pit, leaving a drill string in place in the pilot hole. Drilling fluid is pumped into the pilot hole to maintain the integrity of the hole and flush out cuttings.
- **Preream:** Once the pilot hole has been completed, the borehole must be enlarged to a suitable diameter for the pipeline. Generally, the reamer is attached to the drill string at the receiving pit and pulled back into the pilot hole towards the launch pit. Again, drilling fluid is pumped into the enlarged borehole to maintain the integrity of the hole and flush out cuttings.
- **Back Reaming and Pull Back:** Once the directionally drilled hole is enlarged, the pipeline can be pulled through it. The pipeline is prefabricated at the receiving pit. A reamer is attached to the drill string, and then connected to the pipeline by a pulling head. The HDD machine then begins the pullback operation, rotating and pulling on the drill string as well as circulating drilling fluids. The pullback continues until the reamer exits the bore at the launch pit and the pipeline is in place.

The HDD crossings would be required to have a minimum depth of 20 feet and a maximum depth of 30 feet below the waterbody.

To comply with local and state construction standards, and to protect the waterbody at the proposed crossing location, the contractor would prepare an Inadvertent Release Plan, which the Town would approve prior to the start of the HDD effort. The plan would establish required construction practices to minimize risk of a release, establish monitoring requirements, and define contingency procedures that

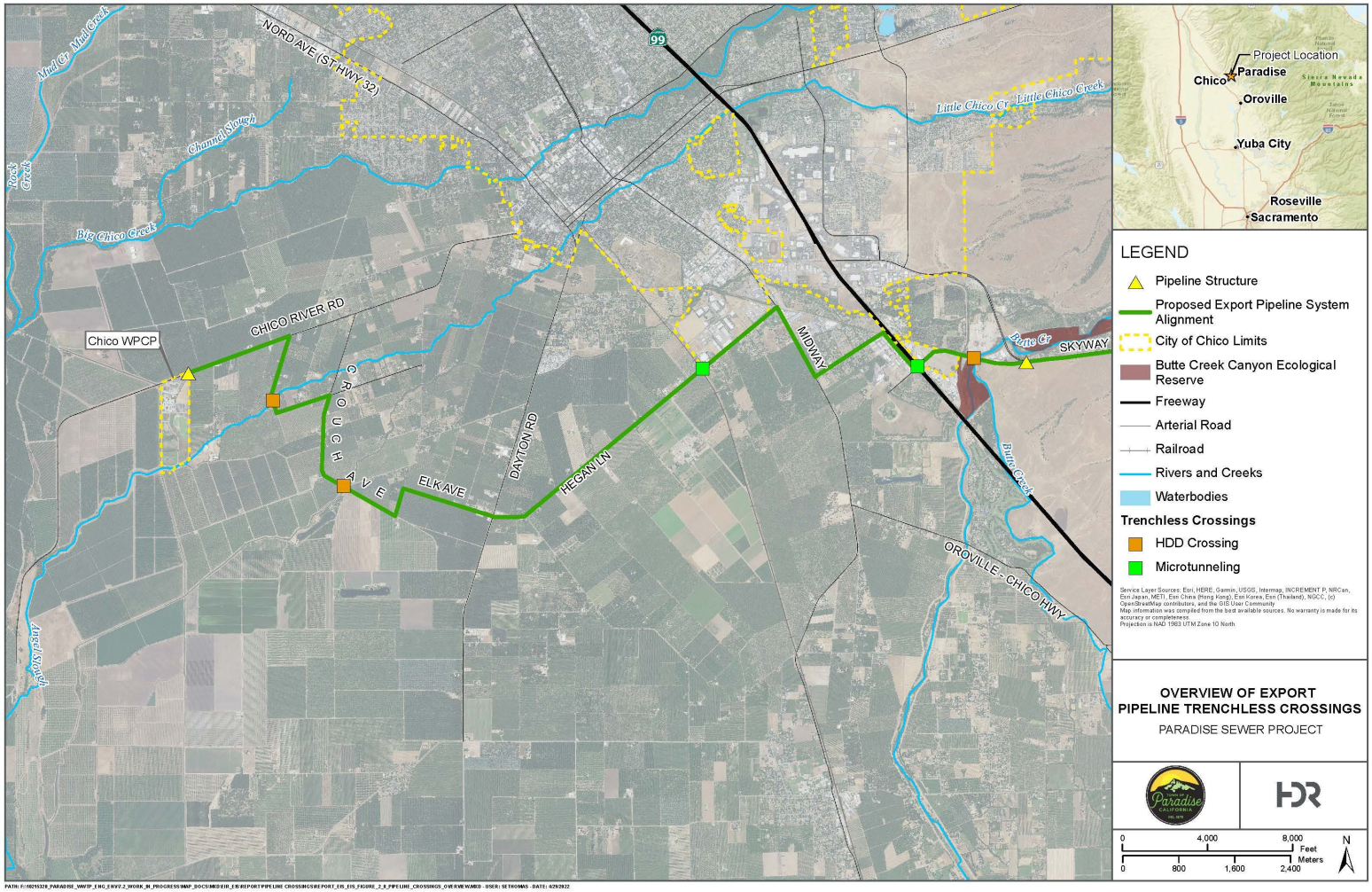


Figure 2-12. Overview of Export Pipeline Trenchless Crossings

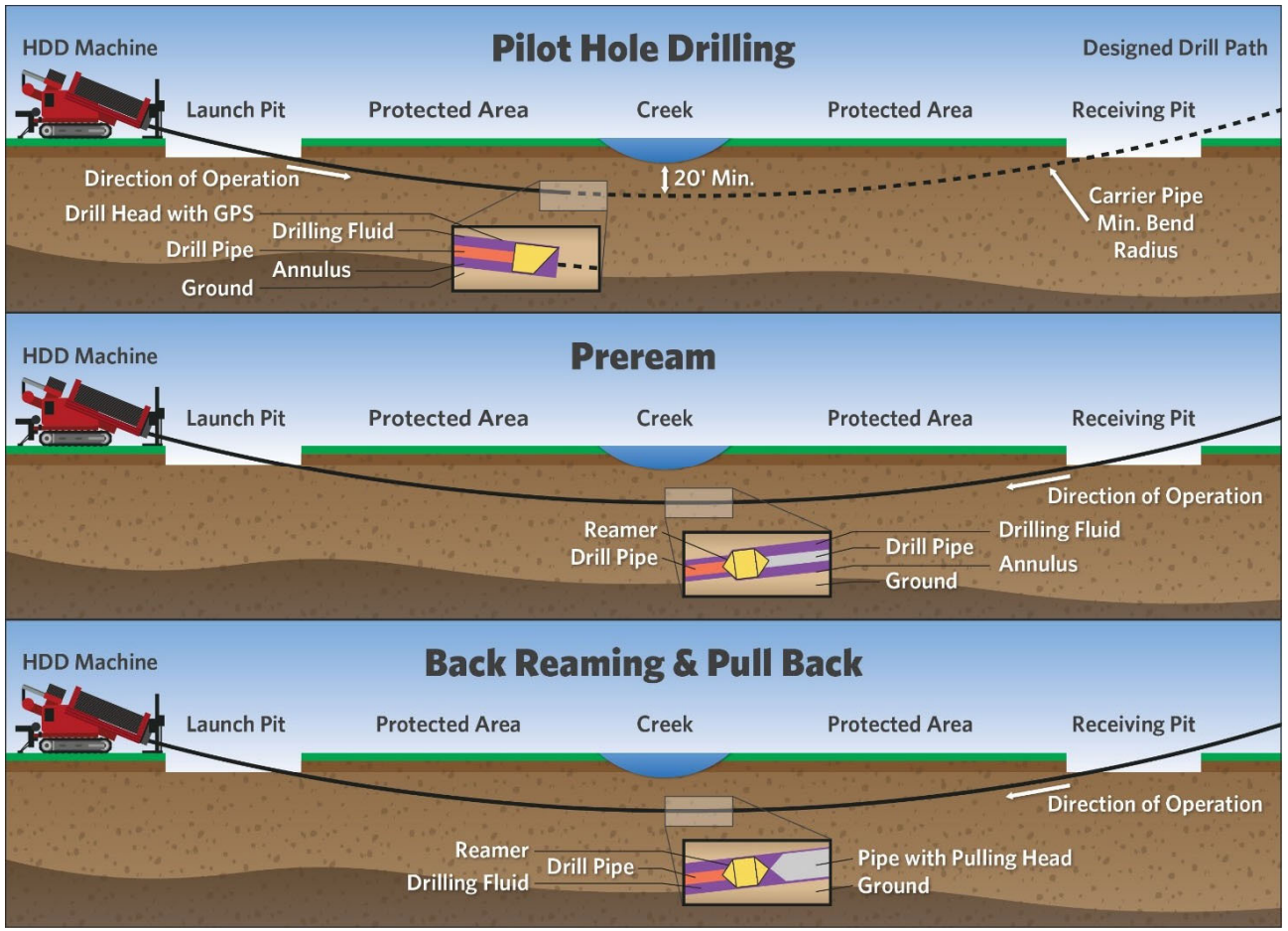


Figure 2-13. Typical HDD Installation

would be followed if the directional bores or pipeline installations caused movement of the soil (referred to as a frac-out) in the waterbody. This scenario is an unlikely, but possible, result of the HDD crossing of the creek.

The work area would include a stockpile area, isolated from any waterbodies, for the excavated material from the launching and receiving pit. The HDD crossing length is a function of the minimum depth requirement and the maximum bend or arch that can be placed on the pipeline, based on the pipeline material properties. Depending on the crossing length and the topography on each side of the crossing, the depth of the pipeline below the surface would vary. Both launching and receiving pits would be shallow (approximately 5 feet deep) and would have work areas around them to facilitate installation and protect the creek. Figure 2-14, Figure 2-15, and Figure 2-16 show the three proposed HDD locations. Section 3.4 provides an assessment of the potential for effects from construction on sensitive resources.

Microtunnel Crossings

Caltrans and Union Pacific Railroad (UPRR) require pipelines to be installed inside an outer casing pipe when crossing below their facilities (highways and railroads, respectively). Both crossings are in highly disturbed areas, not zoned as residential and no residences are present. Nighttime work could occur during microtunneling, when work would need to be completed so as to avoid tunnel failure. If required, as discussed in Section 2.6 Proposed Schedule, the contractor will be required to obtain a special permit from the County Public Works Department that will be appended to the utility encroachment permit for the Proposed Project along with additional conditions. The contractor will be held to permit conditions by the Town and County.

Microtunneling (Figure 2-17) is a construction method that allows installation first of a casing pipe, and then insertion of the primary pipe. Therefore, microtunnel crossings are proposed at SR 99 and UPRR within the Gravity Force Main Section. Microtunneling involves excavation at an estimated depth of 30 feet, with a 30- by 12-foot launching pit, a 12- by 12-foot receiving pit, and work areas surrounding each pit. The work area would be within a previously disturbed area and include a stockpile area for the excavated material of the launching and receiving pit. The pits would be outfitted with temporary water inflow controls and watertight shoring to stabilize the pits during construction. The shoring is typically installed using a pile driver (vibratory or impaction) or an auger with a drill rig during excavation of the launching and receiving pits. Water encountered during pit excavation would be placed into a settling tank before being transported for discharge or reuse, according to local and state standards.

Once the launching and receiving pits are constructed, one 26- or 28-inch-diameter steel casing would be installed to provide the pathway for the underground crossing of the Gravity Force Main Section pipe at this segment. Once completed, the Gravity Force Main Section pipe would be installed inside the steel casing, as shown in Figure 2-17.

After the temporary construction features (slurry pipes, thrust blocks, shoring) are removed, the launching and receiving pits would be backfilled. As they are backfilled, the export pipeline would be installed vertically, to extend the buried pipeline at the crossing to a shallower depth on each side, on the receiving and discharge ends of the pipeline, completing the pipe segment. See Figure 2-18 and Figure 2-19 for the vertical pipeline alignment at the SR 99 and UPRR crossings, respectively.

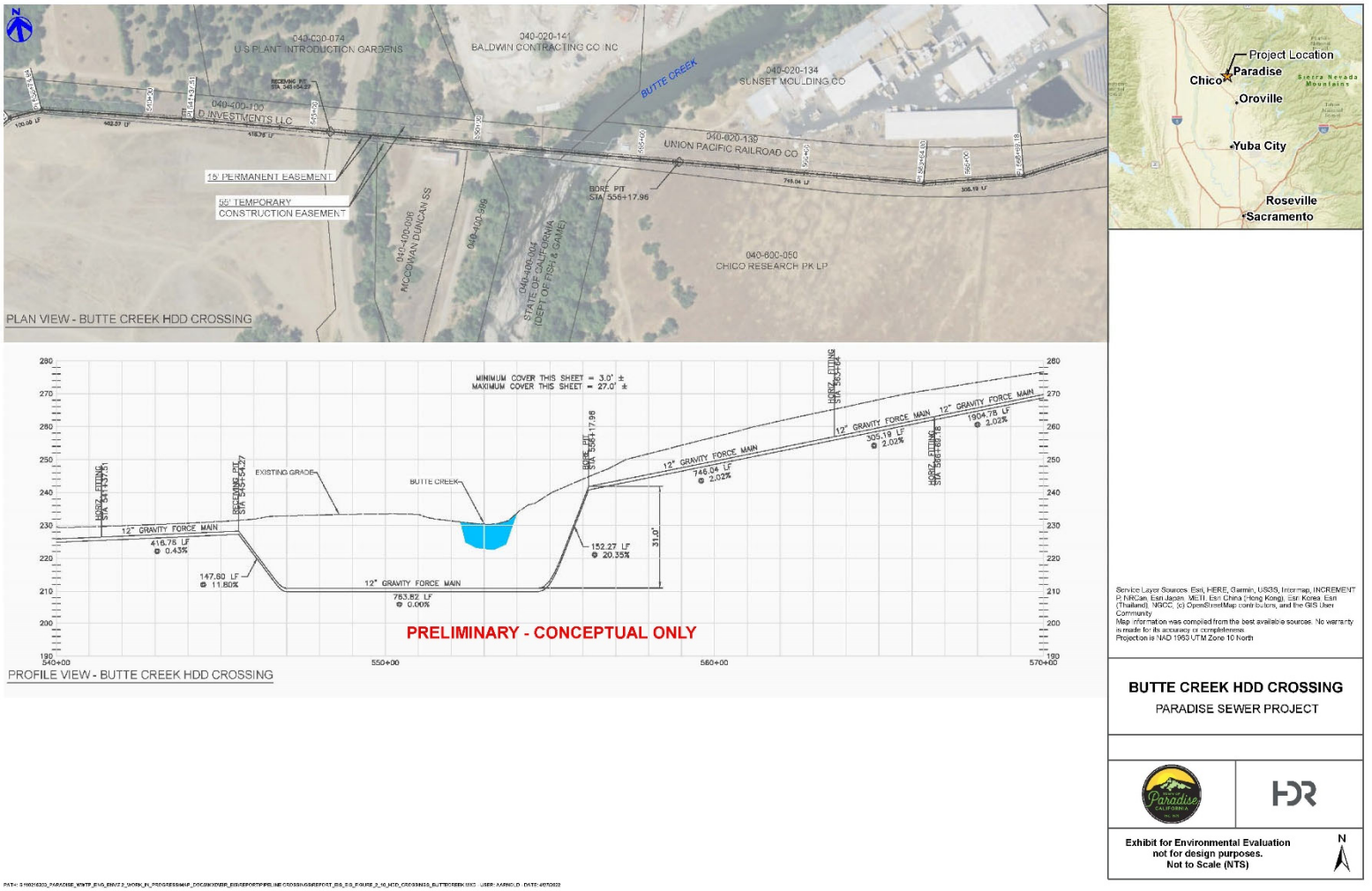


Figure 2-14. Butte Creek and Butte Creek Canyon Ecological Reserve HDD Crossing

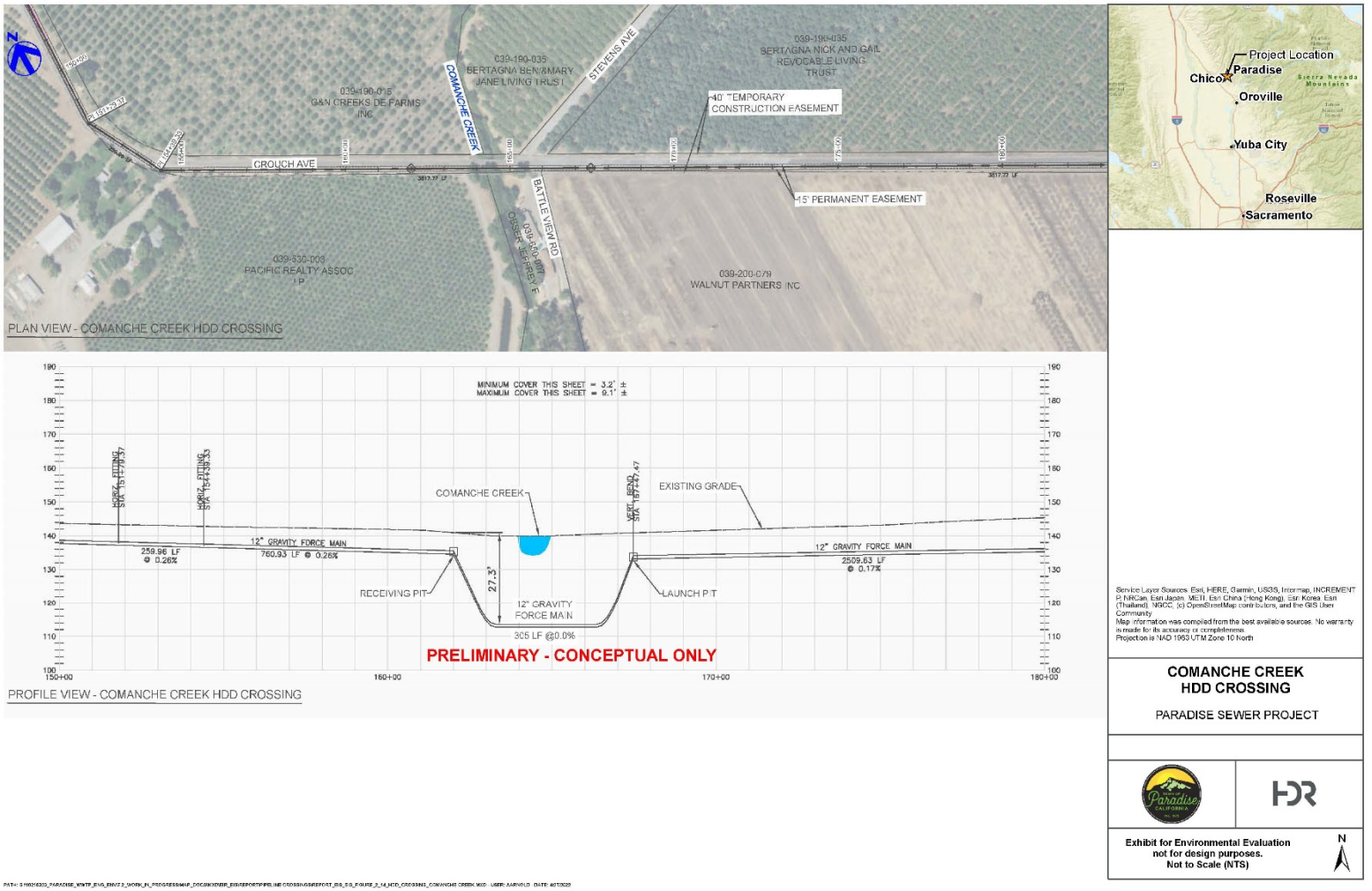


Figure 2-15. Comanche Creek HDD Crossing

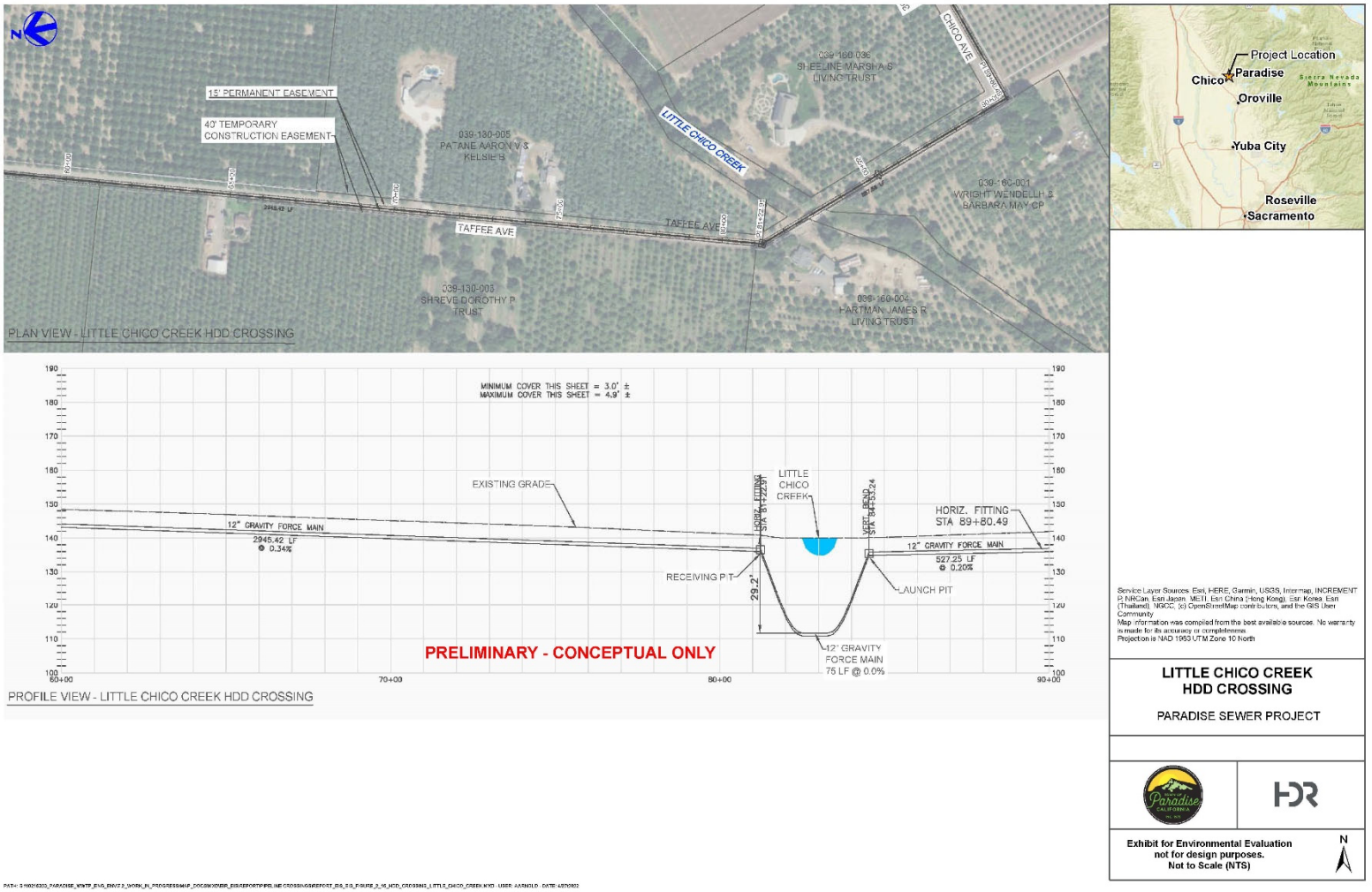


Figure 2-16. Little Chico Creek HDD Crossing

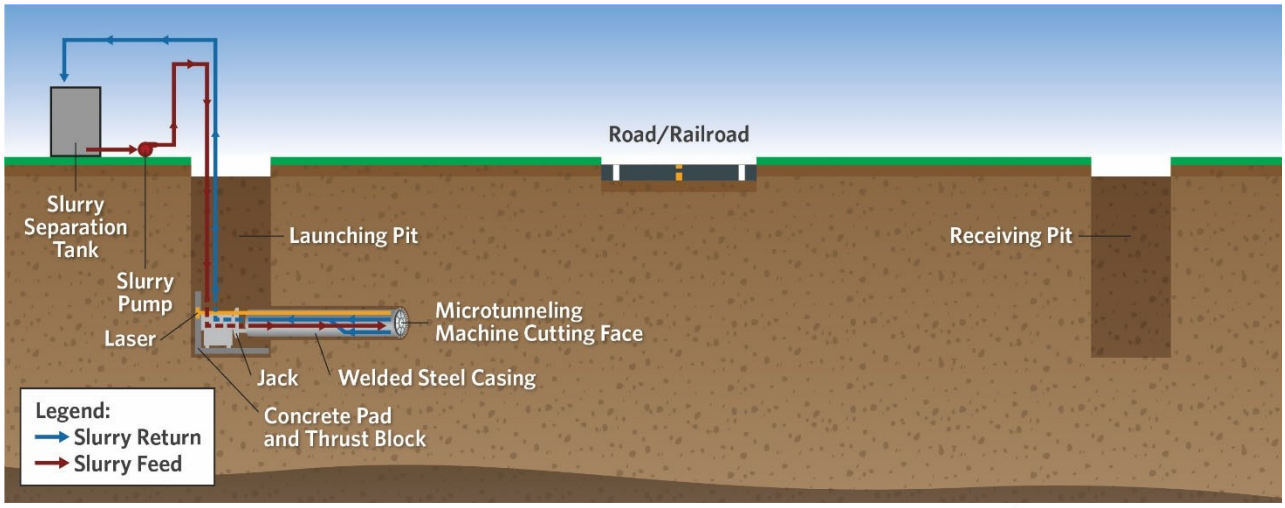


Figure 2-17. Typical Microtunneling Installation

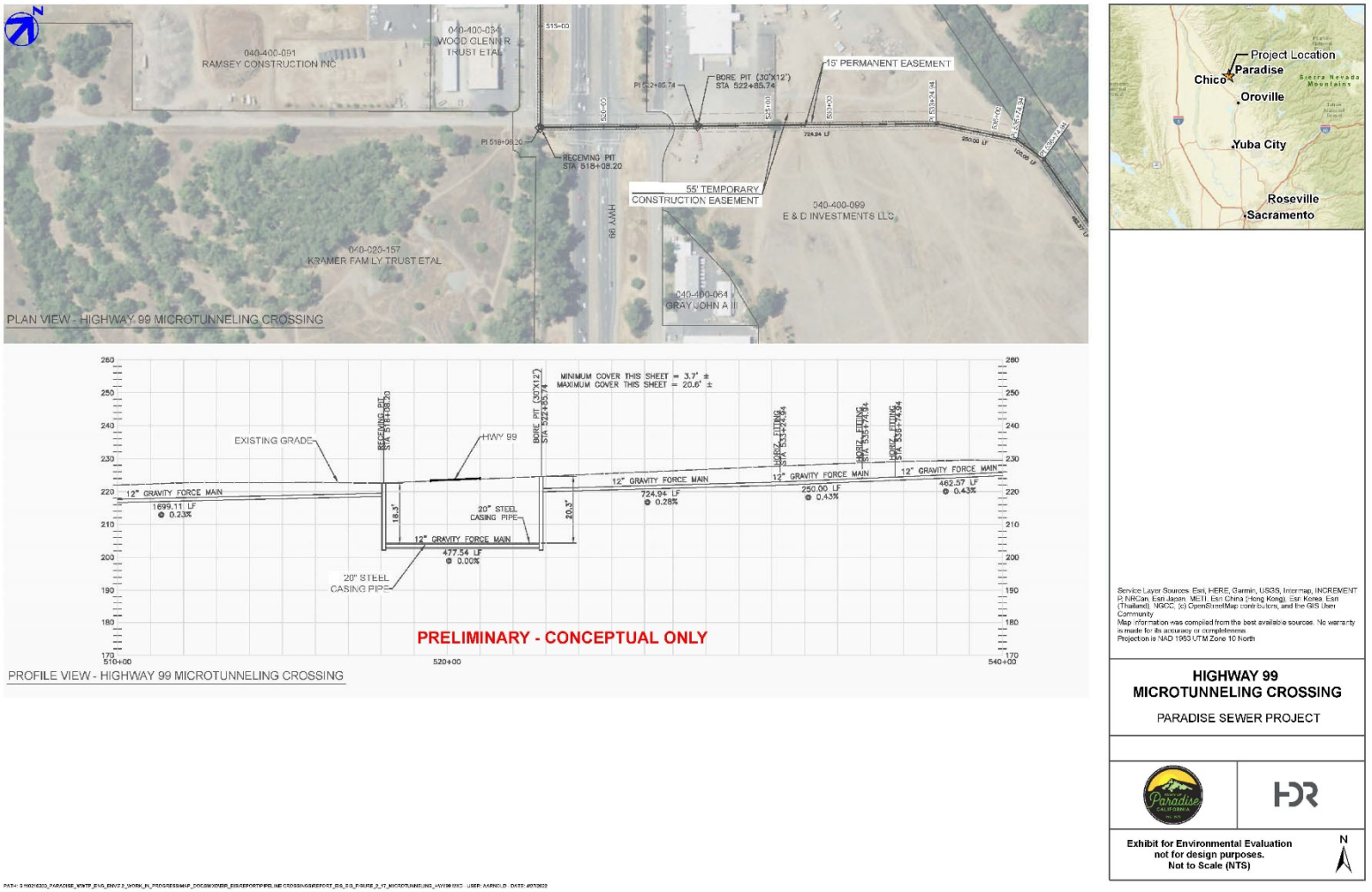


Figure 2-18. State Route 99 Microtunnel Crossing

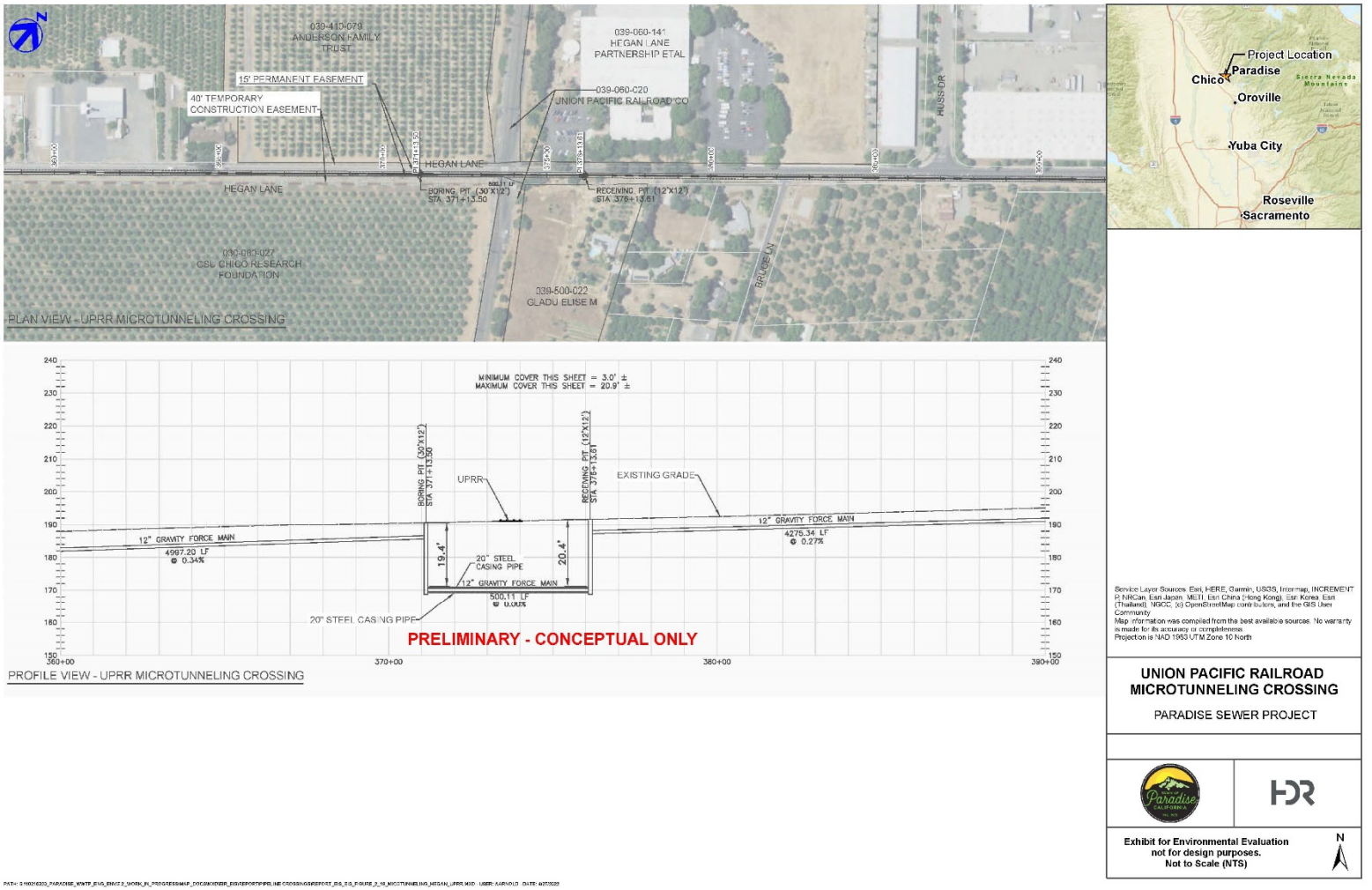


Figure 2-19. UPRR Microtunnel Crossing

Transition Chamber and Flow Control and Metering Structure Construction Methods

At the termination of the Export Pipeline System at the northeastern corner of the Chico WPCP, the Transition Chamber and the Flow Control and Metering Structure would be constructed by excavating an area approximately 35 feet square by 15 feet deep. Backhoes would remove the soil, and equipment would be used to install the structures (assumed to be precast cylinders). The Transition Chamber and the Flow Control and Metering Structure would also involve installation of mechanical and electrical equipment. The excavation would then be backfilled, and the ground surface restored. Excess soil produced by the excavation would be hauled to a local landfill or disposed according to local and state standards. Above-ground access structures and electrical equipment would be required; a photograph of what would be above-ground at a transition chamber is provided in Figure 2-9.

Chico WPCP Connection Construction Methods

The southern end of the Export Pipeline System would be connected to the existing Chico WPCP. All monitoring and electrical equipment required to facilitate the connection would be contained in the Flow Control and Metering Structure. This connection between the Flow Control and Metering Structure and the WPCP would involve drilling a hole in an existing below-ground concrete box at the WPCP facility and connecting the new pipeline.

2.5.2.3 Equipment, Crews, and Materials

The following construction quantities were estimated for the Export Pipeline System (HDR 2022).

Construction Crews and Equipment

Table 2-5 summarizes the construction crew size and equipment types required for Export Pipeline System construction.

Table 2-5. Summary of Construction Crews and Equipment for Export Pipeline System

Crews and Number of Workers Per Crew	Equipment
Asphalt Removal Crew	
1	Sawcutting machine
1	Water truck/trailer
1	Backhoe/loader 95hp, Cat 420
1	Excavator 1.5 cy, 165hp Cat 320
2	Truck tandem 16 cy
1	Skidsteer 80hp
7	**Total Workers**
Small-diameter Pipe Installation Crew	
2	Excavator 1.5 cy, 165hp, Cat 320
1	Loader 170hp, Cat 930
2	Concrete truck
1	Roller compactor, walk behind, 20hp
3	Vibratory plate/jumping jack compactor
2	Truck tandem 16 cy
11	**Total Workers**

Crews and Number of Workers Per Crew	Equipment
Asphalt Replacement Crew	
1	Backhoe/loader 95hp, Cat 420
1	Loader 170hp, Cat 930
1	Skidsteer 80hp
1	Water truck/trailer
1	Asphalt paver 75hp
2	Roller compactor, riding, 25T, 170hp
2	Vibratory plate compactor
2	Truck tandem 16 cy
2	Striping truck
13	**Total Workers**
Structure Installation Crew	
2	Excavator 2.5 cy, 310hp, Cat 336
1	Loader 170hp, Cat 930
1	Roller compactor, walk behind, 20hp
4	Vibratory plate/jumping jack compactor
1	Truck tandem 16 cy
1	Mobile soil-cement mixer, Cement Tech M30, 425hp
1	Excavator 2.5 cy, 310hp, Cat 336
1	Loader 170hp, Cat 930, soil processor bucket
12	**Total Workers**
HDD Crew	
2	Backhoe/loader 95hp, Cat 420
1	Drilling Rig 600–700hp
1	Generator
1	Separator
2	Bentonite pumps
2	Truck tandem 16 cy
9	**Total Workers**
Bore and Jack Crew	
2	Backhoe/loader 95hp, Cat 420
1	Boring machine 600-700hp
1	Generator
1	Separator
2	Truck tandem 16 cy
7	**Total Workers**

Notes: cy = cubic yard; hp = horsepower

Installation of the Export Pipeline System would require multiple crews to be working at the same time. Based on an assumed 18-month construction period, the following is the estimated number of crews working at any given time (HDR 2022):

- Asphalt Removal: 1 crew
- Small-diameter Pipe Installation: 3 crews
- Asphalt Replacement: 1 crew
- Structure Installation: 1 crew
- HDD: 1 crew
- Bore and Jack: 1 crew

Excavated and Fill Materials

The following excavated and fill materials are anticipated on the Export Pipeline System construction (HDR 2022):

- Soil exported: 60,800 cubic yards
- Fill material imported: 22,900 cubic yards

Construction Materials

The following materials are anticipated to be used on the Export Pipeline System construction (HDR 2022):

- PVC pipe and miscellaneous fittings
- Concrete maintenance holes
- Precast concrete cylinders for the Transition Chamber, the Flow Control and Metering Structure, and associated mechanical and electrical equipment for installation at each of the two structures
- Metal carrier pipe at each of the five trenchless crossings
- Temporary and permanent paving (asphalt)
- Backfill material

Estimated Truck Trips

Based on an anticipated 18-month construction period for the Export Pipeline System, an average of 320 round-trip truck trips distributed across an average of 7 crews working at a given time would be generated each working day during construction (HDR 2022). This equates to approximately five trucks per crew per hour, which would be dispersed across multiple locations within the Export Pipeline System construction area. All transport would be completed during daytime hours. Allowable work hours within the County ROW will be defined by an access agreement with general and special conditions that would be issued by the County and included in the County's permission to construct and operate in the ROW. Noise effects are evaluated in Section 3.12.

2.5.2.4 Easement, Encroachment and Access Permission Requirements

The Skyway segment of the Export Pipeline System is located within the County public ROW; therefore, construction would require a construction access agreement with general and special conditions from the County, as well as an ongoing access agreement for maintenance or other similar mechanism.

Once the pipeline alignment departs from Skyway to head towards the Chico WPCP, it would remain within an inactive UPRR rail corridor before bisecting two private parcels, owned by a single landowner; these crossings would require ROW acquisitions from UPRR and the private property owner. The total

length of pipeline that would be on private parcels is approximately 5,700 feet (1.1 miles). For crossing the private parcel, the Town would purchase both permanent and temporary (construction) easements from the parcel owner. The construction easements would provide sufficient space to install the export pipeline as well as for construction vehicles to move across the parcels and reach the public roads, shown in Figure 2-21. The permanent easements would be necessary to allow future access to the pipelines, should maintenance work be required. The pipeline would then cross SR 99, requiring a Caltrans encroachment permit, and finally reconnect to the County public ROW at Entler Avenue (Figure ES-3). The pipeline would follow County public roads to the Chico WPCP, again requiring a County access agreement with general and special conditions. Along this segment, the pipeline makes a trenchless crossing of an active UPRR rail corridor, requiring an additional UPRR encroachment permit. Table 2-6 provides estimates of the dimensions of temporary and permanent easements required for the various Export Pipeline System facilities.

Table 2-6. Approximate and Easement, Encroachment and Access Agreement Requirements for Export Pipeline System

Facilitv	Approximate Permanent Access Permission	Approximate Temporary (Construction) Access Agreement
Pipeline	15 feet wide, along the pipeline	55 feet wide, along the pipeline (includes the 15 feet of permanent easement)
Transition Chamber	35 by 35 feet (fee title)	60 by 60 feet
Flow Control and Metering Structure	25 feet wide by 50 feet long, direction of pipe (fee title or on Chico WPCP site)	75 feet wide by 80 feet long, direction of pipe
HDD Crossing	15 feet wide, along the pipeline	Launching Pit: 75 feet wide by 150 feet long, direction of pipe Receiving Pit: 75 feet wide by 50 feet long, direction of pipe
Microtunnel Crossing	15 feet wide, along the pipeline	Launching Pit: 75 feet wide by 125 feet long, direction of pipe Receiving Pit: 75 feet wide by 100 feet long, direction of pipe

2.5.3 Extended Collection System

As described previously in this document, the Extended Collection System is part of the Proposed Project, but it is still conceptual in definition and the characteristics, timing, and/or locations of the facilities are not available at the time of this PEIR preparation. Therefore, it is being assessed at a programmatic level. Once the Extended Collection System construction is defined, the Town would consider whether subsequent CEQA documentation is required.

The Extended Collection System would be an extension of the Core Collection System that would allow collection of sewage from parcels outside the Core Collection System, within the Town limits. The flow from the Extended Collection System and Core Collection System combined would be limited to the total discharge agreed to between the Town and City, which is currently set at 0.464 mgd, the estimated build-out of the sewer service area (Section 2.2.2). Connection of the Extended Collection System to the Core Collection system leverages the proposed sewer infrastructure to serve additional parcels if the capacity in the system supports this extension. Expanding beyond the Core Collection System or sewer service area would magnify the benefits of reducing private septic systems, maximize use of the Chico WPCP treatment capacity allocated to the Town, and expand on the health and economic benefits to the Town. Further, the addition of the Expanded Collection System moves closer

towards a provision for a regional sewer system, which is a priority of the RWQCB (RWQCB 2020). However, the overall purpose of the Proposed Project is not to serve the entire Town. Areas will continue to exist that are served by the existing District. Instead, the Extended Collection System will provide an opportunity for other property owners within Town limits to connect, particularly those owners with properties near the Core Collection System boundaries that aim to serve higher density uses, such as commercial or multi-family housing. In addition, no portion of the Extended Collection System would extend beyond the Town limits in any case, as presented in Figure ES-2. No sewer service connections would be considered outside the Town and pursuant to the principals of agreement with Chico (Section 1.3.2, Sewer Regionalization Project Advisory Committee Coordination), the project is not designed or intended to serve properties in unincorporated Butte County. Therefore, this PEIR is limited to consideration of physical effects that could result from sewer service connections that would be made within the Town limits.

The Extended Collection System would connect to the Core Collection System along its periphery. The Extended Collection System would consist of 2- to 6-inch-diameter force mains, 8-inch-diameter gravity trunk lines, and additional pump stations. It would likely be constructed as multiple smaller efforts, with geographically similar clusters of parcels within the Town limits being treated as separate individual projects. Other than a single private parcel crossing after leaving Skyway, the pipes would be constructed within existing Town public ROW. The methods and materials used to construct the Extended Collection System would be similar to the Core Collection System (Section 2.5.1). If an Extended Collection System is implemented in the future, it is assumed that similar crew composition and sizes as well as construction equipment would be used, but for shorter durations.

2.6 Proposed Schedule

Construction of the Core Collection System would occur over approximately 22 months, with mobilization beginning in August 2024 and completion by May 2026. The Export Pipeline System would be constructed over an 18-month period beginning in August 2024 and ending in January 2026. Each of these two Proposed Project components would go through their own individual startup periods, to confirm operation of each one individually. Then the entire system, composed of both Proposed Project components, would go through a 2-month system start-up period in June and July 2026, to confirm operation of the entire Proposed Project. Construction of any part of the Extended Collection System would occur following completion of construction of the Core Collection System and Export Pipeline System, and would be expected to occur between 2026 and 2056. Table 2-7 shows the anticipated construction schedule and sequencing for the Core Collection System, Extended Collection System, and Export Pipeline System, broken down by task.

Table 2-7. Construction Schedule for the Proposed Project

Task	Duration	Projected Timeframe
Core Collection System		
Mobilization	8 weeks	August 2024 – October 2024
Gravity Mains and Collectors	1 year, 6 months	October 2024 – March 2026
Force Mains	1 year, 10 months	June 2025 – March 2026
Pump Stations	1 year, 10 months	June 2025 – March 2026

Task	Duration	Projected Timeframe
Testing	8 weeks	March 2026 – May 2026
Startup	2 weeks	May 2026 – May 2026
Extended Collection System		
Design and Construction	Similar durations as above, but defined on project-by-project basis	2026 – 2056
Export Pipeline System		
Mobilization	8 weeks	August 2024 – October 2024
Open Cut Gravity and Force Mains	13 months	October 2024 – October 2025
Transition Chamber	3 months	October 2024 – December 2024
Flow Control and Metering Structure	4 months	December 2024 – March 2025
HDD	4 months	October 2024 – January 2025
• Butte Creek Crossing	8 weeks	October 2024 – November 2024
• Comanche Creek Crossing	8 weeks	November 2024 – December 2024
• Little Chico Creek Crossing	8 weeks	December 2024 – January 2025
Microtunneling (Bore and Jack)	3 months	October 2024 – January 2025
• SR 99 at Southgate	10 weeks	October 2024 – December 2024
• UPRR at Huss Lane	8 weeks	December 2024 – January 2025
Testing	3 months	October 2025 – December 2025
Startup	6 weeks	December 2025 – January 2026
System Start-up and Final Chico WPCP Connection	8 weeks	June 2026 – July 2026

As noted in Section 2.5.1, construction of the gravity sewer mains in the Core Collection System would likely be completed in segments, block by block, or multiple blocks at a time, starting from the downstream end of the system (at the southwestern edge of the Town) and working upstream, based on standard construction methods and gravity sewer installation. Construction of the Core Collection System pump stations and sewer force mains would occur at the same time as the gravity sewers.

Construction of the Export Pipeline System would also likely be divided into segments, with multiple segments under construction at the same time. The connection to the Chico WPCP would occur with Export Pipeline System construction.

The construction schedule assumes that work would occur in line with the noise ordinances of the Town, City, and County, which generally allows daytime work Monday through Saturday, excluding holidays. Noise-generating construction activities located within 1,000 feet of residential uses are further limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays and non-holidays by the *Butte County General Plan 2030* (Butte County 2012). Night work might be needed so as to avoid tunnel failure during microtunneling at the UPRR active rail and SR 99 crossings (Section 2.5.2.2 Construction Methods). Both crossings are in highly disturbed areas, not zoned as residential and no residences are present. At these locations, as discussed in Section 2.5.2.2 Construction Methods, the contractor will be required to obtain a special permit from the County Public Works Department that will be appended to the utility encroachment permit for Proposed Project construction, along with additional conditions. The contractor will be held to all permit conditions.

The Proposed Project within the Core Collection System area would be operational in 2026, with consideration of the Extended Collection System connections through 2057. While the Proposed Project would be in place and able to receive inflow and discharge to the Chico WPCP in 2026, actual sewer flow would be discharged into the pipeline as the private properties connect to it. Initially, it is estimated that the Proposed Project would add 0.109 mgd of wastewater from the Town to the Chico WPCP influent. The full build-out flow of 464,000 gallons per day (0.464 mgd) may not be realized until 2057 or beyond.

2.7 Proposed Staging, Traffic Management, and Access Points

This section describes the proposed locations of temporary staging areas, traffic management and anticipated temporary road closures during construction, and access points and truck routes anticipated during construction.

2.7.1 Potential Staging Areas

As shown in Figure ES-4, up to 11 staging areas for equipment and materials have been identified for potential use by the contractor to maximize access to work areas and store material. These areas have also been selected because they avoid effects on sensitive environmental resources. Because construction would be occurring at the same time on the Core Collection System and the Export Pipeline System, staging areas are considered here for the entire system. Staging areas would have temporary fencing installed to provide a secure storage area and might require minor grading to create a level work surface. No permanent paving would be done. Any unpaved areas temporarily used for construction staging would be returned to their original or better condition. If staging areas are located on public property, encroachment permits would be obtained from the public agency that owns the property. If staging areas are located on private property, temporary construction easements would be acquired from the private property owner.

2.7.2 Traffic Management and Temporary Construction Road Closures

No permanent road closures would result from construction of the Proposed Project. Temporary full road closures are not anticipated; however, could occur, if necessary for public safety, for a short duration (approximately 2-4 hours). For locations where the pipeline is being installed along existing Town or County public ROW, temporary, single-lane road closures with traffic controls around the work areas could occur along the following roads:

- Skyway
- Entler Avenue
- Midway
- Hegan Lane
- Elk Avenue
- Lone Pine Avenue
- Crouch Avenue
- Chico Avenue
- Taffee Avenue
- Chico River Road

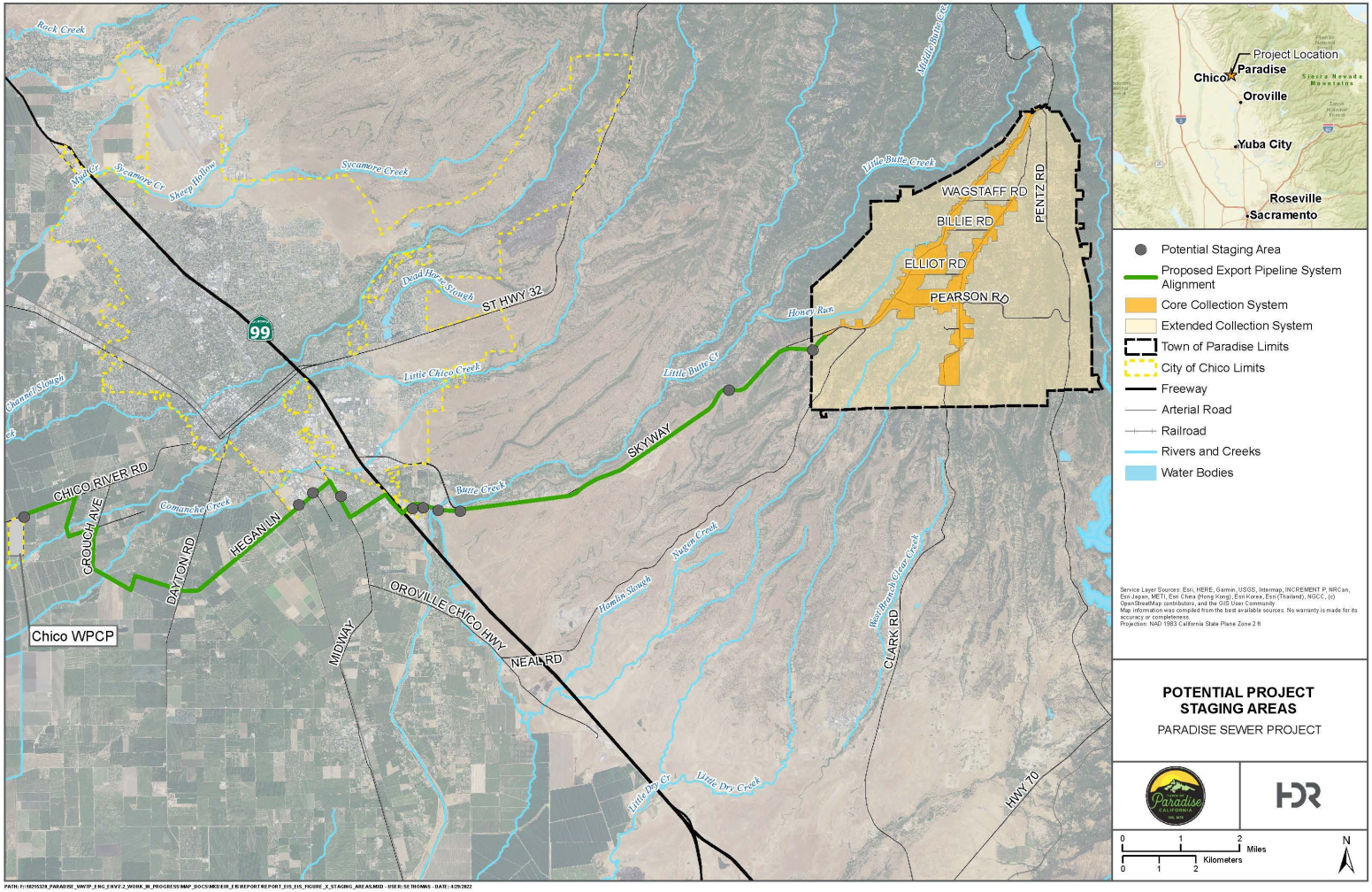


Figure 2-20. Potential Staging Areas

Only the County Public Works Director has the authority to approve road closures on County-maintained roads subject to specific requirements for such road closures. See Section 3.9.4, Impact Analysis (Hazardous Materials) for a description of proposed construction mitigation measures that would be implemented in the event of an emergency evacuation. No road closures are planned within City limits.

2.7.3 Access and Truck Routes

The Export Pipeline System would be primarily constructed within the County public ROW except for approximately 5,700 feet (1.1 miles) of pipeline construction in southern Chico. When the proposed pipeline alignment leaves the Butte County public ROW at Skyway, east of SR 99, it would remain within an inactive UPRR corridor before bisecting two private parcels located within the City limits. See Figure ES-3 for the pipeline route location with the section of proposed crossing of private parcels identified. For crossing the private parcel, the Town would purchase both permanent and temporary (construction) easements from the parcel owner. The construction easements would provide sufficient space to install the export pipeline as well as for construction vehicles to move across the parcels and reach the public roads, shown in Figure 2-21. The permanent easements would be necessary to allow future access to the pipelines, should maintenance work be required (see Table 2-6 for additional information on easement requirements). For all construction, trucks moving equipment in and out, hauling away excess material, and importing material would follow these same routes or remain within public ROW. Trucks hauling loose materials, such as soil and gravel, would be covered to prevent damage to other vehicles.

2.8 Proposed Operation and Maintenance

The Town would own, operate, and maintain the Core Collection System, Export Pipeline System and Extended Collection System. The Town may hire additional staff to handle these operation and maintenance activities. These operations and maintenance staff will need a location for offices and equipment storage. The Town lost its corporation yard during the 2018 Camp Fire and is in the final stages of securing funding to commence rebuilding efforts. At this time, the Town does not have a location set for a new corporation yard, which could be at the old location (933 American Way) or could be at a location yet to be determined. In either case, the Town plans to co-locate at the corporation yard any wastewater operations staff and equipment with the traditional Public Works team and staff. The wastewater operations team would include the following support positions, some of which may be provided by current Town staff: administrative and reception staff, accounting staff, three field crew/utility staff, and one on-site service technician. The existing Public Works director would serve in a management role over sewer functions.

Prior to the start of operations, the Town will adopt applicable ordinances and establish internal administrative procedures to permit and regulate future property owner connections to the Proposed Project.

The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Systems General Order, or SSSGO) was adopted by the SWRCB in May 2006. The purpose of the SSSGO was to provide a consistent statewide approach for reducing sanitary sewer overflows

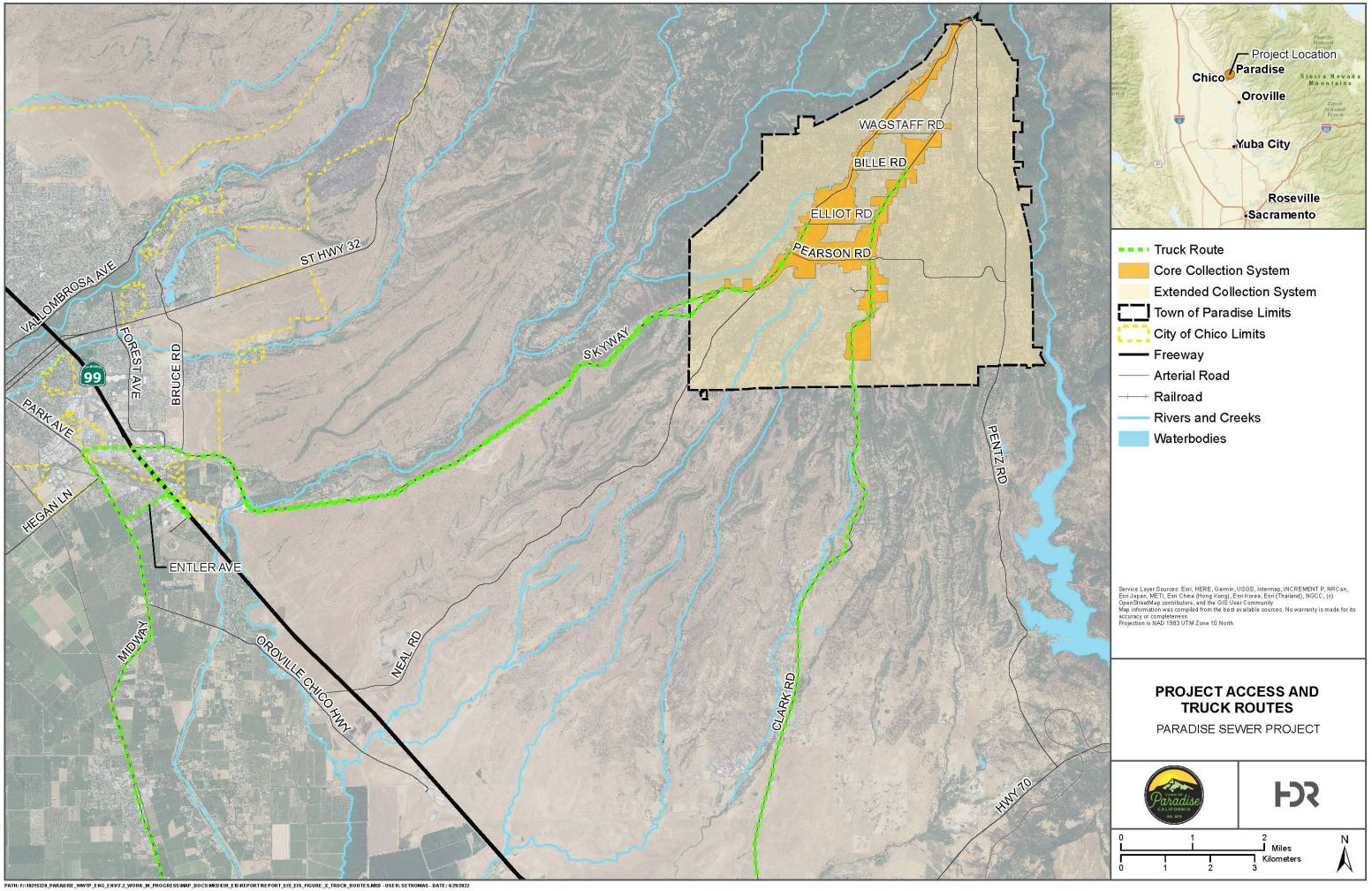


Figure 2-21. Access and Truck Routes

(including leakages). The SSSGO applies to all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. Since the Town's collection system will have more than one mile of sewer pipe, and the Town will own and operate the collection system, the Town will comply with the SSSGO. The RWQCB will oversee the permitting of the Town's collection system under the SSSGO. Per the SSSGO, and subject to its terms, the Town will need to develop a sewer system management plan. The sewer system management plan will include policies, procedures and activities covering the planning, management, operation and maintenance of the collection system. As part of this sewer system management plan, the Town must also develop and implement an overflow emergency response plan to identify measures to protect public health and the environment. Pursuant to the SSSGO, the Town will be required to report sanitary system overflows to the RWQCB using an electronic reporting system. Review and approval by the City and County of the Town's proposed sewer system management plan would be required prior to start of operations.

Further, as previously discussed, the Town and the City will enter into an inter-municipal agreement that will capture the mutually determined details of the connection of the Town's export pipeline to the Chico WPCP and will include system operations and maintenance protocols that will be required by the City. Additionally, the Butte County Department of Public Works will require an access agreement and/or permit with general and special conditions for maintenance of Town facilities located within the County's ROW.

Therefore, review and approval of the Town's proposed operations and maintenance standards and procedures by the RWQCB, the City, and the County (relevant to each one's area of oversight) would be required prior to the start of operations.

Inspection, monitoring, and maintenance procedures that would be included in the Town's sewer system management plan include, but are not limited, to the following. The Town, or other provider, would perform these protocols according to future agreements between the Town and City:

- Inspections of the Core Collection System and the Export Pipeline System would occur one to two times per year, depending on deposition observed within the system. Inspection of pipelines within the system involves use of a camera system and not physical inspection of the pipeline.
- As needed, based upon the results of the camera inspections, the pipelines would be flushed to push deposited material farther down the pipelines to the Chico WPCP. During the early years of service, when flows are low, these flushing activities may need to occur several times per year, then less frequently as flows increase. Flushing is done by sending water through the pipes.
- Physical on-site inspection and maintenance of the air release valves and odor control canisters would be done according to the maintenance protocols that accompany the devices, and would occur every 6 months to ensure optimal performance of these devices. Air release valves would be inspected to ensure they are operating properly. The odor control canisters would be replaced as needed when the carbon media becomes saturated and loses the ability to absorb odors.
- Physical inspection and maintenance of instrumentation would occur monthly according to the maintenance protocols that accompany the instruments. This would include the flow meter, electric-actuated valve, level sensors, and pressure transducers within the transition chamber as well as the flow control and metering structure. This equipment would be replaced approximately every 5 to 10 years.

- Flow data and wastewater samples would be collected from the flow control and metering structure. The flow measurement data would be transmitted continuously via radio or fiber-optic lines; therefore, site visits would not be required to obtain flow measurement data. Wastewater samples would be collected at the structure at a frequency established by agreement with the City and could be as frequently as daily.
- While the Proposed Project components would be designed and constructed to maintain integrity during operations, it is always possible that a pipeline segment could break and result in a leak or overflow, for example during excavations by others near a pipeline. The Export Pipeline System would have pressure gauges in place to help detect the loss of pressure resulting from a break, which in turn would notify the Town Public Works Department that such a break has occurred. As part of the sewer system management plan developed under the SSSGO (see above), the Town would develop a sewer overflow response plan, which would require at a minimum:
    - Proper notification procedures so that the primary responders and the regulatory agencies are informed of all overflows in a timely manner.
    - A program to ensure appropriate response to all overflows.
    - Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the **sewer overflow response plan** and are appropriately trained to do so.
    - Procedures to address emergency operations, such as traffic, crowd control and other necessary response activities.
    - A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the US and minimize or correct any adverse impact on the environment.
    - The Town Public Works Department would have on-hand the equipment and spare parts necessary to rapidly implement a repair.
- During any excavations or other work on the pipeline by the Town Public Works Department, the same procedures and standards would apply as described immediately above for pipeline breaks.

2.9 Energy Consumption during Operations

The Proposed Project would use energy for wastewater collection and treatment during operations. The estimated energy demand for the Proposed Project is described in the following subsections; assessment of effects of the use of energy resources can be found in Section 3.6 Energy.

2.9.1 Energy Use of the Core Collection System

The Core Collection System would consist of an arrangement of gravity sewers, small pump stations, and force mains. Gravity sewers use energy resulting from a difference in elevation to remove wastewater, and no electricity is required to move the wastewater along the sewer. Because of the varied topography within the sewer service area, pump stations and pressurized force mains would be required to pump flows out of valleys and other low-lying areas to adjacent gravity sewers. The pump stations would consume electricity to move wastewater to higher elevations. Based on an average flow

of 0.464 mgd and standard pump efficiency, the pump stations would consume approximately 601,000 kilowatt hours per year of electrical energy. Refer to Appendix I Pump Station Energy Consumption Calculation for the energy demand calculations.

2.9.2 Energy Use at Chico WPCP

The annual average flow coming into the Chico WPCP is currently 6.3 mgd (Chico WPCP monitoring data, RWQCB 2021). The Proposed Project would add an additional 0.109 mgd of wastewater to the Chico WPCP influent at the time of initial connection (estimated for 2026) and 0.464 mgd at build-out (estimated for 2057). The Chico WPCP operates a 1.1-megawatt, solar photovoltaic facility that provides electric power to the WPCP, which reduces the plant's use of utility power by approximately 35 percent. Further, an on-site 335-kilowatt co-generator uses methane produced by the plant processes as a fuel source to produce electricity, which is in turn used at the WPCP (City of Chico 2021a). Therefore, energy efficiency and sustainability measures have already been built into the design of the Chico WPCP. While the Proposed Project would increase the amount of energy needed to treat wastewater at the existing Chico WPCP, it would be within current capacity at the time of connection and would not result in an inefficient use of energy.

3. Environmental Impact Analysis

3.1 Introduction

This chapter presents an evaluation of impacts that could result from implementation of the Proposed Project for 18 resource areas. Section 3.1 provides a brief regional environmental setting and overview of the Proposed Project baseline, defines the overall organization of Chapter 3 and explains the general methodology for assessing Project impacts. This section also identifies resource areas that were evaluated and found to have no potential for significant impacts based on the scope and nature of the Proposed Project activities and provides the justification for eliminating them from detailed analysis in this PEIR. Sections 3.2 through 0 describe the environmental setting, regulatory setting, method of analysis, impact analysis, and impact summary for each individual resource area. Section 0 summarizes the environmental impacts of the Proposed Project.

3.1.1 Regional Environmental Setting

As discussed in Section 2.1 Project Location, the Proposed Project is located within Butte County. Butte County is located in north central California at the northern end of the Sacramento Valley, approximately 150 miles northeast of San Francisco and 70 miles north of Sacramento. Butte County adjoins Tehama County to the north and northwest, Plumas County to the east, Glen and Colusa Counties to the west, and Sutter and Yuba Counties to the south and southeast. The Sacramento River and Butte Creek form the western boundary of Butte County, while the South Fork of Honcut Creek forms the southeastern boundary of Butte County.

Elevation in Butte County ranges from approximately 60 feet above sea level in the southwestern corner of the county, adjacent to the Sacramento River, to approximately 8,100 feet above sea level in the northeastern corner of the county, near Butte Meadows. Butte County has three general topographical areas: the valley region, the foothills east of the valley, and the mountain region east of the foothills. The foothill region encompasses a quarter of Butte County's land area. Occupying almost half of the county's land, the valley region is a wide and expansive green plain, neatly divided with hedge rows that protect acres of cropland, nut and fruit orchards, and meadows for livestock grazing. The foothill region includes hillside communities, such as Paradise. The foothill region also includes Feather Falls, the sixth tallest waterfall in the United States, and the Lake Oroville State Recreation Area. The mountain region makes up the remainder of Butte County and encompasses the majority of its eastern border. There is little urban development in this part of the county, and a large amount of the land is state- and federally owned.

This regional setting applies to all of the resource areas discussed in Section 3.2 Agriculture and Forestry Resources through Section 0 Wildfire. In addition, each of the resource sections includes a detailed description of the environmental setting specific to that resource and defines the study area used in the evaluation.

3.1.2 Baseline

In this chapter, the effects of Proposed Project implementation are compared with baseline physical conditions (environmental setting) as described under each resource area. The use of the resource-specific baseline condition provides a basis for assessing the impacts of the Proposed Project in accordance with CEQA requirements. The baseline year for the Proposed Project is 2021 (post-fire conditions), which aligns with the release of the Notice of Preparation for the Proposed Project, which was released on May 3, 2021. The intent is to give the public and decision makers "the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts" (CEQA Guidelines 15125 (a)).

3.1.3 Structure of the Environmental Impact Analysis

After certain resource areas have been eliminated, as set out in Section 3.1.5 below, this chapter has sections analyzing the following resource areas:

- Section 3.2 Agriculture and Forestry Resources
- Section 3.3 Air Quality
- Section 0 Biological Resources
- Section 0 Cultural Resources
- Section 0 Energy
- Section 0 Geology, Soils, and Paleontological Resources
- Section 3.8 Greenhouse Gas Emissions
- Section 0 Hazards and Hazardous Materials
- Section 0 Hydrology and Water Quality
- Section 0 Land Use and Planning
- Section 0 Noise and Groundborne Vibration
- Section 0 Population and Housing
- Section 0 Public Services
- Section 0 Recreation
- Section 0 Transportation
- Section 0 Tribal Cultural Resources
- Section 0 Utilities and Service Systems
- Section 0 Wildfire

Each resource area analyzed in this chapter includes the following subsections:

- **Environmental Setting:** Provides an overview of the existing physical conditions of an environmental resource in the study area at the time of publication of the NOP that could be affected by implementation of the Proposed Project. Establishing the existing conditions provides a basis of the analysis of potential impacts related to each environmental resource.
- **Regulatory Framework:** Provides an overview of the federal, state, regional, and local laws, regulations, policies, and plans relevant to the analysis of potential impacts related to each environmental resource.

- **Method of Analysis:** Outlines the analysis methodology (quantitative and/or qualitative) for assessing the Proposed Project's potential to impact each resource area. This section also identifies the sources of data used for the analysis and identifies the criteria used to determine the significance of potential impacts.
- **Impact Analysis:** Provides a discussion of impacts associated with implementation of the Proposed Project. For each potential impact, a significance determination is made (that is, no impact, less than significant, less than significant with mitigation, or significant and unavoidable). If required, feasible mitigation measures are identified to reduce significant impacts.
- **Impacts Summary:** A table summarizing the impact significance determinations for each criterion in each resource area.
- **References:** Provides the references relevant to each resource area.

3.1.4 General Methodology for Assessing Impacts

3.1.4.1 Determining Significance under CEQA

Thresholds of significance for each resource were developed consistent with CEQA Guidelines Appendix G to determine the significance of potential impacts. Additionally, the CEQA Guidelines Appendix G checklist was augmented, where necessary, to ensure that all potential impacts of the Proposed Project are addressed.

The environmental review focuses on the potentially significant environmental effects of the Proposed Project. As defined in CEQA Guidelines Section 15382, a "significant effect on the environment" is "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself would not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether a physical change is significant."

In evaluating the significance of the environmental effect of a project, the CEQA Guidelines require the lead agency to consider direct physical changes in the environment and reasonably foreseeable indirect physical changes in the environment that may be caused by the project (CEQA Guidelines Section 15064[d]). A direct physical change in the environment is a physical change in the environment that is caused by, and immediately related to, the project (CEQA Guidelines Section 15064[d][1]). An indirect physical change in the environment is a physical change in the environment that is not immediately related to the project, but that is caused indirectly by the project (CEQA Guidelines Section 15064[d][2]). An indirect physical change is to be considered only if that change is a reasonably foreseeable impact that may be caused by the project (CEQA Guidelines Section 15064[d][3]).

Further, as defined in CEQA Guidelines Section 15064(e), "economic and social changes resulting from a project will not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change would be regarded as a significant effect on the environment. Where a physical change is caused by economic or social effects of a project, the

physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project."

3.1.4.2 Impact Analysis

CEQA requires a lead agency to determine the significance of all environmental impacts (California PRC Section 21082.2; CEQA Guidelines Section 15064). A threshold of significance for a given environmental impact defines the level of effect above which the lead agency will consider impacts to be significant and below which it will consider impacts to be less than significant. Thresholds of significance are identifiable, quantitative, qualitative, or performance levels for a particular environmental effect, whichever is most applicable to each specific type of environmental impact (CEQA Guidelines Section 15064.7[a]). The following terminology is used in this PEIR to describe the various levels and types of environmental impacts associated with the Proposed Project:

- **Significance threshold:** A significance threshold is a criterion used by the Town, as lead agency under CEQA, to determine whether the magnitude of an adverse physical environmental impact would be significant. In accordance with CEQA Guidelines Section 15022(a), the Town used significance criteria that are based on CEQA Guidelines Appendix G and augmented, as necessary; factual and scientific information and data; and the regulatory standards of the federal, state, regional and local jurisdictions (as applicable) where the Proposed Project activities are proposed.
- **No Impact:** No impact indicates that the construction, operation, and maintenance of the Proposed Project would not have a direct or indirect effect on the environment. It means no measurable or observable change from existing conditions would occur. This impact level does not require mitigation.
- **Less than Significant Impact:** An impact is less than significant if the analysis concludes that the implementation of the Proposed Project would not exceed the applicable significance threshold. This impact level does not require mitigation, even if feasible, under CEQA.
- **Significant Impact:** A significant impact is defined by CEQA Section 21068 as one that would cause "a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project." Levels of significance can vary by project, based on the change in the existing physical condition. Under CEQA, mitigation measures or alternatives to the project must be provided, where feasible, to reduce the magnitude of significant impacts.
- **Significant and Unavoidable Impacts:** A significant, unavoidable impact is one that would result in a substantial or potentially substantial adverse effect on the environment, and that could not be justifiably reduced to a less than significant level even with any feasible mitigation. Under CEQA, a project with significant and unavoidable impacts could proceed, but the lead agency would be required to prepare a "statement of overriding considerations" in accordance with CEQA Guidelines Section 15093, explaining why the lead agency would proceed with the project despite the potential for significant impacts.

3.1.4.3 Mitigation Measures

CEQA Guidelines Section 15126.4(a)(1) states that an EIR "will describe feasible measures which could minimize significant adverse impacts." Mitigation measures identified in this PEIR were developed during the analysis and designed to reduce, minimize, or avoid potential environmental impacts

associated with construction, operations, and maintenance of the Proposed Project. Since measures may apply to multiple resource areas, they are labelled by the resource area where they are first defined, so full descriptions can be easily located in this PEIR. Full details for each mitigation measure are provided in the resource section where it is first applied; summaries and a reference to where the details can be found will be included in any subsequent resource section that applies that measure. The description of a mitigation measure states which specific Proposed Project activity the measure applies to.

3.1.5 Impacts Found to Be Not Significant

Resources eliminated from further analysis under CEQA include aesthetics and visual resources as well as mineral resources, for the reasons described below. CEQA Guidelines Appendix G criteria were used to evaluate the potential for effects for both resource areas.

3.1.5.1 Aesthetics and Visual Resources

The aesthetics and visual resources section should include an assessment of the potential for the Proposed Project to have a substantial adverse effect on designated scenic vistas, state scenic highways, and designated scenic resources in an area, such as conservation and open space areas by damage to the viewshed or introduction of new sources of substantial light or glare that would adversely affect views in the area. This also includes the potential to substantially degrading the visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality (CEQA Guidelines Appendix G).

Butte County encompasses a number of natural vistas, landscapes, water resources, and scenic byways. Residential zonings are located immediately adjacent to (that is, within viewshed or next to) the Proposed Project study area (Figure 2-1). However, there are no areas designated for resource conservation in the study area nor immediately adjacent to the study area, and the study area does not contain areas designated as scenic vistas by the Caltrans Scenic Route Project (Butte County 2012; Caltrans 2021). Further, the Proposed Project would primarily be constructed below the surface within the public ROW and would only rise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System alignments, at the transition chamber along the Export Pipeline System, and at the flow control and metering structure where the Export Pipeline System terminates at the Chico WPCP (Section 2.5 Proposed Project). The ROW associated with the Core Collection System is owned by the Town and private landowners (Section 2.5.1.4 Easement or Encroachment Requirements [Core Collection System]); the ROW associated with the Export Pipeline System is owned by the County and private landowners (Section 2.5.2.5 Easement or Encroachment Requirements [Export Pipeline System]). Project construction activities would be temporary and would be completed during daylight hours (Section 2.6 Proposed Schedule), outside of microtunneling at the UPRR active rail and SR 99 crossings (Section 2.5.2.2 Construction Methods) when night work could need to be completed so as to avoid tunnel failure. Both crossings are in highly disturbed areas, not zoned as residential and no residences are present. At the microtunneling locations, as discussed in Section 2.5.2.2 Construction Methods, the contractor will be required to obtain a special permit from the County Public Works Department that will be appended to the utility encroachment permit for the Proposed Project along with additional conditions. The contractor will be held to all permit conditions, including those related to lighting restrictions.

Project implementation will include installing permanent motion-detection security lights at above-ground facilities at each pump station within the Core Collection System (Section 2.5.1.1 Location and Description [Core Collection System]), and the Transition Chamber on Skyway (Section 2.5.2.1 Location and Description [Export Pipeline System]). The motion-detection lights would illuminate during maintenance estimated to occur monthly (Section 2.8 Proposed Operation and Maintenance) or if unauthorized access were to occur. These lights will be positioned to point away from residences and species habitats to avoid impacts on the public and wildlife species from light or glare. Because the Proposed Project would not result in a permanent adverse effect on a scenic resources or vista points, it would not change the aesthetic character in the Proposed Project area, and no new substantial sources of light or glare would occur, and no potential to significantly affect aesthetic resources would result from Proposed Project implementation.

3.1.5.2 Mineral Resources

The California Geological Survey produces Mineral Land Classification studies pursuant to the Surface Mining and Reclamation Act. Mineral Land Classification studies help identify areas with potentially important mineral resources that should be considered in local and regional planning. Based on a review of the California Department of Conservation's (DOC) Mineral Land Classification interactive map, the Proposed Project is not located within a Mineral Land Classification study area (DOC 2015a).

The Core and Extended Collection Systems would be located within the Town limits. The Town is not characterized as a heavily mineralized zone, and no current mining operations occur in the Town (Town of Paradise and Quad Consultants 2008). A review of the US Geological Survey's (USGS) Mineral Resources Online Spatial Data indicates that no past or present mineral resources occur within the Core and Extended Collection Systems area (USGS 2021). Therefore, construction, operation, and maintenance of the Core and Extended Collection Systems would result in no impacts to mineral resources

The Export Pipeline System would be located within the City and unincorporated Butte County. No active mines and no known areas with mineral resource deposits are located within the City (City of Chico 2010). Two mineral resource areas are within Butte County: M&T Chico Ranch and Martin Marietta Materials Table Mountain Quarry (Butte County 2010). The Export Pipeline System is not located within or near the mineral resource areas in Butte County.

Past or present mineral resources may occur along the Skyway segment of the Export Pipeline System in unincorporated Butte County (USGS 2021). No past or present mineral resources occur in the areas proposed for HDD and/or microtunneling. However, the Skyway segment of the Export Pipeline System would be constructed underground within the Butte County ROW. Parcels immediately adjacent to the Skyway segment of the Export Pipeline System are located in the Residential, Commercial, Industrial, Agriculture, and Manufacturing/Warehousing land use designations (see Figure 3.11-1 in Section 0 Land Use and Planning). None of the parcels immediately adjacent to the Export Pipeline System are designated for mineral resource conservation or mining and mining is not allowed in any of those zones. Therefore, construction, operation, and maintenance of the Proposed Project would not result in impacts to known mineral resources nor result in the loss of availability of a locally important resource recovery site, resulting in a less-than-significant impact.

3.2 Agriculture and Forestry Resources

This section describes the environmental setting and regulatory framework for agriculture and forestry resources and identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the agriculture and forestry resources analysis focuses on prime farmland, unique farmland, farmland of statewide importance, Williamson Act contract parcels, forest land, and timberland in the study area where agriculture and forestry resources are most susceptible to change as a result of the Proposed Project's construction, operation, and maintenance. The study area for agriculture and forestry resources refers to the areas within and directly adjacent to the Town, City, and areas of unincorporated Butte County, where the proposed pipeline alignment runs.

3.2.1 Environmental Setting

3.2.1.1 Regional Setting

Butte County is located in the vast floodplain of the Sacramento River, an area that is particularly amenable to farming (Butte County 2010). Agriculture is the largest land use in Butte County, with the majority of farmland aggregated in the flat, western, rural areas of the County (Butte County 2012). Existing agricultural lands within Butte County include field and row crops, orchards, grazing, dry farming, and timber (Butte County 2010). The DOC's Farmland Mapping and Monitoring Program (FMMP) identifies four classes of farmland in Butte County: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Grazing Land. Refer to Section 3.2.2, Regulatory Framework, for a description of FMMP's farmland classes. Table 3.2-1 summarizes the 2016 FMMP data for Butte County, which is the most recent year for which data is available.

Table 3.2-1. 2016 Farmland Classification in Butte County

Farmland Category	Acres	Percent of Total
Prime Farmland	192,561	30
Farmland of Statewide Importance	21,598	3
Unique Farmland	23,279	4
Farmland of Local Importance	0	0
Grazing Land	400,165	63
Total	**637,603**	**100**

Source: DOC 2016

According to Table 3.2-1, the majority of agricultural land in Butte County is Grazing Land. Grazing Land occurs primarily in the mountain and foothill regions. Prime Farmland is located on the alluvial plain of the Sacramento River in the western portion of the county (Butte County 2010). Small areas classified as Farmland of Statewide Importance and Unique Farmland exist in the central, northwestern, and southwestern portions of the County (Butte County 2010).

Butte County participates in the California Land Conservation Act of 1965 (or Williamson Act) agricultural land preservation program. As of 2017, 1,425 parcels and 210,155 acres of land in Butte County are enrolled in the Williamson Act (Butte County 2021a).

The combination of ample rainfall, a long growing season, and deep soils result in good growing conditions for mixed conifer forest in Butte County (Butte County 2012). These timber resources are primarily located in the northern and eastern portions of the county at elevations between approximately 2,200 and 6,200 feet (Butte County 2012).

3.2.1.2 Local Setting

A review of the Butte County Important Farmland Map of 2018 (DOC 2021b) indicates that both the Town and City are designated as Urban and Built-Up Land. Based on a review of the Butte County Development Services Information interactive GIS map (Butte County 2021b), Williamson Act parcels are not present within the Town and City. No forest land nor timberland zoned parcels are located within the Town and City limits (City of Chico 2020b, Town of Paradise 2021a). No forest resources occur within the Town and City (Google Earth 2022).

3.2.1.3 Project Setting

The Core and Extended Collection Systems would be constructed within the Town limits, primarily within the public ROW. The Export Pipeline System would be primarily constructed within the Butte County public ROW, including the full length of the Skyway segment of the proposed pipeline When the proposed pipeline alignment leaves the Butte County public ROW at Skyway, it would remain within an inactive UPRR corridor before bisecting two privately owned parcels (single owner) located within the City. This would account for approximately 5,700 feet or 1.1 miles of the 18-mile proposed pipeline alignment and would require temporary or permanent easements from the landowner. The two parcels are designated as Urban and Built-Up Land and Other Land, have a zoning of CR – Regional Commercial, and are not enrolled in the Williamson Act (DOC 2021b, City of Chico 2020b, and Butte County 2021b). The proposed pipeline alignment would rejoin the Butte County public ROW at Entler Avenue after crossing SR 99. Continuing westward, the proposed pipeline alignment would remain in the Butte County public ROW and cross an active UPRR corridor until it connects to the Chico WPCP, which is designated as Urban and Built-Up Land (DOC 2021b) and has a land use designation of Public. Figure 3.2-1 shows the farmland classifications within the study area. Figure 3.2-2 shows the Williamson Act parcels within the study area.

A review of aerial imagery and street view images indicates that no forest nor timber resources occur within the study area (Google Earth 2022).

3.2.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on agriculture and forestry resources. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

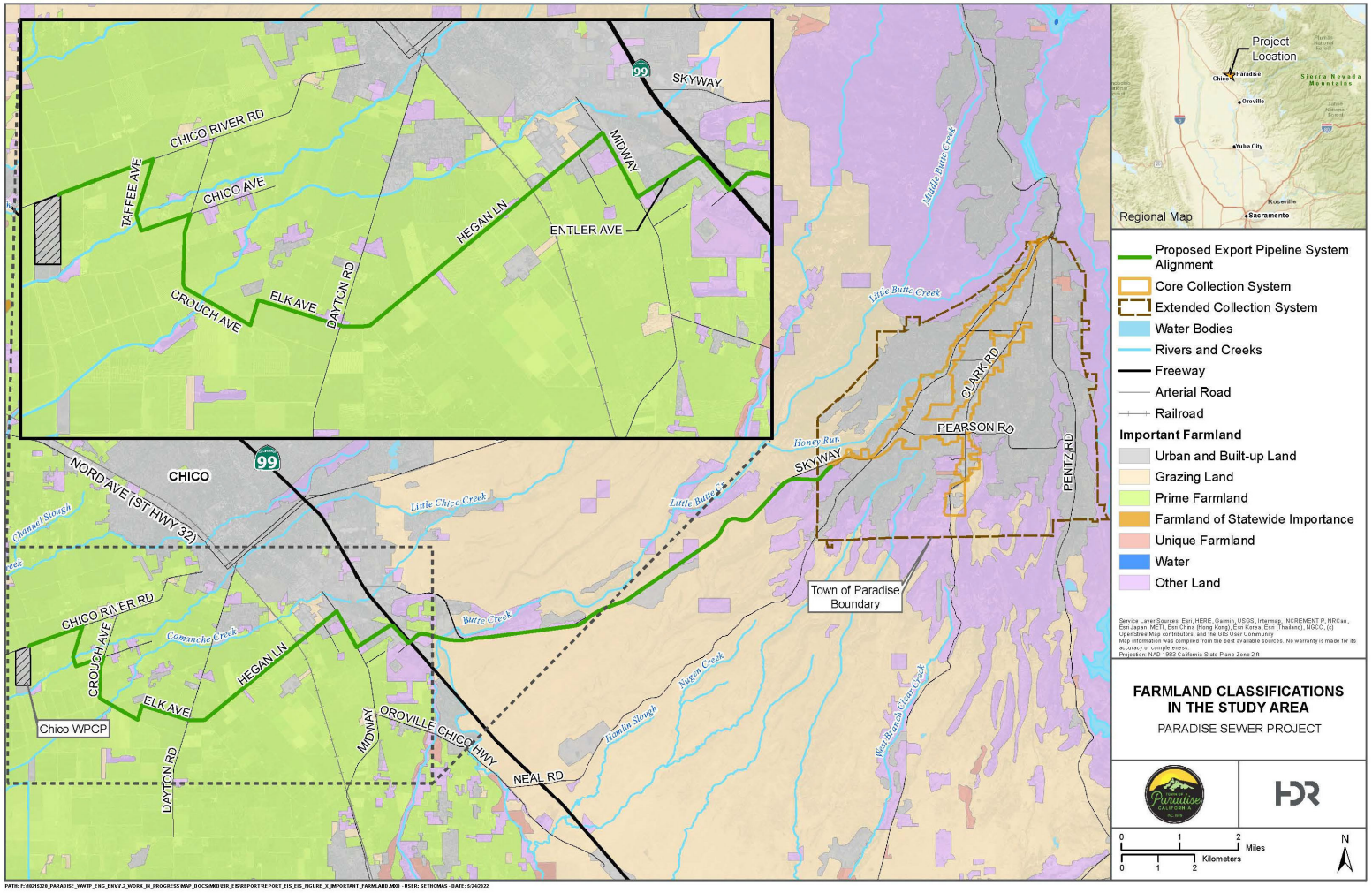


Figure 3.2-1. Farmland Classifications in the Study Area

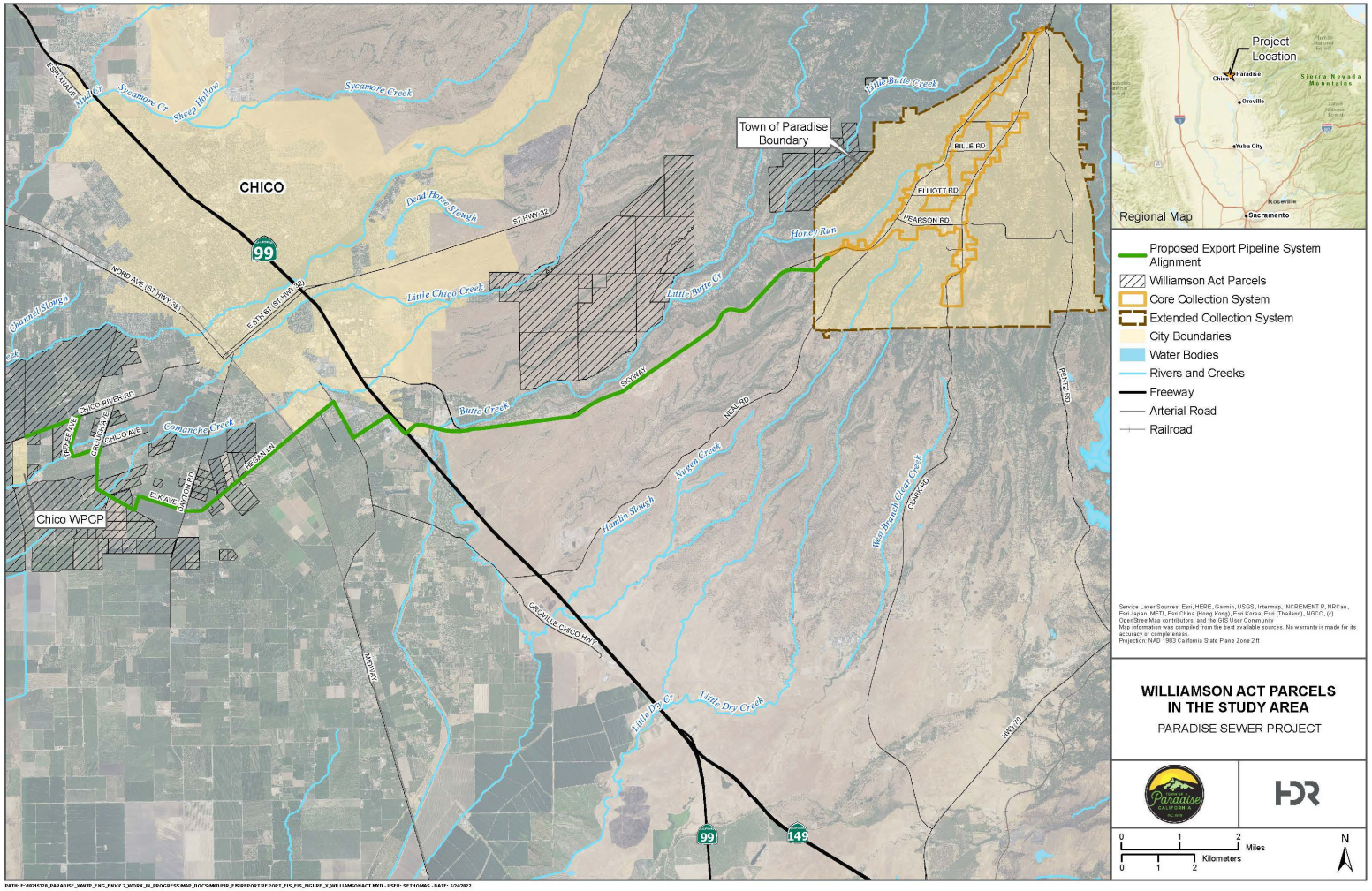


Figure 3.2-2. Williamson Act Parcels in the Study Area

3.2.2.1 Federal

Farmland Protection Policy Act

The Farmland Protection Policy Act is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. The act ensures that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. The act does not authorize the federal government to regulate the use of private or non-federal land nor does it, in any way, affect owner property rights. Projects are subject to Farmland Protection Policy Act requirements if they may irreversibly convert farmland (directly or indirectly) to non-agricultural use and are completed by a federal agency or with assistance from a federal agency.

Although considered during the analysis, the Farmland Protection Policy Act would not apply to the Proposed Project because it would not convert farmland to non-agricultural use.

3.2.2.2 State

California Department of Conservation

The DOC provides services and information that promote environmental health, economic vitality, informed land-use decisions, and sound management of the state's natural resources. The DOC administers and supports a number of programs that are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. These programs include, but are not limited to, the FMMP and the Williamson Act.

The Proposed Project will be held to the programs administered by the DOC.

Farmland Mapping and Monitoring Program

The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The maps are updated every two years using a computer mapping system, aerial imagery, public review, and field reconnaissance. The following FMMP categories are mapped by the DOC (DOC 2021a):

- **Prime Farmland:** This farmland has the best combination of physical and chemical features able to sustain long-term agricultural production. Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agriculture production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance:** This farmland is similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland:** Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.

- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock.
- **Urban and Built-up Land:** Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land:** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines or borrow pits; and waterbodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

The Proposed Project will be held to the categories set forth by the FMMP.

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a non-mandated state program, administered by counties and cities to preserve agricultural land and discourage the premature conversion of agricultural land to urban uses. The act authorizes local governments and property owners to (voluntarily) enter into contracts to commit agricultural land to specified uses for 10 or more years. Once restricted, the land is valued for taxation based on its agricultural income rather than unrestricted market value, resulting in a lower tax rate for owners. In return, the owners guarantee that these properties remain under agricultural production for an initial 10-year period. The contract is renewed automatically unless the owner files a notice of nonrenewal, thereby maintaining a constant 10-year contract.

The Proposed Project will be held to the principles set forth by this act.

Z'berg-Nejedly Forest Practice Act

The Z'berg-Nejedly Forest Practice Act of 1973 established a set of rules known as the Forest Practice Rules to be applied to forest management-related activities (e.g., timber harvests, timberland conversions, fire hazard removal) on privately owned timberlands in California. They are intended to ensure that timber harvesting is conducted in a manner that will preserve and protect fish, wildlife, forests, and streams.

Although considered during the analysis, the Z'berg-Nejedly Forest Practice Act would not apply to the Proposed Project because this area does not include any forest resources nor forest management-related activities.

3.2.2.3 Regional and Local

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to agriculture and forestry resources that are relevant to the Proposed Project:

- **Policy OCEP-31**: Retention of agricultural lands within the Town limits should be encouraged while recognizing that changing circumstances may necessitate a change in use for some lands.
- **Policy OCEP-32**: Significantly important agricultural and timber production lands, particularly those located in the secondary and tertiary planning areas, will be identified and protected from incompatible development.

The Proposed Project will be held to the policies in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to agriculture and forestry resources that are relevant to the Proposed Project:

- **Policy LU-P13.1**: Maintain the Chico Area Greenline, which will be located as shown on Figure LU-7.
- **Policy LU-P13.3**: Recognize the Chico Area Greenline as the boundary between the "Urban Side of the Chico Area Greenline" and the "Agricultural Side of the Chico Area Greenline."
- **Policy LU-P13.7**: Conserve and protect for agricultural use the lands in the Chico area that are situated on the Agricultural Side of the Chico Area Greenline.
- **Policy COS-P11.3**: Urban development will not limit the financial sustainability of timber operations.
- **Policy COS-P11.6**: Public facilities will generally not be located in the Timber Production Zone if the facility will have a significant adverse effect on the production of timber unless alternative sites for an essential public use cannot be located elsewhere.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to agriculture and forestry resources that are relevant to the Proposed Project:

- **Policy OS-5.1, Urban/Rural Boundary**: Protect agriculture by maintaining the Greenline between urban and rural uses.
- **Policy OS-5.2, Agricultural Resources**: Minimize conflicts between urban and agricultural uses by requiring buffers or use restrictions.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

3.2.3 Method of Analysis

This section describes the methods used to analyze impacts on agriculture and forestry resources within the study area.

3.2.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on agriculture if it would:

- **Impact AG-1:** Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- **Impact AG-2:** Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- **Impact AG-3:** Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by California Government Code Section 51104(g)).
- **Impact AG-4:** Result in the loss of forest land or conversion of forest land to non-forest use.
- **Impact AG-5:** Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

3.2.3.2 Approach to Analysis

Construction, Operation, and Maintenance

Impacts on agriculture and forestry resources were identified qualitatively based on the Proposed Project's potential to affect agricultural lands and timber resources.

A desktop analysis was completed to collect and analyze data in the study area. Aerial imagery and street view images were used to identify the land uses that encompass the study area. Additionally, the following resources were used for data collection:

- Butte County Important Farmland Map of 2018 (DOC 2021b)
- Butte County Development Services Information interactive GIS map (Butte County 2021b)
- City of Chico Zoning Map (City of Chico 2020b)
- Butte County Zoning Map (Butte County 2019a)

The analysis of environmental effects focuses on foreseeable changes to agriculture and forestry resources in the context of effects listed in Section 3.2.3.1 CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

3.2.4 Impact Analysis

This section describes the potential environmental impacts on agriculture and forestry resources as a result of implementation of the Proposed Project.

3.2.4.1 Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (No Impact)

Construction, Operation, and Maintenance

The Core and Extended Collection Systems would be located within the Town limits, primarily within the public ROW. Based on a review of the Butte County Important Farmland Map of 2018, Paradise is designated as Urban and Built-Up Land (DOC 2021b).

The Export Pipeline System would be located primarily within the Butte County public ROW. When the proposed pipeline alignment leaves the Butte County public ROW at Skyway, it would remain within an inactive UPRR corridor before bisecting two private parcels located within the City that are designated as Urban and Built-Up Land and Other Land (DOC 2021b). The remaining proposed pipeline alignment would be located within the Butte County public ROW, with a small segment of the pipeline crossing an active UPRR corridor.

Therefore, construction, operation, and maintenance of the Proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, resulting in no impact.

Mitigation. No mitigation required.

3.2.4.2 Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract (No Impact)

Construction, Operation, and Maintenance

The Core and Extended Collection Systems would be located within the Town limits, primarily within the public ROW. Based on a review of the Butte County Development Services Information interactive GIS map (Butte County 2021b), no Williamson Act parcels are present within the Town.

The Export Pipeline System would be primarily constructed within the Butte County public ROW. When the proposed pipeline alignment leaves the Butte County public ROW at Skyway, it would remain within an inactive UPRR corridor before bisecting two private parcels located within the City limits that have a zoning of CR – Regional Commercial (City of Chico 2020b) and are not enrolled in the Williamson Act (Butte County 2021b). The remaining proposed pipeline alignment would be located within the Butte County public ROW, with a small segment of the pipeline crossing an active UPRR corridor.

Therefore, construction, operation, and maintenance of the Proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract, resulting in no impact.

Mitigation. No mitigation required.

3.2.4.3 Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by California Government Code Section 51104(g)) (No Impact)

Construction, Operation, and Maintenance

No lands zoned forest land, timberland, or timberland zoned Timberland Production occur within the study area (City of Chico 2020b, Town of Paradise 2021a, Butte County 2019a). Therefore, construction, operation, and maintenance of the Proposed Project would have no impact on zoning of forest land, timberland, or timberland zoned Timberland Production.

Mitigation. No mitigation required.

3.2.4.4 Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use (No Impact)

Construction, Operation, and Maintenance

A review of aerial imagery and street view images indicates no forest or timber resources occur within the study area (Google Earth 2022). Therefore, construction, operation, and maintenance of the Proposed Project would not result in the loss of forest land nor conversion of forest land to non-forest use, resulting in no impact.

Mitigation. No mitigation required.

3.2.4.5 Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use (Less than Significant Impact)

As noted under Impact AG-4, no forest resources occur within the study area.

Construction

The Core and Extended Collection Systems would be constructed primarily within the Town ROW. No farmlands occur within the Town limits (Google Earth 2022).

The Export Pipeline System would be constructed primarily within the Butte County public ROW. No farmlands are adjacent to the Skyway segment of the Export Pipeline System. As the Export Pipeline System leaves the Butte County public ROW at Skyway and until it connects to the Chico WPCP, it would be adjacent to farmlands (Google Earth 2022).

Construction activities associated with the Export Pipeline System have the potential to result in temporary effects involving dust and stormwater runoff at adjacent farmlands (Google Earth 2022). The Proposed Project will be required to implement best practice measures to control fugitive dust emissions. Refer to Section 3.3 Air Quality for information on dust control measures that will be implemented during construction. As part of the Proposed Project, the Town will also be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) that includes best management measures to reduce stormwater runoff. Refer to Section 0 Hydrology and Water Quality for more information on SWPPP that will be implemented during construction. The temporary effects at adjacent farmlands would cease once construction is complete.

Therefore, construction of the Proposed Project would not result in conversion of farmland to non-agricultural use nor conversion of forest land to non-forest use. This is considered a less-than-significant impact.

Mitigation. No mitigation required.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in

Section 2.8. Operation and maintenance activities would be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground-disturbing activities, except if a pipe broke and a section of pipeline needed to be replaced. In the case of a pipe break, the section will be repaired and returned to previous conditions as expeditiously as possible to limit impacts to the public and sewer service. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads). Operation and maintenance activities, as described in Section 2.8, would not generate excessive dust nor substantially increase stormwater runoff near farmlands due to the infrequency of these activities. Therefore, operation and maintenance of the Proposed Project would not result in conversion of farmland to non-agricultural use nor conversion of forest land to non-forest use. As a result, no impact would occur.

Mitigation. No mitigation required.

3.2.5 Impacts Summary

Table 3.2-2 summarizes the agriculture and forestry resources impacts of the Proposed Project.

Table 3.2-2. Agriculture and Forestry Resources Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use	NI	N/A	NI
Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract	NI	N/A	NI
Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by California Government Code Section 51104(g))	NI	N/A	NI
Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use	NI	N/A	NI
Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use	LTS	N/A	LTS

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.2.6 References

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Butte County. 2019a. *Butte County Zoning Map*. April 2019. https://www.buttecounty.net/Portals/10/Docs/Zoning/Zoning_Map_Poster.pdf?ver=2019-04-30-104419-940.

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DOC. 2016. 2014–2016 California Farmland Conversion Report. Appendix A: 2014–2016 County Conversion Tables, *Table A-3: Butte County 2014-2016 Land Use Conversion*. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Butte.aspx.

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3.3 Air Quality

This section describes the environmental setting and regulatory framework for air quality, and identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the air quality analysis focuses on emissions of criteria air pollutants, toxic air contaminants (TACs), and odors in the study area where air quality is most susceptible to change as a result of the Proposed Project's construction, operation, and maintenance. The study area for air quality is the entire Butte County because this is the area for which the Butte County Air Quality Management District (BCAQMD) has prepared plans for reducing specific types of air emissions, and manages air quality to meet federal and state air quality standards.

3.3.1 Environmental Setting

The Proposed Project is located in Butte County, which is within the Sacramento Valley Air Basin. The Sacramento Valley Air Basin encompasses approximately 14,994 square miles and is bordered on its east, north, and west by the Sierra Nevada, Cascade, and Coast Mountain ranges, respectively (BCAQMD 2014). The 11-county Sacramento Valley Air Basin is divided into two air quality planning areas based on the amount of pollutant transport from one area to the other and the level of emissions within each. Butte County is within the Northern Sacramento Valley Air Basin, which is composed of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba Counties (BCAQMD 2014).

3.3.1.1 Climate and Meteorology

Seasonal weather patterns affect regional and local air quality. The Sacramento Valley and Butte County have a Mediterranean climate, characterized by hot, dry summers and cool, wet winters (BCAQMD 2014). Winter weather is governed by cyclonic storms from the North Pacific, while summer weather is typically subject to a high-pressure cell that deflects storms from the region (BCAQMD 2014).

In Butte County, winters are generally mild, with daytime average temperatures in the low 50s°F and nighttime temperatures in the upper 30s°F (BCAQMD 2014). Temperatures range from an average January low of approximately 36°F to an average July high of approximately 96°F, although periodic lower and higher temperatures are common (BCAQMD 2014). Rainfall between October and May averages approximately 26 inches, but varies considerably year to year. Heavy snowfall often occurs in the northeastern mountainous portion of Butte County. Periodic rainstorms contrast with occasional stagnant weather and thick ground, or "tule," fog in the moister, flatter parts of the valley. Winter winds generally come from the south, although north winds also occur.

Diminished air quality within Butte County largely results from local air pollution sources, transport of pollutants into the area from the south, the Northern Sacramento Valley Air Basin topography, prevailing wind patterns, and certain inversion conditions that differ with the season (BCAQMD 2014). During summer, sinking air forms a "lid" over the region, confining pollution within a shallow layer near the ground that leads to photochemical smog and visibility problems. During winter nights, air near the ground cools, while the air above remains relatively warm, resulting in little air movement and localized pollution "hot spots" near emission sources. Carbon monoxide, nitrogen oxides, particulate matters, and

lead particulate concentrations tend to elevate during winter inversion conditions, when little air movement may persist for weeks (BCAQMD 2014).

3.3.1.2 Air Pollutants of Concern

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), inhalable particulate matter 10 micrometers and smaller (PM_{10}), fine particulate matter 2.5 micrometers and smaller ($PM_{2.5}$), and lead (Pb) are primary air pollutants. ROG and NO_X are criteria pollutant precursors that form secondary criteria air pollutants such as ozone (O_3) through chemical and photochemical reactions in the atmosphere. Each of the primary and secondary criteria air pollutants and its known health effects is described below (US Environmental Protection Agency [USEPA] 2021a).

Carbon Monoxide (CO). CO is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

Reactive Organic Gases (ROG). ROG is a reactive chemical gas, composed of hydrocarbon compounds that may contribute to the formation of smog by their involvement in atmospheric chemical reactions. ROGs are emitted from a variety of sources, including liquid and solid fuel combustion, evaporation of organic solvents, and waste disposal. No ambient air quality standards have been established for ROGs.

Nitrogen Oxide (NO_X). NO_X is a by-product of fuel combustion and contributes to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_2 produced by combustion is NO, but NO reacts with oxygen quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is a reddish-brown gas that acts as an acute irritant and is more injurious than NO in equal concentrations. NO_2 exposure concentrations near roadways are of concern for susceptible individuals, including people with asthma, children, and the elderly. Short-term NO_2 exposures, ranging from 30 minutes to 24 hours, are known to result in adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma.

Sulfur Dioxide (SO_2). SO_2 is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal as well as from chemical processes at chemical plants and refineries. When SO_2 forms sulfates in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Short-term exposures to SO_2, ranging from 5 minutes to 24 hours, are known to

result in adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue.

Particulate Matter (PM_{10} and $PM_{2.5}$). Suspended particulate matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Inhalable coarse particles, or PM_{10}, include particulate matter with a diameter of 10 micrometers or less. Fine particles, or $PM_{2.5}$, have a diameter of 2.5 micrometers or less. Particles that are 10 micrometers in diameter or smaller are of greatest concern because those are the particles that generally pass through the throat and nose, then enter the lungs. Once inhaled, these particles can affect the heart and lungs, and cause serious health effects. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Health effects of particulate matter include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., airway irritation, coughing, difficulty breathing). Particulate matter can also cause environmental effects such as visibility impairment, environmental damage, and aesthetic damage.

Lead (Pb). Pb is a metal found naturally in the environment as well as in manufactured products. The major sources of Pb emissions have historically been mobile and industrial sources. As a result of the USEPA's regulatory efforts to remove Pb from motor vehicle gasoline, levels of Pb in the air decreased by 98 percent between 1980 and 2014. Today, the highest levels of Pb in air are usually found near lead smelters. Depending on the level of exposure, Pb can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Pb exposure also affects the oxygen-carrying capacity of the blood. The most commonly encountered effects of Pb in current populations are neurological effects in children and cardiovascular effects (e.g., high blood pressure, heart disease) in adults.

Ozone (O_3). O_3 is commonly referred to as "smog" and is a gas that is formed when ROGs and NO_X, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas.

3.3.1.3 Toxic Air Contaminants

California law defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health" (California Air Resources Board [ARB] 2021a). TACs are pollutants that cause or may cause cancer or other serious health effects such as birth defects; neurological and reproductive disorders; or chronic eye, lung, or skin irritation. TACs also may cause adverse environmental and ecological effects. They include such substances as volatile organic compounds; chlorinated hydrocarbons; asbestos; dioxin; toluene; gasoline engine exhaust; particulate matter emitted by diesel engines; and metals such as cadmium, mercury, chromium, and lead compounds, among many others.

Diesel engines emit a complex mixture of pollutants, including very small carbon particles, or "soot" coated with numerous organic compounds, known as diesel particulate matter. Diesel exhaust also contains more than 40 cancer-causing substances, most of which are readily adsorbed onto the soot particles. Diesel engine emissions are responsible for approximately 70 percent of California's estimated cancer risk attributable to TACs (ARB 2021b). In 1998, the ARB identified diesel particulate matter as a TAC.

A primary source of diesel particulate matter emissions is combustion from diesel engines, such as those in trucks and other motor vehicles. Diesel particulate matter is of concern because it is a potential source of both cancer and non-cancer health effects, and because it is present at some concentration in all developed areas of the state. Diesel particulate matter contributes to numerous health impacts that have been attributed to particulate matter exposure, including increased hospital admissions, particularly for heart disease, but also for respiratory illnesses and even premature death.

3.3.1.4 Sensitive Receptors

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units (BCAQMD 2014). The BCAQMD recommends evaluation of sensitive receptors within 1,000 feet of the project parcel(s) (BCAQMD 2014). Several sensitive receptors, including residential dwelling units, schools, nursing homes, hospitals, and day care centers, are found within a 1,000-foot radius buffer surrounding the Proposed Project. The closest sensitive receptors to the Proposed Project are the residential dwelling units along Entler Avenue in the City, which are located within 50 feet of the proposed pipeline alignment (Google Earth 2022). See Figure 3.3-1 for the location of sensitive receptors within a 1,000-foot buffer surrounding the Proposed Project.

3.3.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on air quality. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.3.2.1 Federal

Federal Clean Air Act and National Ambient Air Quality Standards

The Federal Clean Air Act is the primary federal law governing air quality. The Federal Clean Air Act is regulated by the USEPA, which sets standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS have been established for six criteria air pollutants that have been linked to potential health concerns: CO, NO_2, O_3, SO_2, PM_{10}, and $PM_{2.5}$. Additionally, national standards exist for Pb. The NAAQS are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. The Federal Clean Air Act requires USEPA to designate areas as attainment, nonattainment, or maintenance (an area that was previously nonattainment and is currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved.

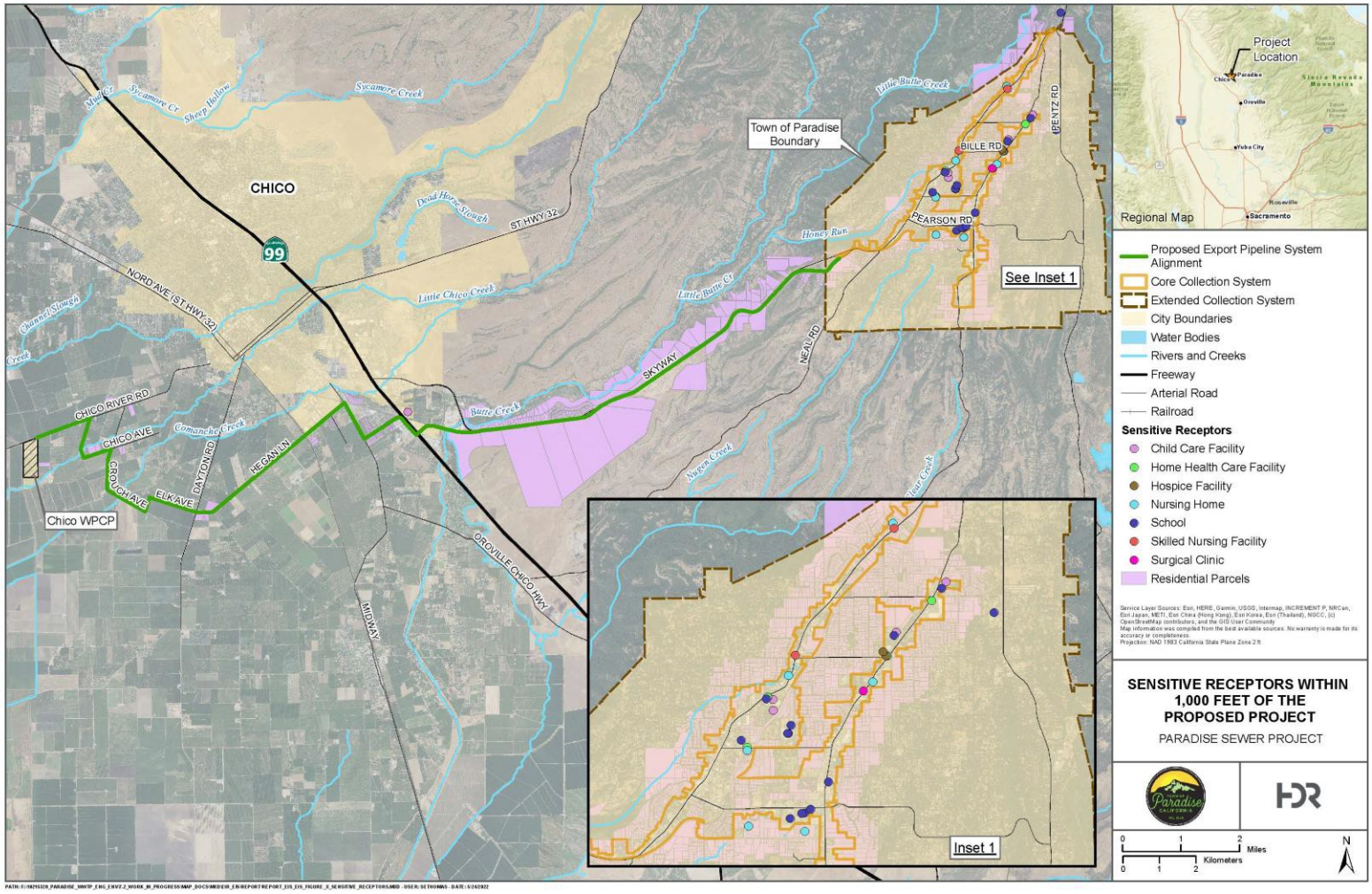

Figure 3.3-1. Sensitive Receptors within 1,000 feet of the Proposed Project

Butte County is designated as nonattainment for national O_3 standards and attainment for all other federal standards (BCAQMD 2018).

The Proposed Project will be held to the NAAQS set forth by the Federal Clean Air Act.

Non-Road Diesel New Engine and Fuel Standards

The USEPA has adopted multiple tiers of emission standards for non-road (or off-road) diesel engines. The non-road standards cover mobile non-road diesel engines of all sizes used in a wide range of construction, agricultural, and industrial equipment. Currently, the most stringent federal standards are Tier 4, which were adopted in 2014. The Tier 4 emissions standards have more stringent NO_X, particulate matter, and hydrocarbon limits than the lower tiers. The CO emission limits for Tier 4 standards remain unchanged from the Tier 2 and Tier 3 standards.

The Proposed Project will be held to these standards.

National Emission Standards for Hazardous Air Pollutants

National Emission Standards for Hazardous Air Pollutants are stationary source standards for hazardous air pollutants. Hazardous air pollutants are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.

The Proposed Project will be held to these standards.

3.3.2.2 State

California Clean Air Act and California Ambient Air Quality Standards

The ARB is responsible for meeting the state requirements of the Federal Clean Air Act, administering the California Clean Air Act, establishing the California Ambient Air Quality Standards (CAAQS), establishing motor vehicle emissions standards, establishing passenger vehicle fuel specifications, and overseeing the functions of air districts (which, in turn, administer air quality activities at the regional and county levels).

In California, the California Clean Air Act is administered by the ARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels (air districts). CAAQS are generally more stringent than the corresponding federal standards, and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The California Clean Air Act requires the ARB to designate areas in California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. The California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regards to the NAAQS and CAAQS. Air quality attainment plans must outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

Butte County is designated as nonattainment for state O_3, PM_{10}, and $PM_{2.5}$ standards, attainment or unclassified for all other state standards (BCAQMD 2018, ARB 2021c).

The Proposed Project will be held to the CAAQS set forth by the California Clean Air Act.

Health Impacts of Regional Criteria Air Pollutants

In December 2018, the California Supreme Court released a decision in *Sierra Club v. County of Fresno*, 6 Cal. 5th 502, also known as the Friant Ranch Case, finding that CEQA requires that a connection be drawn between project emissions and human health impacts.

As explained in the amicus curiae brief submitted by the San Joaquin Valley Air Pollution Control District for the Friant Ranch case, air district significance thresholds were set at emissions levels tied to the region's attainment status; they are emissions levels at which stationary pollution sources permitted by air districts must offset their emissions and CEQA projects must use feasible mitigation measures, and they are not intended to indicate any localized human health impact that a project may have. Therefore, a project's exceedance of the air district's mass regional emission thresholds does not necessarily indicate that the project would cause or contribute to the exposure of sensitive receptors to ground-level concentrations of ozone greater than health-protective levels.

As suggested in the amicus curiae brief submitted for the Friant Ranch case, given the complexity of ozone formation and the current state of environmental science modeling, it is infeasible to determine whether, or the extent to which, a single project's emissions of precursors (NO_X and ROG) would result in the formation of secondary ground-level ozone, and to identify the geographic and temporal distribution of such secondary formed emissions. Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify ozone-related health impacts caused by project-related NO_X or ROG emissions on the local (project) level. Therefore, it is infeasible to connect ozone precursor emissions at a project level to ozone-related health impacts.

The Proposed Project will be held to the conclusions in the amicus curiae brief submitted for the Friant Ranch Case.

Mobile Source Toxics and Toxic Air Contaminants

California regulates TACs primarily through Assembly Bill (AB) 1807, Toxic Air Contaminant Identification and Control Act (Tanner Act), and AB 2588, Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Hot Spots Act). The Tanner Act sets forth a formal procedure for the ARB to designate substances as TAC and adopt an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate best available toxics control technology to minimize emissions. Under the Hot Spots Act, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

The ARB adopted a comprehensive Diesel Risk Reduction Plan in September 2000 to reduce emissions from both new and existing diesel-fueled engines and vehicles. The ARB has also adopted regulations, known as airborne toxic control measures, to reduce emissions from both on- and off-road heavy-duty diesel vehicles (e.g., construction equipment).

The Proposed Project will be held to the principles set forth by the Tanner Act, Hot Spots Act, Diesel Risk Reduction Plan, and airborne toxic control measures.

3.3.2.3 Regional and Local

Butte County Air Quality Management District

BCAQMD is the air quality regulating authority in Butte County, which is responsible for ensuring that NAAQS and CAAQS are not violated within Butte County. Responsibilities of BCAQMD include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality.

Air Quality Attainment Plan. The *Northern Sacramento Valley Planning Area 2018 Triennial Air Quality Attainment Plan* (2018 Air Quality Attainment Plan) (Sacramento Valley Air Quality Engineering and Enforcement Professionals 2018) is the latest air quality attainment plan applicable to Butte County. The BCAQMD, along with other air districts in northern Sacramento Valley, prepared the 2018 Air Quality Attainment Plan to build on the previous 2015 triennial air quality attainment plan. The 2018 Air Quality Attainment Plan intended to comply with the requirements of the California Clean Air Act related to bringing the Sacramento Valley Air Basin into compliance with CAAQS for O_3.The 2018 Air Quality Attainment Plan includes an assessment of progress towards achieving the control measure commitments in the previous triennial plan; a summary of the last 3 years of O_3 data; a comparison of the expected versus actual emission reductions for each measure committed to in the previous triennial plan; updated control measure commitments; and updated growth rates of population, industry, and vehicle related emissions.

Regulations and Rules. The BCAQMD develops regulations to improve air quality and protect the health and welfare of Butte County residents and their environment. The following BCAQMD rules and regulations (BCAQMD 2014) are applicable to the Proposed Project:

- **Regulation II, Rule 200, Nuisance:** No person will discharge from any non-vehicular source such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause or have a natural tendency to cause injury or damage to business or property.
- **Regulation II, Rule 201, Visible Emissions:** A person will not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is:
    - As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the US Bureau of Mines; or
    - Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described above.
- **Regulation II, Rule 202, Particulate Matter Concentration:** A person will not discharge into the atmosphere from any source particulate matter in excess of 0.3 grains per cubic foot of gas at standard conditions.
- **Regulation II, Rule 205, Fugitive Dust Emissions:** No person will cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that: the dust remains visible in the atmosphere beyond the property line of the emission source; or the dust emission exceeds 20% opacity for a period or periods aggregating

more than three (3) minutes in any one (1) hour if the dust emission is the result of movement of a motorized vehicle.

- **Regulation IV, Rule 400, Permit Requirements:** Requires any person constructing, altering, or operating a source that emits or may emit air contaminants to obtain an Authority to Construct or Permit to Operate from the Air Pollution Control Officer, and to provide an orderly procedure for application, review, and authorization of new sources and of the modification and operation of existing sources of air pollution.
- **Regulation IV, Rule 430, State New Source Rule:** Establishes pre-construction review requirements for new and modified stationary sources of air pollution for use of Best Available Control Technology (BACT), offsets, and analysis of air quality impacts, and to ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards and complies with all other applicable BCAQMD Rules and Regulations.

CEQA Guidelines. The *CEQA Air Quality Handbook* (BCAQMD 2014) includes analysis requirements for construction and operational emissions. Table 3.3-1 summarizes BCAQMD's thresholds for criteria air pollutants and recommended thresholds for TACs. BCAQMD has established thresholds of significance for criteria air pollutants, while it provides guidance with regards to TACs.

Table 3.3-1. BCAQMD Thresholds of Significance

Pollutant	Construction-related	Operational-Related
ROG	137 lb/day, not to exceed 4.5 tons/year	25 lb/day
NO_X	137 lb/day, not to exceed 4.5 tons/year	25 lb/day
PM_{10}	80 lb/day	80 lb/day
New Source TAC Risk and Hazards – Individual Project	Same as Recommended Operational Thresholds	No Adopted Threshold. Recommended Thresholds: • Increased Cancer Risk > 10 in one million • Increased Non-Cancer Risk of > 1.0 Hazard Index (Chronic or Acute) • Ambient Diesel $PM_{2.5}$ > 0.3 µg/m^3 annual average • Zone of Influence: 1,000-foot radius from parcel(s) of source or receptor
New Source TAC Risk and Hazards – Cumulative Impacts	Same as Recommended Operational Thresholds	No Adopted Threshold. Recommended Thresholds: • Cancer Risk > 10 in a million from all local sources • Non-Cancer Risk > 1.0 Hazard Index (from all local sources – chronic) • Diesel $PM_{2.5}$ > 0.8 µg/m^3 annual average • Zone of Influence: 1,000-foot radius from parcel(s) of sources or receptors

Source: BCAQMD 2014

Notes: ROG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = particles of 10 micrometers and smaller, $PM_{2.5}$ = particles of 2.5 micrometers and smaller, TAC = toxic air contaminant, lb = pounds, µg/m^3 = micrograms per cubic meter

Odors. Offensive or strong odors may come from a wide variety of temporary and permanent sources, including, but not limited to, wastewater treatment facilities, exhaust from heavy equipment, various industrial processes, landfills, and painting/coating operations.

Pollutants associated with odors such as sulfur compounds and methane can be a nuisance to healthy people and can trigger asthmatic conditions in people with sensitive airways. Given the somewhat subjective nature of human response to odors, BCAQMD does not provide quantitative or formulaic methods to evaluate the presence of an impact. While most odors are highly dispersive, the significance of an odor impact is generally related to its intensity with distance from the source. Table 3.3-2 presents BCAQMD's screening distances for various odors sources.

Table 3.3-2. BCAQMD Screening Levels for Potential Odor Sources

Type of Facility	Screening Distance (miles)
Wastewater Treatment Plant	2
Wastewater Pumping Facilities	1
Sanitary Landfill	1
Transfer Station	1
Composting Facility	2
Petroleum Refinery	2
Asphalt Batch Plant	2
Chemical Manufacturing	1
Fiberglass Manufacturing	1
Painting/Coating Operations	1
Rendering Plant	4
Coffee Roaster	1
Food Processing Facility	1
Feed Lot/Dairy	1
Green Waste and Recycling Operations	2
Metal Smelting Plants	1

Source: BCAQMD 2014

The Proposed Project will be held to the plans, rules, regulations, and thresholds adopted by BCAQMD.

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following goals and objectives related to air quality that are relevant to the Proposed Project:

- **Goal CG-5**: Maintain and improve local and regional air quality.
- **Objective OCEO-8**: Comply with the standards, provisions, and objectives of the Butte County Air Quality Attainment Plan.

The Proposed Project will be held to the goals and objectives in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to air quality that are relevant to the Proposed Project:

- **Policy COS-P5.2**: Developers will implement best available mitigation measures to reduce air pollutant emissions associated with the construction and operation of development projects.

- **Policy COS-P5.6**: New sources of toxic air pollutants will comply with the permitting requirements of the BCAQMD and Section 44300 et seq. of the California Health and Safety Code.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policy related to air quality that is relevant to the Proposed Project:

- **Policy OS-4.1, Air Quality Standards**: Work to comply with state and federal ambient air quality standards and to meet mandated annual air quality reduction targets.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

3.3.3 Method of Analysis

This section describes the methods used to analyze impacts on air quality within the study area.

3.3.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on air quality if it would:

- **Impact AIR-1:** Conflict with or obstruct implementation of an applicable air quality plan.
- **Impact AIR-2**: Result in a cumulatively considerable net increase of any criteria pollutant for which the Proposed Project region is nonattainment under an applicable federal or state ambient air quality standard.
- **Impact AIR-3**: Expose sensitive receptors to substantial pollutant concentrations.
- **Impact AIR-4**: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people.

3.3.3.2 Approach to Analysis

Impacts on air quality were identified qualitatively and quantitively based on the Proposed Project's potential to generate substantial emissions of criteria air pollutants, TACs, and odors.

The analysis of environmental effects focuses on foreseeable changes to air quality in the context of effects listed in Section 3.3.3.1 CEQA Significance Criteria.

Construction

Impacts on air quality during construction of the Proposed Project were analyzed quantitatively. Construction of the Core Collection System, Export Pipeline System, and Extended Collection System would generate criteria air pollutant emissions from the use of construction equipment, haul trucks, and construction labor commute vehicles. Criteria air pollutant emissions associated with construction of the Core Collection System and Export Pipeline System were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria air pollutant emissions associated with both construction

and operation from a variety of land use projects. Construction emissions were estimated in CalEEMod using a combination of information presented in Chapter 2 and model defaults. The area of disturbance for the Core Collection System presented in Section 2.5.1.1 and Export Pipeline System presented in Section 2.5.2.1 were used as inputs in CalEEMod. The construction schedules for the Core Collection System and Export Pipeline System presented in Section 2.6 were used in CalEEMod. Types and quantities of equipment, construction crew size, excavation and fill quantities, and number of truck trips presented in Sections 2.5.1.3 and 2.5.2.3 were used as inputs to CalEEMod. Criteria air pollutant emissions associated with construction of the Extended Collection System were estimated using comparable measures and assumptions for the Core Collection System. Air quality impacts were determined by comparing the criteria air pollutant emissions generated during construction of the Core Collection System, Export Pipeline System, and Extended Collection System against the BCAQMD thresholds.

Operation and Maintenance

Impacts on air quality during operation and maintenance were assessed qualitatively based on the information in Section 2.8.

3.3.4 Impact Analysis

This section describes the potential environmental impacts on air quality as a result of implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to conflict with the applicable air quality plan, generate criteria air pollutant emissions, expose sensitive receptors to TAC emissions, and result in odor emissions. The air quality impact analysis focuses on impacts from construction, operation, and maintenance of the Core Collection System, the Export Pipeline System, and the Extended Collection System.

3.3.4.1 Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan (Less than Significant Impact)

According to the *CEQA Air Quality Handbook* (BCAQMD 2014), a project conflicts with or obstructs implementation of the applicable air quality attainment plan if it would result in or induce growth in population, employment, land use, or regional vehicle miles traveled (VMT) that is inconsistent with the growth (and therefore the emissions projections) assumptions in the applicable air quality attainment plan. As previously discussed in Section 3.3.2 Regulatory Framework, the 2018 Air Quality Attainment Plan is the latest air quality attainment plan applicable to Butte County.

Construction

As discussed in Section 0 Population and Housing, all construction jobs associated with the Proposed Project would be temporary and would be expected to be filled by the current workforce within the County (Section 4.4 Growth Inducing Impacts). During construction, the Proposed Project would not result in employment growth within the County beyond growth projections presented in the 2018 Air Quality Attainment Plan. Therefore, construction of the Proposed Project would not conflict with or obstruct implementation of the 2018 Air Quality Attainment Plan, resulting a less-than-significant impact.

Mitigation. No mitigation required.

Operation and Maintenance

The Proposed Project is a part of the Town's recovery efforts from the 2018 Camp Fire and would address the need for a municipal wastewater management solution. As a result, operation and maintenance of the Proposed Project could foster population regrowth and economic expansion. As discussed in Section 0 Population and Housing, the Town's population decreased by approximately 83 percent as a result of the 2018 Camp Fire. Any inducement of population growth that might occur as a result of the Proposed Project would therefore be a regrowth and repopulation toward pre-fire levels. Any population growth would be contained in the Town because the proposed sewer system would not extend to other cities or counties, nor benefit populations outside of the Town.

As discussed in Section 0 Population and Housing, approximately 5 to 10 permanent employees would be required to serve the Proposed Project during operations and maintenance, which may be re-assigned from existing staff within the Town or may be additional new staff. The minimal increase in employment during operations and maintenance of the Proposed Project would be consistent with the growth projections in the 2018 Air Quality Attainment Plan. Therefore, operation and maintenance of the Proposed Project would not conflict with or obstruct implementation of the 2018 Air Quality Attainment Plan, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

3.3.4.2 Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (Less than Significant Impact)

Construction

Construction activities associated with the Core Collection System, the Export Pipeline System, and the Extended Collection System would generate criteria air pollutant emissions from the use of construction equipment, haul trucks, and construction labor commute vehicles that would temporarily affect air quality.

Criteria air pollutant emissions generated during construction of the Core Collection System and Export Pipeline System were estimated using CalEEMod. The unmitigated construction criteria air pollutant emissions are summarized in Table 3.3-3. The detailed CalEEMod assumptions and output is included in Appendix D Emissions Modeling. Summaries of equipment, crews, and materials used in the modeling are included in Sections 2.5.1.3 and 2.5.2.4, for the Core Collection System and Export Pipeline System, respectively. The maximum daily emissions generated during construction of the Core Collection System and Export Pipeline System were compared with BCAQMD thresholds to determine significance.

Table 3.3-3. Unmitigated Construction Criteria Air Pollutant Emissions

Year	ROG	NOX	PM10	CO	SO2	PM2.5
	lb/day					
Core Collection System						
2023	11.81	89.41	5.94	114.10	0.24	4.05
2024	14.24	100.75	6.95	140.78	0.32	4.61
2025	13.15	87.06	6.33	137.95	0.32	4.04

Year	ROG	NOX	PM10	CO	SO2	PM2.5
	lb/day					
Export Pipeline System						
2023	9.78	75.26	5.19	105.27	0.25	3.51
2024	5.83	41.65	2.87	57.51	0.12	1.92
Maximum Emissions	**14.24**	**100.75**	**6.95**	**140.78**	**0.32**	**4.61**
BCAQMD Thresholds of Significance	137	137	80	N/A	N/A	80
Exceeds BCAQMD Thresholds?	**No**	**No**	**No**	**N/A**	**N/A**	**No**

Source: CalEEMod Results (Appendix D Emissions Modeling)

Notes: ROG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = particulate matter 10 micrometers and smaller, CO = carbon monoxide, SO_X = sulfur oxides, $PM_{2.5}$ = particulate matter 2.5 micrometers and smaller, lb = pound, BCAQMD = Butte County Air Quality Management District, N/A = not applicable

As shown in Table 3.3-3, unmitigated maximum daily criteria air pollutant emissions during construction of the Core Collection System and Export Pipeline System would not exceed BCAQMD thresholds for the County for ROG, NO_X, PM_{10}, or $PM_{2.5}$.

The construction methodology for the Extended Collection System would be similar to the Core Collection System. Crews and equipment used for the Extended Collection System would be similar to the Core Collection System, except that the duration would be shorter. The criteria air pollutant emissions generated during construction of the Extended Collection System would be similar to those generated during construction of the Core Collection System. From Table 3.3-3, unmitigated maximum daily criteria air pollutant emissions associated with construction of the Core Collection System would not exceed BCAQMD thresholds. Similar to the Core Collection System, unmitigated maximum daily criteria air pollutant emissions associated with construction of the Extended Collection System would not exceed BCAQMD thresholds.

Although unmitigated PM_{10} and $PM_{2.5}$ emissions are below BCAQMD thresholds, it is mandatory for all construction projects within Butte County to comply with BCAQMD's Rule 200, Nuisance, and Rule 205, Fugitive Dust Emissions. The *CEQA Air Quality Handbook* (BCAQMD 2014) provides best practice measures to minimize fugitive dust during construction. The Proposed Project will implement the following best practice measures required by BCAQMD Rules 200 and 205 to control fugitive dust emissions:

- The amount of the disturbed area will be reduced where possible.
- Water trucks or sprinkler systems will be used in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency will be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water will be used whenever possible.
- All dirt stockpile areas will be sprayed daily as needed, covered, or a BCAQMD-approved alternative method will be used.
- Permanent dust control measures identified in the approved project revegetation and landscape plans will be implemented as soon as possible following completion of any soil disturbing activities.

- Exposed ground areas that will be reworked at dates greater than 1 month after initial grading will be sown with a fast-germinating, non-invasive, grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to re-vegetation will be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by BCAQMD.
- All roadways, driveways, sidewalks, and other facilities to be paved will be completed as soon as possible. In addition, building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Vehicle speed for all construction vehicles will not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials will be covered or will maintain at least 2 feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.
- Wheel washers will be installed where vehicles enter and exit unpaved roads onto streets, or trucks and equipment leaving the site will be washed.
- Streets will be swept at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water will be used where feasible.
- A sign will be posted in a prominent location visible to the public with the telephone numbers of the contractor and BCAQMD for any questions or concerns about dust from the Proposed Project.

Compliance with the provisions and best practice measures promulgated by Rules 200 and 205 would further reduce fugitive dust emissions of PM_{10} and $PM_{2.5}$.

Based on the discussion above, the Proposed Project would not exceed the BCAQMD thresholds for any criteria air pollutant during construction. Therefore, construction of the Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which Butte County is in nonattainment under the applicable federal or state ambient air quality standard, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would generate criteria air pollutant emissions from the use of vehicles. However, criteria air pollutant emissions from operations and maintenance activities would be minimal and immeasurable due to the infrequency of these activities. Therefore, operation and maintenance of the Proposed Project would not result in a cumulatively

considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

3.3.4.3 Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations (Less than Significant Impact)

Figure 3.3-1 shows the location of sensitive receptors within a 1,000-foot radius buffer surrounding the Proposed Project. Several sensitive receptors, including residential dwelling units, schools, nursing homes, hospitals, and daycare centers are found within the 1,000-foot radius surrounding the Proposed Project. The closest sensitive receptors to the Proposed Project are the residential dwelling units along Entler Avenue in the City, which are located within 50 feet of the proposed pipeline alignment (Google Earth 2022).

Construction

Project construction activities have the potential to generate TAC emissions, specifically diesel particulate matter, from the use of diesel equipment that could affect existing sensitive receptors. However, construction activities would be temporary and short-term. Only portions of the Proposed Project area would be disturbed at a given time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location within the Proposed Project area. Periodic operation of construction equipment would allow for the dispersal of TAC emissions by avoiding continuous construction activity in the portions of the Proposed Project area closest to existing sensitive receptors. All construction equipment and operation thereof will be subject to BCAQMD rules and regulations, including those related to diesel construction equipment. The *CEQA Air Quality Handbook* (BCAQMD 2014) provides best practice measures to minimize diesel particulate matter from construction equipment. The Proposed Project will implement the following BCAQMD best practice measures to reduce diesel particulate matter from construction equipment:

- All on- and off-road diesel equipment will not idle for more than five minutes. Signs will be posted in the designated queuing areas and/or job sites to remind drivers and operators of the 5-minute idling limit.
- Idling, staging, and queuing of diesel equipment within 1,000 feet of sensitive receptors will be prohibited.
- All construction equipment will be maintained in proper tune according to the manufacturer's specifications. Equipment must be checked by a certified mechanic and determined to be running in proper condition before the start of work.
- Diesel particulate filters will be installed or other CARB-verified diesel emission control strategies will be implemented.
- To the extent feasible, truck trips will be scheduled during non-peak hours to reduce peak hour emissions.

Therefore, construction of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would generate TAC emissions from vehicle use. However, TAC emissions from operations and maintenance activities would be minimal due to the infrequency of these activities. Therefore, operation and maintenance of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

3.3.4.4 Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people (Less than Significant Impact)

Construction

Construction of the Proposed Project could result in emissions of odors in the form of diesel exhaust from construction equipment and vehicles. It is anticipated that these odors would be short-term, limited in extent at any given time, and distributed throughout the Proposed Project area during the duration of construction; therefore, they would not affect a substantial number of individuals. Therefore, construction of the Proposed Project would not result in odor emissions adversely affecting a substantial number of people, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would generate odors from the use of vehicles. However, odors from operations and maintenance activities would be minimal and immeasurable due to the infrequency of these activities (Section 2.8 Proposed Operation and Maintenance), and maintenance vehicles would use roads already being used by other vehicles. Once complete, the Proposed Project would provide an overall odor benefit, because it will replace existing septic tanks within the sewer service area that emit unpleasant odors. Routine operations and

maintenance activities will include periodic inspection of the odor control cannisters, which will be provided at the Export Pipeline System's flow control and metering structure. There would be no change to how the Chico WPCP is managed and operated or how treated water is discharged that might generate new odors. Therefore, operation and maintenance of the Proposed Project would not result in odor emissions adversely affecting a substantial number of people, resulting in no impact.

Mitigation. No mitigation required.

3.3.5 Impacts Summary

Table 3.3-4 summarizes the air quality impacts of the Proposed Project.

Table 3.3-4. Air Quality Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan	LTS	N/A	LTS
Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard	LTS	N/A	LTS
Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations	LTS	N/A	LTS
Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people	LTS	N/A	LTS

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.3.6 References

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3.4 Biological Resources

This section describes the environmental setting and regulatory framework with regards to biological resources. For the purposes of the biological resources analysis, the study area refers to the areas within the Town and areas of unincorporated Butte County and Chico within the Proposed Project study area, plus a 500-foot buffer. The 500-foot radius buffer was chosen as a reasonable distance from Proposed Project activities to account for dust and other indirect effects that construction could have on adjacent habitats that may occur. Field studies were limited to public roadways. The few locations of the study area that were on private property and could not be accessed were examined, to the greatest extent feasible, using high-powered optical equipment (binoculars and spotting scopes) from public roadways. For the biological resources' habitat assessment, habitat in and within a 0.5-mile buffer of the Proposed Project footprint was also assessed for Swainson's hawk suitability to determine in which portions of the study area protocol surveys for that species should be conducted. The 0.5-mile buffer was based on the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (CDFW 2000).

3.4.1 Environmental Setting

Field studies performed in the study area to date and the total area evaluated for each are listed below. A detailed description of information used to determine how, and to what extent, the Proposed Project may affect special-status species and sensitive natural communities is provided below. Appendix E Vegetation Community Descriptions and Special-Status Species Accounts includes a full description of findings from the field effort, some of which is referenced further in this section.

3.4.1.1 Studies Performed to Date

Literature Review

The following datasets, online maps, and other online resources were reviewed to identify special-status species and their habitats, as well as aquatic resources, with the potential to occur in the study area:

- CDFW California Natural Diversity Database QuickView Tool in BIOS 5 (CDFW 2021a)
- California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants of California* (CNPS 2021)
- Esri World Imagery map (Esri 2021)
- Google Earth Pro mapping service aerial imagery from 2002 through 2022 and street view images (Google Earth 2022)
- National Hydrography Dataset (USGS 2012)
- National Marine Fisheries Service (NMFS), California Species List Tool, Google Earth Application (NMFS 2021)
- Natural Resources Conservation Service (NRCS) Official Soil Series Descriptions of Butte County (NRCS 2021a)
- NRCS Soil Survey Geographic (SSURGO) Database for Butte County, California (NRCS 2021b)
- National Wetlands Inventory map (US Fish and Wildlife Service [USFWS] 2021a)
- USFWS Information for Planning and Consultation (IpaC) system (USFWS 2021b)

- USFWS Critical Habitat Mapper (USFWS 2021c)
- USGS topographical map

A query of the California Natural Diversity Database provided a list of processed and unprocessed occurrences for special-status species in the following California USGS 7.5-minute quadrangles (quads): Paradise East, Paradise West, Cherokee, Hamlin Canyon, Chico, Ord Ferry, Hamilton City, Glenn, Llano Seco, Nelson, Shippee, Oroville, Oroville Dam, Berry Creek, Pulga, Richardson Springs, Nord, Foster Island, Campbell Mound, Cohasset, Stirling City, and Kimshew Point. The Proposed Project intersects the Paradise East, Paradise West, Cherokee, Hamlin Canyon, Chico, and Ord Ferry quads. The remaining quads listed above surround these six quads.

The CNPS *Inventory of Rare and Endangered Plants of California* database was queried to identify special-status plant species that have the potential to occur in all the same quads listed above. The NMFS California Species List Tool on Google Earth was queried to identify special-status fish species, fish critical habitat, and essential fish habitat known to be present in the six quads intersected by the Proposed Project. The USFWS IpaC system was queried to identify federally protected species that have the potential to occur in the study area as well as designated critical habitat. The USFWS Critical Habitat Mapper was queried to determine the location and extent of designated critical habitat in or adjacent to the study area.

Database search results are provided in Appendix E, Attachment 2. A table summarizing the database search results and conclusions regarding the potential for each species to be impacted by Proposed Project-related activities is provided in Appendix E, Attachment 3.

Biological Resources and Habitat Assessment

A biological resources and habitat assessment of the study area was conducted by HDR biologists Kelly Bartron and Dan Williams on February 23-25, 2021. During these assessments, vegetation communities in and within 500 feet of the Proposed Project footprint were characterized and mapped by hand. Habitats were assessed for suitability to special-status species which had been identified through the database queries as having the potential to occur in the study area, and all plant and wildlife species were identified and recorded. As discussed, habitat in and within a 0.5-mile buffer of the Proposed Project footprint was assessed for Swainson's hawk suitability to determine where in the study area protocol surveys for that species should be conducted.

Aquatic Resources Preliminary Assessment

HDR wetland scientists Leslie Parker and Kristin Smith conducted preliminary site visits to assess aquatic resources in the study area on April 2 and 16, 2021. Aquatic resources were assessed in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987); the *Regional Supplement of the Corps of Engineers Wetland Delineation Manual: Arid West Region*, Version 2.0 (Environmental Laboratory 2008); *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Cold Regions Research and Engineering Laboratory 2008); the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*, Version 2.0 (Environmental Laboratory 2010); and *A Guide to Ordinary High Water Mark (OHWM) Delineation for*

Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (Cold Regions Research and Engineering Laboratory 2014).

The portions of the study area that were on private land (approximately 5,700 feet or 1.1 miles) away from the public roadway in the City (Section 2.5.2.1 Location and Description) were not accessible at the time of the site visit. Where access to aquatic resources was limited (that is, they could be viewed from a public access road or other public space but could not be walked), data was collected to the greatest level of detail possible. However, much of the aerial extent and other quantitative data as that is included in a standard US Army Corps of Engineers (USACE) wetland delineation could not be mapped or collected on-site. The data gathered in areas with limited access was used to facilitate desktop mapping of aquatic resources in conjunction with recent and historical aerial imagery and other data, as listed above. Where there was no access (i.e., aquatic resources could not be viewed from any vantage point on-site), recent and historical aerial imagery, topographic contours, soils, National Wetlands Inventory data, and National Hydrography Dataset data were reviewed. This information was then used to interpret what are likely the most typical site conditions and aquatic resources were mapped from a desktop. Where accessible, each aquatic resource was mapped on-site using GPS equipment with sub-meter accuracy and all data was collected as required by the USACE wetland delineation manuals described above. All findings for the aquatic resources assessment are preliminary, subject to change, and have not been verified by USACE.

Swainson's Hawk Protocol Surveys and Elderberry Shrub Mapping

Between March 25, 2021, and April 14, 2021, HDR biologist Dan Williams conducted protocol Swainson's hawk surveys in the study area. These surveys were conducted at locations in the study area which were identified during the biological resources and habitat assessment as being suitable for Swainson's hawk. During this effort, the HDR biologist also identified and mapped all elderberry shrubs encountered in the study area. Shrubs that were growing close enough to the public roadway to allow thorough examination, were checked for exit holes, a sign of occupancy by valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Full methodology and results of the Swainson's hawk surveys and elderberry shrub mapping are presented in Appendix F, Swainson's Hawk Survey and Elderberry Shrub Mapping Report.

3.4.1.2 Regional Setting

The easternmost portion of the study area is within the Southern Cascades Foothills section of the Cascades Ecoregion, and on the western edge of the Northern Sierra Lower Montane Forest section of the Sierra Nevada Ecoregion. Following Skyway to the west, the study area crosses the Tuscan Flows section of the Central California Foothills and Coastal Mountains Ecoregion, and the North Valley Alluvium and Butte Sink/Sutter and Colusa Basins sections of the Central California Valley Ecoregion (Griffith et al. 2016).

The Sierra Nevada Foothills are composed of sedimentary, granitic, volcanic, and ultramafic substrates. Land cover types in this section consist of oak woodland, annual and perennial grasslands, and chaparral and pine forest. Surface water is characterized by streams flowing west into the Sacramento Valley. In addition, reservoirs for municipal water supply, irrigation, and flood control are common. Summers are hot and dry, while winters are mild (McNab et al. 2007).

The Sierra Nevada Foothills section is further subdivided into five subsections, including the Lower Foothills Metamorphic Belt ecological subsection, which includes the study area. This subsection spans the lower elevation western edge of the Sierra Nevada and has a hot and subhumid climate. This subsection is on moderately steep hills and mountains at the western foot of the Sierra Nevada. The predominant vegetative community in this subsection is blue oak woodland, with scattered grassland, chaparral, and valley oak woodland. Several large rivers cross this subsection. All but the largest tributary streams are dry during summer (McNab et al. 2007).

3.4.1.3 Local Setting

The study area is in central Butte County from Paradise in the western Sierra Nevada foothills, west to the Chico WPCP in the northern Sacramento Valley. Topography across the study area transitions gradually from flat in the west to gently rolling with steep canyons adjacent in the east. Elevation in the study area ranges from approximately 135 feet above mean sea level at the Chico WPCP, to approximately 2,320 feet above mean sea level at the highest point of the sewer service area in Paradise.

According to the HUC data provided by NRCS (2018), the study area crosses the following nine hydrologic units:

- Dry Creek (HUC12 180201580401)
- Little Dry Creek (HUC12 180201580403)
- Little Butte Creek (HUC12 180201580201)
- Lake DeSalba-Butte Creek (HUC12 180201580202)
- Hamlin Slough (HUC12 180201580203)
- Dubock Slough-Little Butte Creek (HUC12 180201580204)
- Durham Slough-Butte Creek (HUC12 180201580205)
- Comanche Creek (HUC12 180201580301)
- Little Chico Creek (HUC12 180201580302)

The NRCS Web Soil Survey identifies 17 soil types in the study area, in addition to water (NRCS 2021a). The soil types are well drained, composed predominantly of loam, and include a mix of metamorphic parent materials.

The following sections summarize the onsite vegetation communities, sensitive habitats, movement corridors, and special-status species with the potential to occur in the study area.

3.4.1.4 Non-Sensitive Vegetation Communities

Vegetation communities in the study area were characterized by reviewing CDFW's *California Wildlife Habitat Relationships System* (CDFW 2021b) vegetation community maps and ground-truthing during surveys to refine vegetation mapping. Non-sensitive vegetation communities are those that are not of special concern to resource agencies, or afforded protections under CEQA, Fish and Game Code (FGC) Sections 1600–1603, and/or Clean Water Act (CWA) Section 401 and Section 404. Non-sensitive vegetation communities in the survey area include annual grassland, blue oak woodland, blue oak-foothill pine woodland, cropland, deciduous orchard-vineyard, developed, disturbed/ruderal,

irrigated row and field crops, mixed chaparral, montane hardwood-conifer, non-native woodland, pasture, ponderosa pine, and valley oak woodland. A map set of vegetation communities in the study area can be found in Appendix E, Attachment 1. Descriptions of each vegetation community and common plant and wildlife species associated with them can be found in Appendix E. This section focuses on those communities referenced in the impact analysis.

3.4.1.5 Sensitive Communities

Sensitive communities included are those that are of special concern to resource agencies or those that are protected under CEQA, FGC Sections 1600–1603, and/or CWA Section 401 and Section 404. Of the vegetation communities identified in the study area, only one is considered a sensitive habitat type: valley-foothill riparian. Valley-foothill riparian habitat was identified in the study area along Butte Creek parallel to and west of Skyway, as well as along Comanche Creek and Little Chico Creek. The map set of vegetation communities in Appendix E, Attachment 1 shows the location of valley-foothill riparian habitat in the study area. A description of the valley-foothill riparian sensitive community and common plant and wildlife species associated with it can be found in Appendix E.

Aquatic Resources

Aquatic resources are considered a sensitive habitat type or land cover type because they provide important ecosystem functions to flora, fauna, and their habitat. Some functions include movement corridors, migratory and/or dispersal corridors, foraging habitat, and cover. Further, aquatic resources are capable of protecting surrounding land cover types from large precipitation events that may cause flooding and resulting adverse effects on biological resources. Five types of aquatic resources were identified in the study area: perennial channel, intermittent channel, ephemeral channel, wetland, and ditch. The five types of aquatic resources identified in the study area are listed below along with brief descriptions of them and where in the study area they were identified:

- **Perennial Channel:** Typically flows continuously throughout an average rainfall year, often with the streambed located below the water table for most of the year. Five perennial channels were identified in the Proposed Project area/footprint: Honey Run and unnamed channel in the sewer service area, Butte Creek and Butte Creek Diversion Channel between Paradise and Chico, and Comanche Creek toward the western end of the Proposed Project area/footprint.
- **Intermittent Channel:** Typically, only flows for a portion of the year, often during the wet season. The wet season is typically in the winter and spring during periods of sustained precipitation when the streambed may be below the water table or when snowmelt provides sustained water flow. Other intermittent sources of water may be artificial in which flow regimes are controlled by irrigation systems or other artificial conveyance. Four intermittent channels were identified in the Proposed Project area/footprint: three unnamed intermittent channels are located in the sewer service area, while Little Chico Creek, a dry, sinuous creek with a low to medium gradient stream profile and medium silt to small cobbles in the low-flow portion of its channel, crosses east to west across the west end of the proposed Export Pipeline System route and along the southern boundary of the Chico WPCP.
- **Ephemeral Channel:** Typically, only flows in direct response to, or immediately after, a precipitation event. One ephemeral channel was identified in the sewer service area near Pearson Road and Black Olive Drive.

- **Wetland:** Based on observations of hydric soils, wetland vegetation, and wetland hydrology, several potential wetlands were identified in the Proposed Project area/footprint along Skyway and in the sewer service area. The three types of potential wetlands observed in the Proposed Project area/footprint are vernal pool (especially prevalent along Skyway between Paradise and Chico, scrub-shrub wetland (an isolated depressional area adjacent to Honey Run), and freshwater emergent wetland (two small features in the Extended Collection Area).
- **Ditch:** Conveys stormwater from roads to subsurface storm drains or surface streams. Five roadside ditches were identified in the Proposed Project area/footprint: two along and adjacent to Skyway in the sewer service area, one along Southgate Avenue just west of SR 99, and one along Crouch Avenue near Comanche Creek.

These aquatic resource types are described in greater detail in Appendix E, and the locations in the study area where they were identified are shown in Appendix E, Attachment 1.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with NMFS on all actions that may adversely affect essential fish habitat. Essential fish habitat has been designated for Chinook salmon in Butte Creek and Little Chico Creek. The designation does not identify specific salmon species or races (for example, spring-run or fall-run); however, Central Valley spring-run Chinook salmon were confirmed present by HDR biologist Dan Williams in the study area in Butte Creek while conducting Swainson's hawk protocol surveys in Spring 2021.

Wildlife Movement Corridors

Wildlife movement corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to (1) sustain species with specific foraging requirements, (2) preserve a species' distribution potential, and (3) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

Available data on movement corridors and linkages was accessed via the CDFW California Natural Diversity Database QuickView Tool in BIOS 5 (CDFW 2021a). Data reviewed included the Essential Connectivity Areas (ds623) layer, the Natural Landscape Blocks [ds621] layer, and the Missing Linkages in California (ds420) layer. A large swath of northern and central Butte County, including much of the study area between Paradise and Chico, is considered Essential Connectivity Area as a great deal of the landscape remains contiguous grassland, oak and pine woodland, and creek riparian corridors. A Natural Landscape Block is present just to the south of Skyway between Paradise and Chico. Additionally, crossing the study area at Skyway between Chico and Tuscan Ridge, is a linkage for small grassland mammals that was identified in the missing linkages layer. Lastly, Butte Creek, Comanche Creek, and Little Chico Creek and their associated riparian corridors are important facilitators of aquatic and terrestrial wildlife movement.

3.4.1.6 Special-Status Species

Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area, or across their native habitat. These

species have been identified and assigned a status ranking by governmental agencies such as CDFW and USFWS, and private organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

- Listed, proposed, or candidates for listing under the federal Endangered Species Act (50 Code of Federal Regulations Section 17.11 – listed; 61 Federal Register 7591 – candidates)
- Listed or proposed for listing under the California Endangered Species Act (FGC 1992 Section 2050 et seq.; 14 California Code of Regulations Section 670.1 et seq.)
- Designated as Species of Special Concern by CDFW
- Designated as Fully Protected by CDFW (FGC Sections 3511, 4700, 5050, and 5515)
- Species that meet the definition of rare or endangered under CEQA (14 California Code of Regulations Section 15380) including CNPS List Rank 1B and 2.

The results of USFWS, NMFS, CDFW, and CNPS database queries identified 39 special-status plant species and 38 special-status wildlife species with the potential to be impacted by the Proposed Project. A table listing all special-status species identified in the database results is provided in Appendix E, Attachment 3. This table also provides a description of the habitat requirements for each species and conclusions regarding the potential for each species to be impacted by Proposed Project components. In cases where a determination was made that no suitable habitat for a given species is present in the study area, that species is not analyzed further in this document. Descriptions of the habitat requirements and range for each special-status species identified as having the potential to be affected by Project-related activities is provided in Appendix E. Table 3.4-1 summarizes those species and the California Wildlife Habitat Relationship vegetative communities or other habitat or land cover types within the study area that provide suitable habitat for them. California Wildlife Habitat Relationship vegetation communities, other habitats, and land cover types in the study area include the following: habitats or land cover types that are not California Wildlife Habitat Relationship vegetation communities are indicated with an asterisk (*):

- Annual Grassland (AGS)
- Blue Oak-Foothill Pine (BOP)
- Blue Oak Woodland (BOW)
- Cropland (CRP)
- Deciduous Orchard-Vineyard (DOR)
- Developed (DEV)*
- Disturbed/Ruderal (DRD)*
- Irrigated Row and Field Crops (IRF)
- Mixed Chaparral (MCH)
- Montane Hardwood-Conifer (MHC)
- Non-native Woodland (NNW)*
- Pasture (PAS)
- Ponderosa Pine (PPN)

- Valley Oak Woodland (VOW)
- Valley Foothill Riparian (VRI)
- Wetlands and other Aquatic Habitats (WET)*

Table 3.4-1. Special-status Species with the Potential to Occur in the Study Area and their Associated Habitats

Scientific Name	Common Name	USFWS/ NMFS	CDFW	CRPR	Habitat Associations[a]
Plants					
Allium jepsonii	Jepson's onion	None	None	1B.2	BOP, MCH, MHC
Astragalus tener var. ferrisiae	Ferris' milk-vetch	None	None	1B.2	AGS, PAS
Balsamorhiza macrolepis	big-scale balsamroot	None	None	1B.2	AGS, BOP, BOW, MCH, MHC, PAS, PPN, VOW
Brasenia schreberi	watershield	None	None	2B.3	WET
Campylopodiella stenocarpa	flagella-like atractylocarpus	None	None	2B.2	BOP, BOW, DRD, MHC, PPN, VOW
Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	None	None	1B.2	BOP, BOW, MCH, MHC, PPN
Carex xerophila	chaparral sedge	None	None	1B.2	BOP, BOW, MCH, MHC, PPN
Castilleja rubicundula var. rubicundula	pink creamsacs	None	None	1B.2	AGS, BOP, BOW, MCH, MHC, PAS, PPN, VOW
Clarkia gracilis ssp. Albicaulis	white-stemmed clarkia	None	None	1B.2	BOP, BOW, MCH, MHC, PPN
Clarkia mildrediae ssp. Mildrediae	Mildred's clarkia	None	None	1B.3	BOP, BOW, MHC, PPN
Clarkia mosquinii	Mosquin's clarkia	None	None	1B.1	BAR, BOP, BOW, MHC, MHW, PPN
Cryptantha crinita	silky cryptantha	None	None	1B.2	BOP, BOW, VOW, VRI
Delphinium recurvatum	recurved larkspur	None	None	1B.2	AGS, BOP, BOW, MCH, MHC, PAS, PPN, VRI, VOW
Eremogone cliftonii	Clifton's eremogone	None	None	1B.3	BOP, MCH, MHC, PPN
Eriogonum umbellatum var. ahartii	Ahart's buckwheat	None	None	1B.2	BOP, BOW, MCH, MHC, PPN
Erythranthe filicifolia	fern-leaved monkeyflower	None	None	1B.2	BOP, MCH, MHC, PPN
Euphorbia hooveri	Hoover's spurge	FT	None	1B.2	AGS, PAS, WET
Fritillaria pluriflora	adobe-lily	None	None	1B.2	AGS, BOP, BOW, MCH, MHC, PAS, PPN, VRI, VOW
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	None	None	1B.2	PAS, WET
Imperata brevifolia	California satintail	None	None	2B.1	MCH, MHC, VRI, WET
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	None	None	1B.1	AGS, BOP, BOW, MCH, MHC, PAS, PPN, VRI, VOW, WET
Layia septentrionalis	Colusa layia	None	None	1B.2	AGS, BOP, BOW, MCH, MHC, PAS, PPN, VOW
Lewisia cantelovii	Cantelow's lewisia	None	None	1B.2	BOP, BOW, MCH, MHC, PPN
Limnanthes 115mission ssp. Californica	Butte County meadowfoam	FE	SE	1B.1	AGS, PAS, WET

Scientific Name	Common Name	USFWS/ NMFS	CDFW	CRPR	Habitat Associations[a]
Monardella venosa	veiny monardella	None	None	1B.1	AGS, BOP, BOW, MHC, PAS, PPN, VOW
Orcuttia pilosa	hairy Orcutt grass	FE	SE	1B.1	AGS, PAS, WET
Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	None	None	1B.2	BOP, BOW, MCH, MHC, PPN, VOW
Paronychia ahartii	Ahart's paronychia	None	None	1B.1	AGS, BOP, BOW, MHC, PAS, PPN, VRI, VOW, WET
Poa sierrae	Sierra blue grass	None	None	1B.3	BOP, MHC, PPN
Rhynchospora californica	California beaked-rush	None	None	1B.1	BOP, MHC, MRI, PPN, VRI, WET
Rhynchospora capitellata	brownish beaked-rush	None	None	2B.2	BOP, MHC, MRI, PPN, VRI, WET
Rupertia hallii	Hall's rupertia	None	None	1B.2	BOP, BOW, DRD, MHC, PPN
Sagittaria sanfordii	Sanford's arrowhead	None	None	1B.2	WET
Sedum albomarginatum	Feather River stonecrop	None	None	1B.2	BOP, MCH, MHC, PPN
Sidalcea robusta	Butte County checkerbloom	None	None	1B.2	BOP, BOW, MCH, MHC, PPN
Stuckenia filiformis ssp. Alpina	slender-leaved pondweed	None	None	2B.2	WET
Trifolium jokerstii	Butte County golden clover	None	None	1B.2	AGS, PAS, WET
Tuctoria greenei	Greene's tuctoria	FE	SR	1B.1	AGS, PAS, WET
Wolffia brasiliensis	Brazilian watermeal	None	None	2B.3	WET
Invertebrates					
Bombus crotchii	Crotch bumble bee	None	SCE	---	AGS, MCH
Bombus occidentalis	western bumble bee	None	SCE	---	AGS, DEV, DRD, MCH
Branchinecta conservatio	Conservancy fairy shrimp	FE	None	---	AGS, PAS, WET
Branchinecta lynchi	vernal pool fairy shrimp	FT	None	---	AGS, PAS, WET
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	FT	None	---	AGS, VRI
Lepidurus packardi	vernal pool tadpole shrimp	FE	None	---	AGS, PAS, WET
Fish					
Cottus gulosus	riffle sculpin	None	None	---	WET
Mylopharodon conocephalus	hardhead	None	SSC	---	WET
Oncorhynchus mykiss irideus (pop. 11)	steelhead (Central Valley Distinct Population Segment)	FT	None	---	WET
Oncorhynchus tshawytscha (pop. 6)	chinook salmon (Central Valley spring-run Evolutionary Significant Unit)	FT	ST	---	WET
Amphibians					
Rana boylii	foothill yellow-legged frog	None	None	—	VRI, WET

Scientific Name	Common Name	USFWS/ NMFS	CDFW	CRPR	Habitat Associations[a]
Rana draytonii	California red-legged frog	FT	SSC	—	AGS, MCH, MHC, PPN, WET
Spea hammondii	western spadefoot	None	SSC	---	AGS, BOP, BOW, PAS, WET
Reptiles					
Actinemys marmorata	western pond turtle	None	SSC	---	VRI, WET
Phrynosoma blainvillii	Blainville's horned lizard	None	SSC	---	AGS, BOP, BOW, MCH, MHC, PPN, VRI, VOW
Thamnophis gigas	giant garter snake	FT	ST	---	IRF, VRI
Birds					
Accipiter gentilis	northern goshawk	None	SSC	—	BOP, PPN
Agelaius tricolor	tricolored blackbird	None	ST, SSC	---	AGS, CRP, PAS, VRI
Aquila chrysaetos	golden eagle	None	SFP	—	AGS, BOP, MHC, PAS
Antigone canadensis tabida	greater sandhill crane	None	ST, SFP	—	AGS, CRP, IRF, PAS
Asio otus	long-eared owl	None	SSC	—	BOP, MHC, PPN, VRI
Athene cunicularia	burrowing owl	None	SSC	---	AGS, CRP, DRD, IRF, PAS
Buteo swainsoni	Swainson's hawk	None	ST	---	AGS, BOW, CRP, DRD, PAS, VRI, VOW
Circus hudsonius	northern harrier	None	SSC	---	AGS, CRP, IRF, PAS, WET
Elanus leucurus	white-tailed kite	None	SFP	—	AGS, BOP, BOW, CRP, PAS, VRI, VOW
Falco peregrinus anatum	American peregrine falcon	None	SFP	---	BOP, DEV, MHC, PPN
Haliaeetus leucocephalus	bald eagle	None	SE	—	MHC, PPN, VRI, WET
Icteria virens	yellow-breasted chat	None	SSC	---	VRI
Lanius ludovicianus	loggerhead shrike	None	SSC	---	AGS, BOW, CRP, PAS, VOW
Laterallus jamaicensis coturniculus	California black rail	None	ST, SFP	---	PAS, WET
Progne subis	purple martin	None	SSC	---	MHC, VRI
Setophaga petechia	yellow warbler	None	SSC	—	MHC, VRI
Strix occidentalis	California spotted owl	None	SSC	—	MHC, PPN
Mammals					
Antrozous pallidus	pallid bat	None	SSC	—	AGS, BOP, BOW, DEV, MCH, MHC, PPN, VRI, VOW
Corynorhinus townsendii	Townsend's big-eared bat	None	SSC	—	AGS, BOP, BOW, DEV, MCH, MHC, PPN, VRI, VOW
Eumops perotis	western mastiff bat	None	SSC	—	AGS, BOP, BOW, DEV, MCH, MHC, PPN, VOW
Lasiurus blossevillii	western red bat	None	SSC	---	AGS, BOP, BOW, DEV, MCH, MHC, PPN, VRI, VOW
Taxidea taxus	American badger	None	SSC	—	AGS, BOP, MCH

[a] Associations are derived from detailed habitat description in species table (Appendix E, Attachment 3).

Habitat acronyms are defined in text above. *Habitat is not a California Wildlife Habitat Relationship vegetation community.

Notes: FE = federal endangered; FT = federal threatened; FC = federal candidate; SE = state endangered; ST = state threatened; FP = fully protected; SSC = species of special concern; SR = state rare; CRPR = California Rare Plant Rank; 1B = plants rare, threatened, or endangered in California and elsewhere; 2B = plants rare, threatened, or endangered in California, but more common elsewhere

3.4.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on biological resources. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.4.2.1 Federal

Endangered Species Act

The Endangered Species Act provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code [USC] Sections 1531–1544).

Endangered Species Act Section 7(a)(1) requires federal agencies to use their authority to further the conservation of listed species. Endangered Species Act Section 7(a)(2) requires consultation with the USFWS or the NMFS if a federal agency undertakes, funds, permits, or authorizes any action that may impact endangered or threatened species or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and that lack a federal nexus, a Section 10(a)(1)(b) incidental take permit may be obtained from USFWS and/or NMFS.

The Proposed Project will be held to the requirement under the Endangered Species Act.

Clean Water Act

The Federal Water Pollution Control Act of 1948 was the first major United States law to address water pollution. Upon sweeping amendments made in 1972, the law became commonly known as the CWA (33 USC Section 1251). The CWA established the structure for regulating discharge of pollutants into waters of the United States and regulating quality standards for surface waters.

CWA Section 404 (33 USC Section 1344) enables regulation of the discharge of dredged or fill material into waters of the United States, including wetlands. To comply with CWA Section 404, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any unavoidable impacts.

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants, waives or denies CWA Section 401 certification. Decisions made by states or tribes are based on the proposed project's compliance with USEPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the SWRCB is the primary regulatory authority for CWA Section 401 requirements.

The Proposed Project will be held to the permitting requirements under this act.

Section 14 of the Rivers and Harbors Appropriation Act of 1899, Section 408

Under Section 408 (33 USC Section 408), any use or alteration of a Civil Works project is subject to the approval of USACE. This requirement was established in Section 14 of the Rivers and Harbors Act of 1899. Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project.

The Proposed Project will be held to the requirements under Section 408.

Magnuson-Stevens Fishery Conservation and Management Act

Magnuson-Stevens Act of 1976 (revised in 1996 and reauthorized 2007) is the primary law governing marine fisheries management in federal waters. Under the act, federal agencies that fund, permit, or carry out activities that may adversely impact Essential Fish Habitat (EFH) or Habitat Areas of Particular Concern (HAPCs) are required to consult with NMFS regarding the potential adverse effects of Project activities, as well as respond in writing to NMFS Project-specific recommendations.

The Proposed Project will be held to the principles set forth by this act.

Migratory Bird Treaty Act of 1918

Migratory birds are protected under the Migratory Bird Treaty Act of 1918 (MBTA; 16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21).

The Proposed Project will be held to the requirements under this act.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (16 USC Sections 668–668c) prohibits anyone, without a permit issued by the Secretary of the Interior, from “taking” bald or golden eagles, including their parts (feathers, nests, or eggs). This act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.” Regulations for permitting take of bald eagles or golden eagles (50 CFR 22) provide permits for "the taking, possession, and transportation within the United States of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) and their parts, nests, and eggs for scientific, educational, and depredation control purposes; for the religious purposes of American Indian tribes; and to protect other interests in a particular locality. This part also governs the transportation into or out of the United States of bald and golden eagle parts for scientific, educational, and Indian religious purposes." The USFWS issues and maintains permits for eagle take.

The Proposed Project will be held to the requirements under this act.

Executive Order 13112

Executive Order (EO) 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. As part of the proposed action, USFWS and USACE will issue permits and, therefore, will be responsible for ensuring that the proposed action complies with EO 13112 and does not contribute to the spread of invasive species.

The Proposed Project will be held to the principles of EO 13112.

Executive Order 11990

EO 11990 (42 Federal Register [FR] 26961) requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands.

The Proposed Project will be held to the principles of EO 11990.

3.4.2.2 State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW is responsible for maintaining a list of endangered and threatened species (FGC Section 2070). Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present and determine whether the proposed project would have a potentially significant impact on such species.

Proposed project-related impacts on species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from CDFW will be in the form of an incidental take permit.

The Proposed Project will be held to requirements under this Act.

California Fish and Game Code – Native Plant Protection Act

The Native Plant Protection Act (FGC Sections 1900–1913) prohibits the taking, possession, or sale within the state of any plants with a state designation of rare, threatened, or endangered as defined by CDFW. Project impacts on these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

The Proposed Project will be held to the requirements of the Native Plant Protection Act.

California Fish and Game Code – Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act (FGC Sections 2800–2835) is also intended to protect special status species and their habitat by establishing natural community conservation plans to conserve and manage natural biological diversity within the plan area while allowing compatible and appropriate economic development, growth, and other human uses.

The Proposed Project will be held to the requirements of the Natural Community Conservation Planning Act.

California Fish and Game Code Sections 3503 and 3503.5

FGC Sections 3503 and 3503.5 provide regulatory protection to resident and migratory birds and all birds of prey within the state of California, including the prohibition of the taking of nests and eggs, unless otherwise provided for by the FGC.

The Proposed Project will be held to the requirements of Sections 3503 and 3503.5.

California Fish and Game Code – Fully Protected Species

California statutes afford fully protected status to several specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit. FGC Section 3505 makes it unlawful to take "any aigrette or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird". FGC Section 3511 protects from take the following fully protected birds: (1) American peregrine falcon (*Falco peregrinus anatum*); (2) brown pelican (*Pelecanus occidentalis*); (3) California black rail (*Laterallus jamaicensis coturniculus*); (4) California clapper rail (*Rallus longirostris obsoletus*); (5) California condor (*Gymnogyps californianus*); (6) California least tern (*Sterna albifrons browni*); (7) golden eagle (*Aquila chrysaetos*); (8) greater sandhill crane (*Grus canadensis tabida*); (9) light-footed clapper rail (*Rallus longirostris levipes*); (10) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (11) trumpeter swan (*Cygnus buccinator*); (12) white-tailed kite (*Elanus leucurus*); and (13) Yuma clapper rail (*Rallus longirostris yumanensis*).

FGC Section 4700 identifies the following fully protected mammals that cannot be taken: (1) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (2) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (*Ovis canadensis* ssp.); (3) Guadalupe fur seal (*Arctocephalus townsendi*); 4) ring-tailed cat (*Bassariscus* sp.); (4) Pacific right whale (*Eubalaena*); (5) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (6) southern sea otter (*Enhydra lutris nereis*); and (7) wolverine (*Gulo gulo*).

FGC Section 5050 protects from take the following fully protected reptiles and amphibians: (1) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (2) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); (3) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); (4) limestone salamander (*Hydromantes brunus*); and (5) black toad (*Bufo boreas exsul*).

FGC Section 5515 identifies certain fully protected fish that cannot lawfully be taken, even with an incidental take permit. The following species are protected in this fashion: (1) Colorado River squawfish (*Ptychocheilus*); (2) thicktail chub (*Gila crassicauda*); (3) Mohave chub (*Gila mohavensis*); (4) Lost River sucker (*Catostomus luxatus*); (5) Modoc sucker (*Catostomus microps*); (6) shortnose sucker (*Chasmistes brevirostris*); (7) humpback sucker (*Xyrauchen texanus*); (8) Owens River pupfish (*Cyprinoden radiosus*); (9) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (10) rough sculpin (*Cottus asperrimus*).

The Proposed Project will be held to FGC's requirements related to fully protected species.

California Wetlands and Other Policies

The California Natural Resources Agency and its various departments, which includes CDFW and the California Department of Water Resources (DWR), do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine, or inland wetlands. Exceptions may be granted if all the following conditions are met:

- The project is water dependent.
- No other feasible alternative is available.
- The public trust is not adversely affected.
- Adequate compensation is proposed as part of the project.

The Proposed Project will be held to the policies of the California Natural Resources Agency and its various departments.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented by the SWRCB at the state level and the regional water boards within the nine regions designated. The regional water boards carry out planning, permitting, and enforcement activities related to water quality in California. The regional water boards are responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements or conditional waivers to waste discharge requirements. Waste discharge requirements are required by the regional water boards for activities that may affect water quality.

The Proposed Project will be held to the requirements of this act.

Clean Water Act Section 401 Water Quality Certification

A CWA Section 401 water quality certification is required for activities that require CWA Section 404 permits issued by USACE. As mentioned above, the SWRCB has primary regulatory authority for CWA Section 401 requirements for protecting water resources. Enforcement of these requirements is also handled by the nine regional water boards depending upon location of the potential impacts. The RWQCB will be responsible for CWA Section 401 for this project.

The Proposed Project will be held to the permit requirements under CWA Section 404.

California Native Plant Society

The CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level concerning extinction. These data are used by the CNPS to create and maintain a list of native California plants that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021). Potential impacts on populations of CNPS-listed plants receive consideration under CEQA review.

The Proposed Project will be held to the standards set forth by CNPS.

3.4.2.3 Regional and Local

Town of Paradise Code of Ordinances

Chapter 8.12, Felling, Removal, Destruction, Damaging and Replacement of Trees, of the Town of Paradise Code of Ordinances intends to limit the indiscriminate destruction of healthy trees, preserve natural beauty, maintain healthy forests, and promote proper tree management through education. This section of the code prohibits felling of any qualifying trees without a permit. Certain activities are exempt from the tree felling permit program including the reparation, maintenance, or installation of service lines (Code of Ordinances 8.12.090) and the establishment of a Town-funded capital improvement project (Code of Ordinances 8.12.090). Tree felling permits may be issued to accommodate certain activities including the repair or installation of a Town-authorized wastewater treatment and disposal system (Code of Ordinances 8.12.090).

The Proposed Project will be held to the requirements of the Town of Paradise Code of Ordinances.

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to biological resources that are relevant to the Proposed Project:

- **Policy OCEP-15**: Existing, significantly important natural habitat areas having high value for birds and other wildlife should be preserved for future generations through careful land use planning and public participation.
- **Policy OCEP-16**: Area fisheries shall be protected, and the cooperation of responsible agencies shall be sought to assure minimum stream flow and restore fisheries.

The Proposed Project will be held to the policies in the *Town of Paradise General Plan*.

Town of Paradise Tree Preservation Ordinance

The Town of Paradise Tree Preservation Ordinance (Chapter 8.12 of the Town's municipal code) intends to limit the indiscriminate destruction of healthy trees, preserve natural beauty, maintain healthy forests, and promote proper tree management through education. This section of code prohibits felling of any qualifying trees without a permit. Certain activities are exempt from the tree felling permit program including the reparation, maintenance, or installation of service lines and the establishment of a town-funded capital improvement project. Tree felling permits may be issued to accommodate certain activities including the repair or installation of a town-authorized wastewater treatment and disposal system.

The Proposed Project will be held to the requirements of the Town of Paradise Tree Preservation Ordinance.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to biological resources that are relevant to the Proposed Project:

- **Policy COS-P7.3**: Creeks shall be maintained in their natural state whenever possible, and creeks and floodways shall be allowed to function as natural flood protection features during storms.
- **Policy COS-P7.4**: New development projects shall mitigate their impacts in habitat areas for protected species through on- or off-site habitat restoration, clustering of development, and/or project design and through the provisions of the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) within the HCP/NCCP Planning Area, upon the future adoption of the HCP/NCCP.
- **Policy COS-P7.5**: No new development projects shall occur in wetlands or within significant riparian habitats, except within the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) Planning Area where such development is consistent with the conditions of the HCP/NCCP, upon the future adoption of the HCP/NCCP.
- **Policy COS-P7.6**: New development projects shall include setbacks and buffers along riparian corridors and adjacent to habitat for protected species, except where permitted in the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP)

Planning Area and where such development is consistent with the conditions of the HCP/NCCP, upon the future adoption of the HCP/NCCP.

- **Policy COS-P7.7**: Construction barrier fencing shall be installed around sensitive resources on or adjacent to construction sites. Fencing shall be installed prior to construction activities and maintained throughout the construction period.
- **Policy COS-P7.8**: Where sensitive on-site biological resources have been identified, construction employees operating equipment or engaged in any development-associated activities involving vegetation removal or ground disturbing activities in sensitive resource areas shall be trained by a qualified biologist and/or botanist who will provide information on the on-site biological resources (sensitive natural communities, special-status plant and wildlife habitats, nests of special-status birds, etc.), avoidance of invasive plant introduction and spread, and the penalties for not complying with biological mitigation requirements and other State and federal regulations.
- **Policy COS-P7.9**: A biologist shall be retained to conduct construction monitoring in and adjacent to all habitats for protected species when construction is taking place near such habitat areas.
- **Policy COS-P8.1**: Native plant species shall be protected and planting and regeneration of native plant species shall be encouraged, wherever possible, in undisturbed portions of development sites.
- **Policy COS-P8.4**: Introduction or spread of invasive plant species during construction of development projects shall be avoided by minimizing surface disturbance; seeding and mulching disturbed areas with certified weed-free native mixes; and using native, noninvasive species in erosion control plantings.
- **Policy COS-P9.1**: A biological resources assessment shall be required for any proposed development project where special-status species or critical habitat may be present. Assessments shall be carried out under the direction of Butte County. Additional focused surveys shall be conducted during the appropriate season if necessary. Upon adoption of the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP), assessment requirements of the HCP/NCCP shall be implemented for development projects within the HCP/NCCP area.
- **Policy COS-P9.2**: If special-status plant or animal species are found to be located within a development site, proponents of the project shall engage in consultation with the appropriate federal, State and regional agencies and mitigate project impacts in accordance with State and federal law. Upon adoption of the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP), mitigation requirements of the HCP/NCCP shall be implemented for development projects within the HCP/NCCP area. Examples of mitigation may include:

    - Design the proposed project to avoid and minimize impacts.
    - Restrict construction to specific seasons based on project-specific special-status species issues (e.g., minimizing impacts to special-status nesting birds by constructing outside of the nesting season).
    - Confine construction disturbance to the minimum area necessary to complete the work.

- Mitigate for the loss of special-status species by purchasing credits at an approved conservation bank (if a bank exists for the species in question), funding restoration or habitat improvement projects at existing preserves in Butte County, or purchasing or donating mitigation lands of substantially similar habitat.
- Maintain a minimum 100-foot buffer on each side of all riparian corridors, creeks and streams for special-status and common wildlife.
- Establish setbacks from the outer edge of special-status species habitat areas.
- Construct barriers to prevent compaction damage by foot or vehicular traffic.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to biological resources that are relevant to the Proposed Project:

- **Policy OS-1.1, Native Habitats and Species**: Preserve native species and habitat through land use planning, cooperation, and collaboration.
- **Policy OS-1.2, Regulatory Compliance**: Protect special-status plant and animal species, including their habitats, in compliance with all applicable state, federal and other laws and regulations.
- **Policy OS-2.5, Creeks and Riparian Corridors**: Preserve and enhance Chico's creeks and riparian corridors as open space for their aesthetic, drainage, habitat, flood control, and water quality values.
- **Policy OS-2.6, Oak Woodlands**: Protect oak woodlands as open space for sensitive species and habitat.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

City of Chico Tree Preservation Regulations

Chapter 16.66 Tree Preservation Regulations of Chico's municipal code requires that a tree removal permit be obtained from the director of the public works department before removing any trees within the city. This chapter of the code requires preparation of a tree protection plan that complies with the city's "Best Practices Technical Manual: Tree Preservation Measures" prior to the issuance of demolition permits, grading permits, building permits, use permits, planned development permits, or parcel or tentative subdivision maps.

The Proposed Project will be held to the requirements of Chico's Tree Preservation Regulations.

3.4.3 Method of Analysis

This section describes the methods used to analyze biological resources impacts within the study area.

3.4.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on biological resources if it would:

- **Impact BIO-1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations, or by the CDFW or USFWS
- **Impact BIO-2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- **Impact BIO-3:** Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means
- **Impact BIO-4:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- **Impact BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- **Impact BIO-6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

3.4.3.2 Approach to Analysis

Construction, Operation, and Maintenance

Biological impacts were evaluated qualitatively using data collected from the literature review, biological resources assessment, habitat mapping (including mapping of elderberry shrubs), aquatic resources preliminary assessment, and protocol Swainson's hawk surveys. When information about the presence of a particular special-status species is unknown, but suitable habitat is present, then the impact analysis took a conservative approach by inferring presence of special-status species within the Project area. Impacts on specific biological resources are assessed considering the potential for the Proposed Project to impact special status or otherwise protected species, habitat, or migration corridors. These impacts may be direct or indirect, short-term or longer term. Mitigation measures are defined for those impacts found to be significant along with justification as to whether that measure would be expected to effectively offset the corresponding impact.

The analysis of environmental effects focuses on foreseeable changes to biological resources in the context of effects listed in Section 3.4.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

3.4.4 Impact Analysis

This section describes the potential effects on biological resources which could occur as a result of implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to impact sensitive communities and special-status plant and wildlife species in the study area. Excavation and ground disturbing activities as a result of these construction activities have the potential to impact biological resources in the study area. Open cutting in the roadway within 250 feet of vernal pools (as mandated by USFWS) could fracture the restrictive layer, resulting in effects on the subsurface

hydrology of vernal pools. Inadvertent fuel or chemical spills associated with the operation of construction vehicles and equipment could also impact aquatic resources in the study area.

3.4.4.1 Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

Construction

The species or species groups identified in the following subsections were determined to have the potential to be adversely affected by Proposed Project-related activities, either directly through habitat modifications or indirectly.

Special-Status Plant Species. As presented in Section 3.4.1.6, Special-Status Species, suitable habitat for up to 39 species of rare plants occurs within the study area. Although none of these species were observed during field studies to date, the potential exists for them to occur in the study area due to the presence of suitable habitat and nearby occurrence records. Because these 39 species of rare plants occupy a wide variety of habitats, some even occurring in disturbed/ruderal areas, impacts on special-status plant species were considered for all components of the Proposed Project.

If any special-status plants are present within the Proposed Project footprint, including construction access routes or temporary work areas, individuals may be impacted by compaction, trampling, removal, or degradation of habitat. Although suitable habitat for special-status plants would be limited within the disturbed paved Town and Butte County ROWs where most of the construction would occur, there are limited areas where the pipeline in the Export Pipeline System would have to cross over or be constructed adjacent to natural habitats (Appendix E). There is also the potential for special-status plants to occur in areas adjacent to the Proposed Project footprint, including construction access routes or temporary work areas, during construction of the Core Collection System and Extended Collection System, although these components would be less likely to impact these habitats because they would be within Town limits, where more disturbance has already occurred. The potential for impacts would be avoided as much as possible; however, ground disturbance associated with construction of the Core Collection System, Export Pipeline System, and Extended Collection System may result in adverse impacts on these species should they be present in areas proposed for disturbance. This would be considered a significant impact on special-status plants.

Mitigation. To minimize potentially significant impacts on special-status plant species during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1** through **MM-BIO-5** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint. During site preparation for any segment of the Core Collection System, Export Pipeline System, or Extended Collection System, ground disturbance and vegetation clearing footprints, including along construction access routes or at temporary work areas, will be reduced to the smallest area feasible. Prior to any ground disturbance, a qualified biologist hired by the Town will identify areas to be avoided during construction activities; these areas will be fenced and/or flagged as close to construction limits as feasible. This mitigation measure is coordinated with MM-BIO-2 but applies to all biological resources.

MM-BIO-2: Special-status Plant Surveys. Prior to initiating proposed ground disturbance or vegetation clearing, including along construction access routes or at temporary work areas, a qualified botanist will perform focused surveys to determine the presence or absence of special-status plant species with potential to occur in and adjacent to (within a radius of 100 feet, as prescribed by CDFW) proposed disturbance areas. These surveys will be conducted in accordance with CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018a), which requires rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Surveys will be scheduled to coincide with known flowering periods, and/or during appropriate developmental periods that are necessary to identify the plant species of concern. If special-status plants are identified during surveys, then **MM-BIO-3** will be implemented.

MM-BIO-3: Special-status Plant Avoidance. If any special-status plant species are found within 100 feet of ground disturbance or vegetation clearing areas, including construction access routes or temporary work areas, during **MM-BIO-2**, the following will be implemented:

- Any special-status plant species that are identified within 100 feet of proposed ground disturbance or vegetation clearing areas, including construction access routes or temporary work areas, but are not proposed to be disturbed (that is, the area doesn't need to be cleared for construction), will be protected by flagging, signage, orange plastic fence, and/or silt fence, as appropriate based on site conditions, to limit the effects of activities and material stockpiles on special-status plant species.
- If activities could result in the loss of greater than 10 percent of a population identified during surveys or occupied habitat for a special-status plant species, a mitigation plan will be developed and implemented by a qualified biologist for the Town that will include a program to transplant, salvage, cultivate, and reestablish the species at suitable sites (if feasible); means and methods to propagate affected special-status plants through vegetative or reproductive means (for example, harvesting of seed or seed bank through topsoil collection, salvaging and transplanting or collecting of cuttings), as appropriate for the species, and transplant at suitable receiving sites as close to the existing population as possible. The plan will be approved by CDFW and any other agencies with jurisdiction over the species found to be present prior to implementation of the plan and before initiation of any construction related activities. Propagation and transplantation will occur prior to initiation of the activity. The receiving location will be evaluated and chosen based on similarity to conditions at the transplant source location. Site conditions to consider when choosing a receiving site will include aspect, substrate, hydrology, associated species, and canopy cover. The transplanted plants will be monitored by a qualified biologist for the Town for at least 1 year following transplantation. As part of the mitigation plan, a monitoring plan will be developed and approved by CDFW with propagation goals tailored to the species that are being transplanted. If propagation goals are not met after 1 year following transplantation, then adaptive management strategies will be developed in coordination with CDFW to achieve those goals.
- The actual level of mitigation may vary depending on the sensitivity of the species, its prevalence in the area, the location of the occurrence, and the current state of knowledge about overall population trends and threats to its survival; however, at a minimum, the species and

habitat will be replaced at a 1:1 ratio (individuals or acreage of occupied habitat). Ratios will be developed in coordination with and approved by CDFW.

MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training. A qualified biologist will monitor construction activities that could potentially cause significant impacts on sensitive biological resources. The amount and duration of monitoring will depend on the activity and will be determined by a qualified biologist for the Town. Monitoring will be required at any location where special status species have been identified within 100 feet of vegetation clearing area. In addition, a qualified biologist will be retained by the Town to conduct mandatory contractor/worker awareness training for construction personnel to brief them on the identified location of sensitive biological resources, including how to identify species (visual and auditory) most likely to be present, the need to avoid impacts on biological resources (e.g., plants, wildlife, and jurisdictional waters), and on the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the Project, the contractor will ensure that they receive the mandatory training before starting work. This mandatory training will be included in all contractor construction documentation as special conditions and will be enforceable as contract provisions. This measure will apply to any biological resources for which complete avoidance cannot be attained through **MM-BIO-1** or resource-specific measures.

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control. Following construction of the Core Collection System, Export Pipeline System, or Extended Collection System, all exposed and/or disturbed areas resulting from ground disturbing activities, including construction access routes or temporary work areas, will be returned to their original contour and grade, and restored using locally native grass and forb seeds, plugs, or a mix of the two. Areas will be seeded with species appropriate to their topographical and hydrological character and covered with broadcast straw and/or jute netted, as appropriate for specific habitat type. For example, temporarily disturbed wetlands will be seeded with native hydrophytic species typical to the region, whereas upland areas will be seeded with an upland grass and forb mix. Several invasive and noxious weed species are known to occur in the study area, and 27 plant species classified by the California Invasive Plant Council as invasive were identified in the study area during field studies (Appendix E). In order to avoid the spread of invasive plant species in the study area, native species will be used for reseeding, and the Proposed Project will not allow any use of species listed as noxious weeds. Further, precautions will be taken to avoid the spread of invasive plant species. These include the inspection and cleaning of construction equipment and implementation of CDFW-approved eradication strategies should an invasion occur. This measure is focused on habitat, but applies to all biological resources (e.g., special status species dependent on specific habitat).

Significance after Mitigation. Implementation of **MM-BIO-1** will minimize impacts on special-status plant species through restriction of ground disturbance and vegetation clearing footprint. **MM-BIO-2** will determine whether special-status plants are present within 100 feet of proposed ground disturbance and vegetation clearing, including construction access routes and temporary work areas. If special-status plants are determined to be absent, no further mitigation is required; however, if special-status plants are determined to be present, implementation of **MM-BIO-3** will be required to confirm the location and extent of special-status plant populations and provide for biological oversight, such as fencing and flagging, of construction activities to minimize incidental impacts that could occur during

construction. As shown, if the Proposed Project is approved, implementation of the aforementioned mitigation measures will reduce impacts on special-status plants to a less than significant level.

Vernal Pool Crustaceans. Vernal pools were mapped in the study area during the aquatic resources preliminary assessment. Vernal pools in the study area could provide suitable habitat for previously analyzed special-status plants and three vernal pool crustaceans: vernal pool tadpole shrimp, vernal pool fairy shrimp, and Conservancy fairy shrimp. Protocol-level surveys for vernal pool crustaceans have not been performed to date in the study area; therefore, their presence is assumed due to the existence of suitable habitat and proximity of documented occurrences of vernal pool tadpole shrimp (1.5 miles), vernal pool fairy shrimp (4 miles), and Conservancy fairy shrimp (8 miles; CDFW 2021a).

Construction associated with the Proposed Project could result in impacts on vernal pool crustaceans, because multiple vernal pools are mapped within 250 feet of Skyway (the distance from ground disturbance that is mandated by USFWS for avoidance), and construction of the transition chamber, which involves open excavation, is proposed to take place between Skyway and Butte Creek in an area where vernal pools are known to be present. The extent and location of vernal pools is estimated conservatively due to a limitation of access during the aquatic resources preliminary assessment to the area between Skyway and Butte Creek and to other areas within 250 feet of Skyway where vernal pools are potentially present. However, due to their assumed presence for the reasons described above, impacts on vernal pool crustaceans could be significant.

Mitigation. To minimize potentially significant impacts on vernal pool crustaceans during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1** and **MM-BIO-6** through **MM-BIO-8** will be implemented.

MM-BIO-6: No Net Loss of Aquatic Resources. No net loss of aquatic resources would be achieved through impact avoidance, minimization, which are both covered under MM-BIO-1 through MM-BIO-4, and/or compensatory mitigation. Mitigation for permanent impacts on aquatic resources will be provided at a minimum 1:1 ratio. Mitigation will be achieved through onsite restoration, in-lieu fee payment, or purchase of mitigation credits at a USACE-, USFWS-, and/or CDFW-approved mitigation bank at the expense of the Town. Mitigation, as required in regulatory permits issued through CDFW, USACE, USFWS, and/or the RWQCB will be applied to satisfy this measure.

MM-BIO-7: Sensitive Community Fencing. If sensitive communities occur within 100 feet (250 feet for vernal pools as mandated by USFWS) of proposed ground disturbing activities, including construction access routes and temporary work areas, with no pre-existing barrier between them and the proposed ground disturbance, protective fencing, such as silt fencing, will be installed between habitats that are to be avoided and the construction limits to prevent accidental disturbance and to protect water quality during construction.

MM-BIO-8: Dry Work Areas. Ground disturbing activities within 100 feet (250 feet for vernal pools) of aquatic resources will coincide with the driest time of year and will avoid occurring within 72 hours (before or after) a rain event, if feasible.

Significance after Mitigation. Implementation of **MM-BIO-1** will minimize impacts on special-status species through restriction of ground disturbance and the vegetation clearing footprint. If mapping

efforts completed after final design and with full site access find that vernal pools are absent, no further mitigation is required; however, if vernal pools are present, implementation of **MM-BIO-6** through **MM-BIO-8** will provide for biological oversight of construction activities, require mitigation for the permanent loss of vernal pool habitats at a minimum of 1:1 ratio, minimize adverse impacts resulting from sedimentation and erosion during construction, and demarcate vernal pools that need to be avoided by construction activities to minimize incidental impacts that could occur during construction. As shown, if the Proposed Project is approved, implementation of the aforementioned mitigation measures would reduce impacts on vernal pool habitat and vernal pool crustaceans to a less than significant level.

Valley Elderberry Longhorn Beetle. Elderberry mapping in the study area took place as part of the field studies in Spring 2021. Elderberry shrubs were noted in two locations in the study area: where the pipeline crosses Little Chico Creek at Taffee Avenue, and on the west bank of Butte Creek (which the Butte Creek HDD crossing would pass under). Construction associated with the Proposed Project may result in direct (elderberry shrub loss) or indirect (soil compaction, fugitive dust, etc.) impacts on elderberry shrubs, and potentially valley elderberry longhorn beetle, should elderberry shrubs be present within 165 feet of ground disturbance and/or vegetation clearing areas (in accordance with *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* [USFWS 2017]). For the purposes of this analysis, this impact is considered significant.

Mitigation. To minimize potentially significant impacts on the valley elderberry longhorn beetle during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1** and **MM-BIO-9** through **MM-BIO-14** will be implemented.

MM-BIO-9: Mapping of Elderberry Shrubs and USFWS Section 7 Consultation. If Proposed Project impacts, including along construction access routes and temporary work areas, are to take place within 165 feet of a riparian corridor where elderberry shrubs are known to be present, then a full inventory of elderberry shrubs within 165 feet of the proposed disturbance, including an assessment of whether valley elderberry longhorn beetle exit holes are present, will be conducted pursuant to the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017). Based on the inventory findings, the Town and USFWS will coordinate to determine whether formal consultation is required for the Project. If formal consultation is deemed required, results of the inventory will be submitted by the Town in a Biological Assessment to USFWS. USFWS will review proposed findings and mitigation, and respond in a Biological Opinion, which will finalize elderberry mitigation that will be required of the Town for the Proposed Project.

MM-BIO-10: No Net Loss of Elderberry Shrubs. Elderberry shrubs that would be directly impacted by the Proposed Project will be transplanted to a new suitable location. In addition, two credits would be purchased at a USFWS-approved bank for each shrub (2:1 ratio). Mitigation as required in regulatory permits issued through USFWS may be applied to satisfy this measure.

MM-BIO-11: Elderberry Transplanting. Elderberry shrubs would be transplanted outside the flight season of the valley elderberry longhorn beetle (March to July) and follow the most current version of the American National Standards Institute A300 (Part 6) guidelines for transplanting (http://www.tcia.org/). Exit-hole surveys would be completed immediately before transplanting. The

number of exit holes found, GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted would be reported to USFWS. A qualified biologist hired by the Town will be on site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures and other conservation measures. The transplanted shrubs will be monitored by a qualified biologist during one growth season following transplant to confirm shrub survival. If the shrub(s) are deemed alive, no further monitoring or action would be necessary. If the shrub(s) are deemed dead, an additional one credit per shrub would be purchased by the Town from a USFWS-approved bank for valley elderberry longhorn beetle.

MM-BIO-12: Avoidance Areas. Activities that may indirectly damage or kill an elderberry shrub (trenching, paving, etc.) will require an avoidance area of at least 20 feet from a shrub's drip line, as appropriate, depending on the type of activity. All activities that could occur within 165 feet of an elderberry shrub will also be conducted outside of the flight season of the valley elderberry longhorn beetle (March to July).

MM-BIO-13: Chemical Use. Herbicides will not be used within the drip line of the shrub. Insecticides will not be used within 98 feet (30 meters, as required by USFWS) of an elderberry shrub. If deemed necessary, all chemicals will be applied using a backpack sprayer or similar direct application method.

MM-BIO-14: Mowing. Mechanical weed removal within the drip line of the shrub would be limited to the season when adult- valley elderberry longhorn beetles are not active (August to February) and will be completed so as to not damage an elderberry shrub.

Significance after Mitigation. Implementation of **MM-BIO-1** would minimize impacts on special-status species through restriction of ground disturbance and vegetation clearing footprint. **MM-BIO-9** would evaluate the potential for elderberry to be present within 165 feet of areas proposed for ground disturbance and vegetation clearing. If **MM-BIO-9** determines elderberry shrubs would be directly or indirectly affected by Project activities, then **MM-BIO-10** through **MM-BIO-14** would be implemented through compensatory mitigation, transplanting of shrubs, and avoidance. If the proposed Project is approved, implementation of the aforementioned mitigation measures would reduce impacts on valley elderberry longhorn beetle to a less than significant level.

Special-Status Fishes. The following special-status fish species occur or have potential to occur in the study area and were identified in the various special-status species queries: steelhead (Central Valley Distinct Population Segment), Chinook salmon (Central Valley spring-run Evolutionary Significant Unit), and hardhead (*Mylaphorodon conocephalus*). Steelhead and chinook salmon are known to be present in the study area in Butte Creek, while hardhead may be present in Butte Creek or Little Chico Creek.

Fish species in the study area are not likely to be affected by the Proposed Project since crossings of streams are to be carried out by HDD borings at least 20 feet below the creek bed and will not damage riparian habitat along edges of creek. However, there is potential for special-status fish species and other aquatic wildlife to be affected in the event of a frac-out, which is the unintentional or inadvertent loss of drilling fluids that could rise to the ground surface during an HDD installation. For the purposes of this analysis, this impact is considered significant.

Mitigation. To minimize potentially significant impacts on special-status fish species during construction of the Proposed Project to a less than significant level, mitigation measure **MM-BIO-15** will be implemented prior to initiation of ground disturbing and vegetation clearing activities.

MM-BIO-15: Frac-Out-Plan. Prior to construction, and included within the contractor construction documentation as special conditions, which will be enforceable as contract provisions, the Town will require that its contractor prepare an Inadvertent Release Plan to address inadvertent loss of inert drilling fluids in the event of a frac-out during HDD for each waterbody crossing. This plan will include Best Management Practices, monitoring, and contingency procedures, and will be developed, approved by a qualified biologist hired by the Town, and implemented by the contractor during construction to avoid or counteract potential impacts on water quality, fish, or other aquatic wildlife resulting from turbidity changes from the fluids.

Significance after Mitigation. Implementation of **MM-BIO-15** will minimize impacts on special-status fish species in the event of a frac-out and result in a less-than-significant finding.

Special-Status Amphibians and Reptiles. Special-status amphibians and reptiles that have the potential to occur in the study area include foothill yellow-legged frog, California red-legged frog, western pond turtle, and giant garter snake.

Implementation of the Proposed Project may result in potentially significant impacts on special-status amphibians and reptiles should suitable habitat and individuals be present in or adjacent to areas of proposed ground disturbing or vegetation clearing activities in association with construction of the Core Collection System, Export Pipeline System, and Extended Collection System. This would be considered a significant impact on special-status amphibians and reptiles.

Mitigation. To minimize potentially significant impacts on special-status amphibians and reptiles during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1, MM-BIO-6** through **MM-BIO-8**, and **MM-BIO-16** through **MM-BIO-20** will be implemented.

MM-BIO-16: Western Pond Turtle Visual Encounter Surveys. A preconstruction survey for western pond turtle would be conducted by a qualified biologist within 24 hours prior to the onset of any ground disturbing activities that would occur within 350 feet of the OHWM of a creek or stream. If juvenile or adult turtles are found within the survey area, they would be moved by a qualified and CDFW-permitted biologist hired by the Town at least 500 feet away from the proposed disturbance area to a location with similar habitat. If a turtle nest is found within the survey area, construction activities would not take place within 100 feet of the nest until the turtles have hatched or the eggs have been moved to an appropriate location. Any egg relocation would be conducted by a qualified and CDFW-permitted biologist in coordination with CDFW.

MM-BIO-17: Foothill Yellow-legged Frog Surveys. Within 3-5 days prior to working within 300 feet radius of the OHWM of a creek or stream within the foothill yellow-legged frog range, per CDFW guidelines, a qualified and CDFW-permitted biologist will survey the Proposed Project site for foothill yellow-legged frogs (adults, subadults, tadpoles or egg masses), including construction access routes and at least 500 feet upstream and downstream (CDFW 2018b). Although unlikely, if the Project activities are expected to result in effects extending beyond 500 feet downstream (e.g., heavy

sedimentation that could bury egg masses or tadpole rearing sites), the survey area will be expanded to encompass the expected affected area. If surface water is present during the work period, a qualified biologist hired by the Town will inspect the work area daily for foothill yellow-legged frogs before work begins and during construction.

MM-BIO-18: California Red-legged Frog Surveys. Within 3-5 days prior to working within 300 feet of the OHWM of a creek or within 300 feet of fresh emergent wetland habitat, a qualified and CDFW-permitted biologist will conduct a visual encounter survey of the Proposed Project site for California red-legged frogs (adults, subadults, tadpoles or egg masses).

MM-BIO-19: Conduct Construction Activities during the Active Period for Giant Garter Snakes. During biological monitoring (MM-BIO-4), the biologist will identify any suitable aquatic or upland habitat that may be used by giant garter snake within or adjacent to areas where ground disturbing and vegetation clearing activities would occur. All construction activity within 200 feet of suitable giant garter snake aquatic (generally defined as sloughs, irrigation ditches, creeks or slow-moving streams) or upland habitat (defined as grasslands or disturbed areas within 200 feet of an aquatic feature suitable for a giant garter snake) will be conducted during the snake's active period (May 1 through October 1) in order to minimize the risk that the snakes will be underground and more susceptible to injury or death from ground disturbing activities.

MM-BIO-20: Minimize Potential Effects on Giant Garter Snake Habitat. Staging areas will be located more than 200 feet from any suitable giant garter snake aquatic or upland habitat as identified during monitoring by the biologist, or the area will be fenced with exclusion fencing prior to the start of construction. Vegetation clearing within 200 feet of the banks of suitable giant garter snake aquatic habitat will be limited to the minimum area necessary. The movement of heavy equipment within 200 feet of the banks of suitable giant garter snake aquatic habitat will be confined to designated haul routes to minimize habitat disturbance.

Significance after Mitigation. Implementation of **MM-BIO-1** would minimize impacts on special-status species through restriction of ground disturbance. If areas within the species buffers discussed above of suitable habitat for these species will be avoided, then no further mitigation is required; however, if ground disturbing and vegetation clearing activities will occur within species buffer areas of suitable habitat, implementation of **MM-BIO-6** through **MM-BIO-8**, and **MM-BIO-16** though **MM-BIO-20** will provide for biological oversight of construction activities, implement construction BMPs to minimize adverse impacts resulting from sedimentation and erosion during construction, and protect western pond turtle nests, if found. As shown, if the Proposed Project is approved, implementation of the aforementioned mitigation measures will reduce impacts on special-status amphibians and reptiles to a less than significant level.

MBTA- and FGC- Protected Birds and Raptors. As a result of the queries and desktop review, the study area may provide nesting, wintering, and/or foraging habitat for several special-status bird and raptor species including golden eagle, Swainson's hawk, northern harrier, white-tailed kite, bald eagle, and loggerhead shrike. Swainson's hawk, northern harrier, and bald eagle were confirmed present in the study area during field studies in spring 2021. Swainson's hawk surveys conducted during those field studies revealed the presence of one nesting pair of Swainson's hawks within 0.5 mile of the

pipeline route (full results of the Swainson's hawk surveys are presented in Appendix F). The study area also may provide nesting, wintering, and/or foraging habitat for other migratory birds and raptors besides the special-status species identified in the database results provided in Appendix E, Attachment 3. All native breeding birds (except game birds during the hunting season), regardless of their listing status, are protected under FGC Section 3503.

Implementation of the Proposed Project may result in potentially significant impacts on MBTA- and FGC-protected migratory birds and raptors, either directly from incidental nest destruction, or indirectly through excessive noise, should suitable habitat and individuals be present in or adjacent to areas of proposed ground disturbing or vegetation clearing activities associated with construction of the Core Collection System, Export Pipeline System, and Extended Collection System. This would be considered a significant impact on MBTA- and FGC-protected migratory birds and raptors.

Mitigation. To minimize potentially significant impacts on migratory birds and raptors during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1**, **MM-BIO-21**, **MM-BIO-22**, and **MM-BIO-23** will be implemented.

MM-BIO-21: MBTA- and FGC-Protected Bird and Raptor Surveys. To the extent feasible, tree and vegetation clearing will be conducted outside the migratory bird nesting season (March 1 through August 31) in areas where the Town's biologist identifies potential nesting trees. However, if clearing and/or construction activities need to occur during the migratory bird nesting season in these locations, then preconstruction surveys to identify active migratory bird and/or raptor nests would be conducted by a qualified biologist within 14 calendar days prior to construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence or absence of active nest sites within the proposed impact area, including construction access routes with a 500-foot buffer, where feasible.

MM-BIO-22: Protocol Swainson's Hawk Surveys. In the year that construction of the Proposed Project is planned to be initiated, a qualified biologist will conduct protocol surveys for Swainson's hawk in and within 0.5-mile of all suitable habitat for the species in the Proposed Project footprint. These surveys will follow the protocol outlined in the Swainson's Hawk Technical Advisory Committee's *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (CDFW 2000). If any active Swainson's hawk nests are found, the biologist will determine an appropriately sized buffer around the nest in which construction activities will not be allowed to commence until which time the nest has been determined by the biologist to have reached the end of its cycle (fledged or failed). The size of the buffer will initially be 0.25-mile per CDFW standard requirements but may be reduced in certain circumstances based on the opinion of the biologist regarding observed sensitivity of the hawks to disturbance, visual screens between the nest and disturbance, and other factors.

MM-BIO-23: Nest Avoidance. If active nests of any MBTA- and FGC-protected bird species are identified within the survey areas, a no-disturbance buffer would be established for all active nest sites prior to commencement of any Proposed Project construction activities to avoid construction or access-related disturbances to migratory bird nesting activities. A no disturbance buffer is a zone in which Proposed Project-related activities (that is, vegetation removal, earth moving, noise generation, and

construction) cannot occur. The size of the no disturbance buffers would be determined by a qualified biologist based on the species, activities proposed near the nest, and topographic and other visual barriers.

Significance after Mitigation. Implementation of **MM-BIO-1** would minimize impacts on migratory birds and special-status raptors by reducing the area of disturbance to the smallest footprint feasible to avoid unnecessary encroachment into areas that may support migratory birds and special-status raptors. Additionally, implementation of **MM-BIO-21** and **MM-BIO-22** would minimize impacts on nesting birds by requiring preconstruction nesting surveys. Finally, implementation of **MM-BIO-23** would further minimize impacts on nesting birds by requiring nest avoidance. Implementation of the aforementioned mitigation measures would reduce impacts on these species to a less than significant level.

Special-Status Bats. Bats roost in a wide variety of habitats, including buildings, mines, under bridges, rock crevices, caves, under tree bark, and in snags. The Townsend's big-eared bat, pallid bat, western mastiff bat, and western red bat are all considered California species of special concern with potential to occur in the study area. These species may use a variety of habitats, such as riparian areas with hollow trees or trees with exfoliating bark and human-made structures throughout the study area, as well as in adjoining offsite areas, for roosting and foraging. The disturbance of active maternity roosts would affect the reproductive success of the species because young do not fly from the maternity roost until they reach several months in age (CDFW 2021b). Increased noise levels associated with the Proposed Project construction activity, especially in the areas of the Export Pipeline System near riparian areas, have the potential to disturb bat roosts, which would be considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts on special-status bats during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1** and **MM-BIO-24** will be implemented.

MM-BIO-24: Bat Surveys. Prior to implementation of Proposed Project-related activities in undisturbed portions of the Proposed Project site and in and around buildings or other human-made structures with recesses where bats could potentially roost, a qualified biologist will conduct a daytime site reconnaissance of the area. The biologist, focusing on buildings and other human-made structures or trees with cavities or exfoliating bark, would look for bats and bat signs including existing roost sites, bat guano deposits, and will listen for roosting bats. If the daytime survey does not identify the presence of potential bat roosts, no further mitigation is required. If potential roost sites are identified, an exit nighttime survey will be conducted to determine species of roosting bats, relative bat activity, and to estimate the number of individual bats. This nighttime survey may be an active or passive acoustic monitoring survey. If occupied bat roost sites are identified, appropriate spatial and temporal buffers, as defined by the Town's biologist based on experience with bat species, would be implemented to minimize impact on roosting bats during construction of the Project.

Significance after Mitigation. Implementation of **MM-BIO-1** would reduce the area of disturbance to the smallest footprint feasible to avoid unnecessary encroachment into areas that may be used as roosting sites by special-status bats. Additionally, implementation of **MM-BIO-24** would minimize

impacts on special-status bats by requiring preconstruction surveys for roosts and full avoidance is detected. As shown, if the Proposed Project is approved, implementation of the aforementioned mitigation measures would reduce impacts on special-status bats from a significant level to a less than significant level.

American Badger. Grassland and shrub communities in the study area may provide suitable foraging, movement, and denning habitat for the American badger. Although there are no recorded occurrences near the Proposed Project, American badgers are known to occur across most of the State and annual grasslands in the study area provide suitable habitat for this species. Due to the presence of suitable habitat for American badger, implementation of Proposed Project-related activities, especially ground disturbance associated with the Export Pipeline System in annual grassland habitat between Skyway and Butte Creek, may result in adverse impacts on this species should it be present, which would be considered a significant impact.

Mitigation. To minimize potentially significant impacts on American Badger during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1** and **MM-BIO-25** will be implemented.

MM-BIO-25: American Badger Detection Surveys. Within 14 days prior to implementation of Proposed Project-related activities in or adjacent to American badger habitat (annual grassland, mixed chaparral, and blue oak-foothill pine), a qualified biologist will determine if American badger dens are present within 500 feet of the proposed impact area, including construction access routes. If badger den(s) are observed, the following buffer distances, according to what type of den(s) the biologist determines it (them) to be, will be established prior to construction activities:

- potential den = 30 feet
- active (adults present) den = 250 feet
- natal (young present) den = 500 feet

Activities permitted within and the size of the no disturbance buffers may be adjusted based on an evaluation by the qualified biologist. The buffer would be imposed until a qualified biologist determines the den is inactive.

Significance after Mitigation. Implementation of **MM-BIO-1** would reduce the area of disturbance to the smallest footprint feasible to avoid unnecessary encroachment into areas that may be used by American badger. Additionally, implementation of **MM-BIO-25** would minimize impacts on American badger by requiring preconstruction den surveys and den avoidance. As shown, implementation of the aforementioned mitigation measures would reduce impacts on American badger to a less than significant level.

Operation and Maintenance

As discussed in Section 2.8, Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same

procedures and standards would apply. Operation and maintenance activities would be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced as noted above. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), making the potential to impact habitat suitable for special-status plant or wildlife species limited. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would result in less than significant impacts on special-status species.

Mitigation. No mitigation required.

3.4.4.2 Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

Construction

As mentioned in Section 3.4.1.5, Sensitive Communities, the Proposed Project study area includes valley foothill riparian habitat, aquatic resources including perennial channels, and essential fish habitat, which are all considered sensitive natural communities by the resource agencies.

The Proposed Project has been designed to minimize impacts on sensitive natural communities as construction activities would mostly occur in previously disturbed areas (within paved roads), and perennial channels are to be avoided by the use of HDD boring. However, inadvertent fuel or chemical spills associated with the operation of construction vehicles and equipment could result in a significant impact on aquatic resources in the study area.

Mitigation. To minimize potentially significant impacts on sensitive natural communities during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1** and **MM-BIO-5** through **MM-BIO-8** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Impact BIO-1 for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas (see Impact BIO-1 for description)

MM-BIO-6: No Net Loss of Aquatic Resources (see Impact BIO-1 for description)

MM-BIO-7: Sensitive Community Fencing (see Impact BIO-1 for description)

MM-BIO-8: Dry Work Areas (see Impact BIO-1 for description)

Significance after Mitigation. Implementation of **MM-BIO-1** would reduce the area of disturbance to the smallest footprint feasible to avoid unnecessary encroachment into sensitive habitat areas. Additionally, implementation of **MM-BIO-6** would provide that there is no net loss of aquatic resources, implementation of **MM-BIO-7** and **MM-BIO-8** would provide that sensitive communities would not be

degraded by erosion, sedimentation, or other harmful materials. This would be accomplished by restricting work in wetted areas, buffering and fencing off sensitive areas, and implementing standard BMPs. Following construction, implementation of **MM-BIO-5** would minimize adverse effects on sensitive communities because of Proposed Project-induced erosion and encroachment of invasive plants by requiring temporarily disturbed areas to be revegetated with native species. As shown, implementation of the aforementioned mitigation measures would reduce impacts on sensitive natural communities to a less than significant level.

Operation and Maintenance

As discussed in Section 2.8, Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities would be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced as noted above. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), making the potential to impact sensitive natural communities limited. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would result in less than significant on sensitive natural communities.

Mitigation. No mitigation required.

3.4.4.3 Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (Less than Significant Impact with Mitigation Incorporated)

Construction

The preliminary assessment of aquatic resources identified vernal pools and other aquatic features which may be State and/or federally protected wetlands in the study area. The Proposed Project has been designed to minimize impacts on sensitive aquatic resources as construction activities would mostly occur in previously disturbed areas (within paved roads), and perennial channels are to be circumvented by the use of HDD boring. However, multiple vernal pools are mapped within 250 feet of Skyway, and construction of the transition chamber involves opening an excavation area between Skyway and Butte Creek in an area where vernal pools are known to be present. Even if direct impacts on vernal pools are avoided, open cutting within 250 feet of vernal pools could fracture the restrictive layer resulting in indirect effects on the subsurface hydrology of vernal pools. Further, inadvertent fuel or chemical spills associated with the operation of construction vehicles and equipment could also impact aquatic resources in the study area. Any impacts on aquatic resources would be considered a significant impact.

Mitigation. To minimize potentially significant impacts on state or federally protected wetlands during construction of the Proposed Project to a less than significant level, mitigation measures **MM-BIO-1**, **MM-BIO-5** through **MM-BIO-8**, and **MM-BIO-26** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Impact BIO-1 for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas (see Impact BIO-1 for description)

MM-BIO-6: No Net Loss of Aquatic Resources (see Impact BIO-1 for description)

MM-BIO-7: Sensitive Community Fencing (see Impact BIO-1 for description)

MM-BIO-8: Dry Work Areas (see Impact BIO-1 for description)

MM-BIO-26: State or Federally Protected Wetlands Mitigation. Compensatory mitigation for temporary and permanent impacts on state and/or federally protected wetlands that cannot be avoided through other mitigation measures will be purchased by the Town at a minimum 1:1 ratio, as defined by USACE through the Section 404 permit. Mitigation might include onsite restoration approved by the USACE, in-lieu fee payment, or purchase of mitigation credits at a USACE approved mitigation bank. Mitigation as required in regulatory permits issued through the USACE and/or CDFW may be applied to satisfy this measure.

Significance after Mitigation. **MM-BIO-6** sets a minimum standard for no-net-loss of aquatic resources for future activities. In addition, impacts on aquatic resources which may be State and/or federally protected wetlands will be minimized to a less than significant level through the implementation of mitigation measures **MM-BIO-1** and **MM-BIO-5** through **MM-BIO-8**. To minimize the level of impact to a less than significant level, mitigation measure **MM-BIO-1** will be implemented prior to initiation of ground disturbing and vegetation clearing activities. To date, only a preliminary assessment of aquatic resources has been conducted for the Proposed Project due to the lack of access to areas away from the public roadway. Prior to initiation of ground disturbing activities, a more complete mapping of aquatic resources in these areas will be completed to support a formal jurisdictional delineation during the permitting phase of the Proposed Project. Should this more complete mapping effort find that there are vernal pools or other aquatic features which are State and/or federally protected wetlands present in or within 250 feet of proposed ground disturbance and/or vegetation clearing footprint(s), then **MM-BIO-6 through MM-BIO-8** will be implemented. Following construction, implementation of **MM-BIO-5** will minimize adverse effects on sensitive communities because of Proposed Project-induced erosion and encroachment of invasive plants by requiring temporarily disturbed areas to be revegetated with native species. In addition, **MM-BIO-26** will be implemented to minimize impacts on State and/or federally protected wetlands to a less than significant level. As shown, implementation of the aforementioned mitigation measures would reduce impacts on state or federally protected wetlands to a less than significant level.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example

during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities would be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced as noted above. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), making the potential to impact State and federally protected wetlands limited. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would result in less than significant on state and federally protected wetlands.

Mitigation. No mitigation required.

3.4.4.4 Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites (No Impact)

Construction, Operation, and Maintenance

A review of wildlife corridor data available in CDFW's California Natural Diversity Database QuickView Tool in BIOS 5 (CDFW 2021a) was performed for the Proposed Project to determine whether the study area is located in an Essential Connectivity Area. The review of these data indicated that a large swath of northern and central Butte County, including much of the study area between Paradise and Chico, is considered Essential Connectivity Area as a great deal of the landscape remains contiguous grassland, oak and pine woodland, and creek riparian corridors. Additionally, Butte Creek, Comanche Creek, and Little Chico Creek and their associated riparian corridors are important facilitators of aquatic and terrestrial wildlife movement.

The Proposed Project would not interfere with movement of any fish or wildlife species, because none of the Proposed Project components involve the introduction of any new permanent impermeable surface barriers to the landscape or waters. Most new infrastructure associated with the Proposed Project would be placed underground, and all perennial channels and their associated riparian zones are to be avoided via HDD installation of pipeline infrastructure. Any above-ground facilities would have a very limited footprint that would not interfere with wildlife movement. Further, none of the Project components would impede the use of wildlife nursery sites. Therefore, no impact would occur.

Mitigation. No mitigation required.

3.4.4.5 Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (No Impact)

Construction, Operation, and Maintenance

The *Butte County General Plan 2030* (Butte County 2012), *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008), and *Chico 2030 General Plan* (City of Chico 2017) include policies to protect water resources, wetland and riparian areas, fish and wildlife habitat, wildlife movement corridors, vegetation communities, open space for the preservation of natural resources,

threatened and endangered species, and aquatic habitats. Additionally, the general plans include specific measures to preserve and protect oak trees and oak woodlands. A review of the policies included in the *Butte County General Plan 2030, Town of Paradise General Plan,* and *Chico 2030 General Plan* resulted in the determination that the Proposed Project activities are consistent with these policies. Therefore, construction, operation, and maintenance of the Proposed Project will not conflict with any local policies or ordinances protecting biological resources, resulting in no impact.

Mitigation. No mitigation required.

3.4.4.6 Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (No Impact)

Construction, Operation, and Maintenance

The Proposed Project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. A portion of the study area overlaps with the Butte Regional Conservation Plan (BRCP), which as of summer 2021 had not been formally adopted, though it was in the final phase of development. Species analyzed and discussed in this document that are covered species under the BRCP include Hoover's spurge, Butte County meadowfoam, hairy Orcutt grass, Butte County checkerbloom, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Central Valley steelhead, Central Valley spring-run Chinook salmon, giant garter snake, western pond turtle, foothill yellow-legged frog, western spadefoot, tricolored blackbird, burrowing owl, California black rail, Swainson's hawk, and white-tailed kite. Proposed Project activities may be covered under the Waste and Wastewater Management Facility Permanent Development Projects component of the BRCP. However, these activities do not conflict with the BRCP, and no impact is anticipated.

Mitigation. No mitigation required.

3.4.5 Impacts Summary

Table 3.4-2 summarizes the biological resources impacts of the Proposed Project.

Table 3.4-2. Biological Resources Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Plant Species	SI	MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5	S/M

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Vernal Pool Crustaceans	SI	MM-BIO-1, MM-BIO-6, MM-BIO-7, MM-BIO-8	S/M
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Valley Elderberry Longhorn Beetle	SI	MM-BIO-1, MM-BIO-9, MM BIO-10, MM-BIO-11, MM BIO-12, MM-BIO-13, MM-BIO-14	S/M
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Fishes	SI	MM-BIO-15	S/M
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-status Amphibians and Reptiles	SI	MM-BIO-1, MM-BIO-6, MM-BIO-7, MM-BIO-8, MM-BIO-16, MM-BIO-17, MM-BIO-18, MM-BIO-19, MM-BIO-20	S/M
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: MBTA and FGC-Protected Birds and Raptors	SI	MM-BIO-1, MM-BIO-21, MM-BIO-22, MM-BIO-23	S/M
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Bats	SI	MM-BIO-1, MM-BIO-24	S/M
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: American Badger	SI	MM-BIO-1, MM-BIO-25	S/M

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	SI	MM-BIO-1, MM-BIO-5, MM-BIO-6, MM-BIO-7, MM-BIO-8	S/M
Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands	SI	MM-BIO-1, MM-BIO-5, MM-BIO-6, MM-BIO-7, MM-BIO-8, MM-BIO-26	S/M
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites	NI	N/A	NI
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	NI	N/A	NI
Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	NI	N/A	NI

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.4.6 References

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3.5 Cultural Resources

This section describes the environmental setting and regulatory framework for cultural resources in the study area, and it identifies potential direct and indirect impacts and effects of the Proposed Project during construction, operation, and maintenance. The study area for the cultural resources records search encompasses the Proposed Project and the entirety of the Town's area that could be included in the Extended Collection System buffered by a 0.25-mile search radius. This buffer was chosen in order to allow for potential design changes as well as to receive a full characterization of the type and breadth of previously recorded resources in the general vicinity of the Proposed Project. The study area for the pedestrian survey included the Chico WPCP, the length of the Export Pipeline System, and the Core Collection System. The Extended Collection System area was not surveyed at this time.

3.5.1 Environmental Setting

3.5.1.1 Archaeological Context

Researchers have divided the prehistory of central California into a series of cultural periods, reflecting an increasing degree of cultural complexity through time. The Paleoindian Period includes the Pre-Clovis (Unknown to 13,500 Cal B.P.[1]) era during which a hypothesized coastal colonization route allowed people to enter California. In the subsequent Clovis (13,500-10,500 Cal B.P.) era human populations spread within California. The Archaic Period includes the Lower Archaic (10,500-7,500 Cal B.P.). At this time, post-Pleistocene climatic changes cause lakes/wetlands to dry up. Milling technology became common and widespread, indicating a plant food emphasis. The basic social unit remained the extended family. During the Middle Archaic (7,500-2,500 Cal B.P.), climate, habitats, and resources were unstable. The economy became more diversified. The inception of more sedentary living along with population growth and expansion occurred. Technological and environmental factors were dominant themes. In the Upper Archaic (2,500-1,500 Cal B.P.) there was growth of sociopolitical complexity characterized by development of status distinctions based upon wealth.

During the Emergent Period, the Lower Emergent (1500-500 Cal B.P.) witnessed replacement of the dart and atlatl by the bow and arrow. Coastal maritime adaptations flourished. Territorial boundaries were well established. Distinctions in social status linked to wealth became more and more common. Regularized inter-group exchange included abundant, often diverse, materials. The Upper Emergent (500-150 Cal B.P.) is characterized by appearance of a "monetized" clam shell disk bead economy.

[1] Before present (B.P.) is a time scale used in archaeology, geology, and other scientific disciplines to specify when events in the past occurred. Because the "present" time changes, standard practice is to use the year 1950 as the arbitrary origin of the age scale. "Cal" refers to calibrated. Uncorrected, or 'conventional' radiocarbon ages are calculated using an assumption that the concentration of naturally occurring radiocarbon in the atmosphere is constant. Calibration of these conventional ages to calendar years corrects for known minor variations over time in the concentration of atmospheric radiocarbon. This calibration also corrects for an error in the estimate of 'half-life,' or the rate at which radiocarbon decays. While the half-life of radiocarbon is now known to be slightly longer than was estimated when the technique was invented, laboratories continue to report radiocarbon dates using the older, less accurate value, hence the term 'conventional.' Because of this, uncalibrated dates earlier than about 2000 years before present (B.P.) tend to be substantially 'younger' than calibrated dates.

More goods were moving farther in space. The growth of local specializations in production and exchange took place. There was an interpenetration of central and southern exchange systems.

Specific manifestations of local/regional prehistory are defined in the temporal sequence first developed in the Oroville Reservoir area, and subsequently applied to adjacent portions of Butte and Plumas Counties. The earliest archaeological complex, the *Masilla Complex* (ca. 3,000-2,000 B.P.), emphasized the use of handstones and milling slabs for seed grinding. During the subsequent *Bidwell Complex* (ca. 2,000-1,200 B.P.), use of large slate and basalt dart points continued. At this time, people probably lived in relatively permanent villages.

The *Sweetwater Complex* (ca. 1,200-500 B.P.) witnessed the advent of the bow and arrow. Arrows were tipped with Rosegate and Gunther Series projectile points. The steatite industry was elaborated, with cups, platters, bowls, and tubular smoking pipes being produced. A large variety of bone artifacts, and an expanded inventory of shell artifact types occurred as well. Burial patterning shifted from flexed to extended or semi-extended interments.

The *Oroville Complex* (ca. 1500-500 B.P.) represents the protohistoric Maidu/Konkow. At this time, bedrock mortars became central to acorn processing. Hallmark artifacts included incised bird bone tubes, bone gorge hooks, gaming bones, and clamshell disk beads. Desert Series projectile points predominated. Steatite vessels were absent. Several kinds of structures, including large circular dance houses, were constructed. Burials were tightly flexed on their sides, and occasionally placed under stone cairns.

3.5.1.2 Ethnographic Context

By the time of the first Euro-American arrivals in the Project area in the 19th century, a mosaic of "tribelets" occupied Butte County. The foothill Konkow[2] inhabited the foothills region of the northern Sierra. Their historical homeland centers on the river drainages of the North Fork of the Feather River, and roughly encompasses the present political boundaries of Butte County. A related group, the Mechoopda, had densely settled the valley floor near present-day Chico (Kowta 1988, C'ammuden 2020). Additionally, Penutian-speaking Maidu occupied the higher Sierra country in Plumas County. The foothill Konkow continue to live in their ancestral homeland, the Mooretown Rancheria in as well as at the Round Valley Reservation in Mendocino County, where many were forcibly placed by semi-regular military forces and irregular militias after the Gold Rush commenced (C'ammuden 2020). The Mechoopda Indian Tribe of Chico Rancheria ("valley Konkow") maintain a federally recognized tribal government in Chico.

[2] The differentiation between these three groups is recognized based on geographical differences that had spurred cultural differences, with the Mechoopda and others being previously referred to by early Euro-American scholars as "Valley Maidu", the Konkow being "Foothill Maidu" and the Maidu in Plumas County called "Mountain Maidu". These ersatz appellations obscure what was a much more complex social landscape, as the "Konkow" proper were the name of one of the more prominent groups in a mosaic of Maiduan speakers in the foothills (Wells and Chambers 1882). "Konkow" is now often used to name both foothill and valley populations, but not of the Mountain Maidu.

3.5.1.3 Historic Context

By the late 1700s, Spain sought to expand its claims on lands north of Mexico and established a mission in the San Francisco Bay area in 1776. In 1808, the Gabriel Moraga became one of the first Europeans (by ancestry) to traverse the Sacramento Valley, naming many of the rivers he located. Moraga reportedly met a delegation of 52 Maidu at Sutter Buttes. In 1811, Padre Arbella reportedly met Konkow people while travelling up the Sacramento River. In 1821, Captain Louis Arguello located and named the Feather River ("El Rio de las Plumas"). Arguello traded and fought with Indigenous people along his route (C'ammuden 2020, Selverston 2006). Russian explorers may have also reached the mouth of the Feather River. Spanish expeditions mostly explored the Sacramento and San Joaquin River valleys and did not much penetrate the foothills Sierra (Dixon 1905). These early expeditions probably first introduced European-borne diseases, as explorers in the 1830s discovered several abandoned villages with unburied dead (Selverston 2006, Dixon 1905).

American fur trappers soon arrived in the Sierra foothills. Jedediah Smith spent 6 months with the Konkow near the Oroville locality in 1827 (C'ammuden 2020, Selverston 2006). Following Smith's reports, The Hudson Bay Fur Trading Company sent expeditions into the area between 1828 and 1836 (C'ammuden 2020). In 1833, John Work led a 100-person trapping party into the Oroville locality that Selverston (2006) characterizes as a "nomadic pluralistic village with men, women, and children of diverse backgrounds and task-specific specialization." Work noted in his diaries that the Indigenous populations were numerous and densely settled, and other contemporaneous explorers echoed this observation (Selverston 2006, Dixon 1905). Work's party was the source of a widespread epidemic of either smallpox or malaria in 1833 (Cook 1955, 1976).

Further incursions into the territory increased in the 1840s with Mexican agricultural land grants. After John Sutter established his eponymous fort near Sacramento in 1839, non-Hispanics made multiple claims in Butte County by 1844. General John Bidwell was the first to establish a trading post along Chico Creek, and more Anglo settlers followed. Bidwell also employed Mechoopda people at his ranch on the Arroyo Chico grant, within their valley homeland, as well as later at the rich mining site of Bidwell Bar on the Feather River. The Bidwells would come to have a relatively close but paternalistic relationship with the Mechoopda (Mechoopda Indian Tribe of Chico Rancheria 2021). Californios (California-born Spanish) Maximo and Dionisio Zenon Fernandez of Monterey were granted the Fernandez Rancho in the area in 1846. Other agricultural grants in the area include the Boga-Larkin, Farwell, Esquon, Bosquejo, Aguas Firas, and Llano Seco (Mansfield 1918). The United States formally annexed Alta California in 1848.

The Gold Rush officially started with Marshall's discovery of gold at Coloma in 1848. A contemporaneous jackpot strike by John Bidwell on the Feather River brought a flood of immigrants to Butte County. Multiple camps carrying hundreds of miners from all over the world were established along the major rivers and minor tributaries in Butte County every 5 to 10 miles (Selverston 2006). This influx of new settlers brought the Konkow more disease (including cholera, flu, and tuberculosis), alcohol, and displacement from their homes. Large placer mining disrupted aboriginal hunting and fishing patterns and may have wiped out Konkow ancestral sites within a matter of years (Dixon 1905, Selverston 2006, Mechoopda Indian Tribe of Chico Rancheria 2021). The immigrant miners often were disdainful towards the Indigenous inhabitants, yet there was some mutual interest between Indigenous

Konkow and the miners to maintain peace (C'ammuden 2020). The Konkow's general posture towards the intruders was to remain peaceful (C'ammuden 2020, Mansfield 1918).

In 1851, government-to-government treaties were signed which promised to allocate reservation territory and sovereign nations status to the Maidu-speaking tribes, in exchange for ceding land (C'ammuden 2020, Mechoopda Indian Tribe of Chico Rancheria 2021). However, California, having quickly achieved statehood, refused to ratify the treaty due to objections from business leaders and its legislature. What happened instead was a piecemeal and semi-official removal of Natives from their homelands. In 1852, the federal government provided $250,000 to California to establish five reservations of no more than 25,000 acres each. Volunteers in Butte County were mustered over the course of the next decade to force Indians of different tribes together onto these reservations. In 1853, these removals were known as "the Maidu Trail of Tears." Many were taken to Nome Lackee, near Corning, starting in 1854. But by 1859, the reservation was shuttered after allegations of fraud and abuse against its Indian Agent, Vincent E. Geiger (C'ammuden 2020). The 1860s saw depredations towards Natives and subsequent retaliations by them against the settlers. In 1863, a meeting held at Pence's Ranch concluded to remove Indians from Butte County (Mansfield 1918). Many of the foothill Konkow were marched to Round Valley Reservation in Mendocino County along with several other tribes during this decade. The journey was harsh, many died along the way, and still more were killed by the volunteers. Conditions at Round Valley remained desperate for decades after. Their populations depleted and their land base taken, most of the foothill Konkow who remained in the ancestral territory aimed to live quietly and assimilate into the new American society (C'ammuden 2020). However, many of the Mechoopda were not forced into removal due to their relationship with John Bidwell, remaining relatively safe at his holdings. Foothill Konkow folk also made their way to Arroyo Chico to live amongst their valley neighbors (Mechoopda Indian Tribe of Chico Rancheria 2021).

C'ammuden (2020) reports that throughout the end of the 19th century, the foothills Konkow did their best to assimilate into the new American empire while also maintaining familial ties and traditions. Some subsequently followed their kin to Round Valley, but others stayed in Butte County. Some foothill Konkow women married Anglo miners. Two prominent Anglo/Konkow families started during this time include the Gramps and Clark families. These two families secured mineral and land rights on the West Branch and North Fork of the Feather River and were successful miners. Konkow people advised the railroads as to the best locations for travel in their ancestral lands. Konkow served honorably during the Spanish-American War both World Wars, and beyond. Konkow people worked in rail, lumber, and manufacturing, and pursued careers as plumbers, electricians, cannery workers, truck drivers, and more. Many Konkow also moved to urban areas to find opportunity. C'ammuden (2020) writes: "always aware of their Indian heritage as a focal point of connection, these families kept memories alive by celebrating together in ceremonial gatherings as time and money permitted thru (sic) World War I, II, and beyond."

The Concow-Maidu of Mooretown Rancheria is a federally recognized Konkow Tribe. Following the Rancheria Act of 1884, in 1894, James T. Grubbs relinquished 80 acres for the use of Indian families. In 1915, the BIA purchased another 80-acre parcel nearby for 53 members of the Frank Taylor band of Indians, who were on a census list. The Tribe was terminated in 1953, but after subsequent legal battles the tribe was reinstated in 1983. Mooretown Rancheria eventually bought 35 acres just south of Oroville as a land base for their members. The Concow-Maidu own and operate the Feather Falls

Casino, constructed in 1996. Cultural and language preservation is a top priority for the Tribe (Cultural Programs Office of Mooretown Rancheria 2021).

The Mechoopda had a complex relationship with John and Annie Bidwell that was framed in paternalism. Bidwell hired mercenary protection for the Mechoopda during the pogroms of the 1860s, as they provided labor for his enterprises. In 1868, Bidwell married Annie Kennedy, who instituted Christian religious teachings at Arroyo Chico, instituting a church in 1895. John Bidwell died in 1900, and Annie continued to oversee the village, which had fifty people in 1910. Annie Bidwell died in 1918, deeding the land to the Presbyterian Church as trustee for the Native residents. The land was conveyed into federal trust in 1939. The Mechoopda became a federally recognized tribe in 1992. Since 1998, the Mechoopda Tribe has been most interested in securing and developing housing, and rebuilding and restoring their political, economic, and social lives (Mechoopda Indian Tribe of Chico Rancheria 2021).

By 1844, John Bidwell established a trading post at the Arroyo Chico land grant. In 1848, he struck gold at the Feather River, and with his riches, he bought 28,000 acres in both sides of Chico Creek. He founded Chico in 1860 (incorporated 1872). Bidwell was elected to the US Congress in 1864 as a Republican. In Washington D.C., he met and married Annie Bidwell, and in 1868, settled in Chico. There they built the Bidwell Mansion, which would become the center of social and political life in the region. Bidwell helped direct the town's agricultural focus, especially for processing rice, almonds, and fruit. In 1887, Bidwell donated land to found a new state teacher's college, which eventually evolved into California State University, Chico. John and Annie Bidwell's mansion was restored and still stands at the Bidwell Mansion State Historic Park. The Bidwell Mansion represents a fine example of early Victorian-era architecture. It is California Historical Landmark #329 and is listed on the National Register of Historic Places. After John's death in 1900, Annie Bidwell donated 1,900 acres for a public park, which is now the 3,640-acre Bidwell Park, which is one of the country's largest municipal parks. Chico city proper contains a population of 121,219 people as of the 2020 census (Britannica 2021, Chico Chamber of Commerce 2018, California State Parks 2021).

Paradise was named around the 1860s as families began to settle the area following the construction of lumber mills. Legend has it that the area was named when William Leonard and his mill crew came to rest in the shade of ponderosa pines, and, feeling relaxed, he exulted: "boys, this is paradise!" Settlement in the area increased after railroad service was established in 1904. Shortly after the Paradise Irrigation District was established, it was able to supply a regular water supply in all but the most severe droughts. The Paradise Farm Center was founded to develop and use the most modern farming practices. Orchards used the railroad to quickly speed their products to market. After World War II, the population of Paradise swelled from 5,000 to 20,000 by 1966. However, Paradise was not formally incorporated until 1979 (McDonald n.d.). In November 2018, the swift and devastating Camp Fire destroyed much of Paradise, killing 85 people and burning more than 150,000 acres, including 14,000 residences within the Town.

3.5.1.4 Literature Search and Data Limitations

The records search from the Northeast Information Center of the California Historical Resources Information System at California State University, Chico encompasses the entirety of the Proposed Project, all Project alternatives, and a 0.25-mile buffer around the furthest extent of the Proposed

Project and Project alternatives. Outside of the exceptions described further below, the pedestrian survey covered the preferred alternative and consisted of parallel and meandering transects spaced no more than 10 to 15 meters apart, covering 100 percent of the public ROW between the Chico WPCP at the west end and the intersection of Skyway and Neal Road at the east end. Within Paradise, the pedestrian survey was limited to the public ROW alignments of the Core Collection System. Individual parcels were not surveyed.

Due to the lack of private landowner consent to access, approximately 1.1 miles of the proposed pipeline alignment, between Skyway and SR 99 (including the Butte Creek crossing) were not surveyed. Additionally, none of the Project alternatives were subject to pedestrian survey although they were, as noted above, included in the records search. The Extended Collection System area was not surveyed at this time, as noted above, but it was included in the records search.

With several exceptions that are discussed further below, all newly discovered and previously recorded cultural resources were documented or updated on standard State of California Department of Parks and Recreation Series 523 forms. These forms, distributed by the California Office of Historic Preservation, are used for recording and evaluating resources and for nominating properties as California Historical Landmarks, California Points of Historical Interest, and to the California Register of Historical Resources.

There are resources over the age of 45 years of age located in, or traversed by, the study area that would not be significantly impacted during Project construction or implementation. These include SR 99 and the UPRR (both traversed via microtunneling), as well as numerous county and municipal roads, and linear water conveyances. Importantly, the Proposed Project does not include any actions related to the realignment or replacement of roads. Roadwork proposed within the Project area as part of the Project implementation would not result in a change of use for the road or any other transecting resource, nor would the work impact the alignment of the structures. Resurfacing of roadways to the extent required for the implementation of the Proposed Project does not extend beyond that which has already taken place as part of the installation of utilities along these throughfares at multiple stages in the past. During such resurfacing, there have been no impacts to the resources listed above. The process of resurfacing has not change. Therefore, there is little to no potential for these resources to be impacted by the Proposed Project. Because there is no possibility that resources would be impacted by the Proposed Project, these resources are not included as part of the impact analysis and were, therefore, not recorded or evaluated for historic significance under the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP) as a part of the cultural resources study.

3.5.1.5 Identification of Historical Resources

The records searches, archival research, and pedestrian survey resulted in the identification of 23 archaeological and built environment resources within the study area, of which 20 were previously determined or newly evaluated as ineligible for inclusion in the NRHP and CRHR during the study, 3 remain unevaluated, and none have been evaluated as eligible, as shown in Table 3.5-1.

Table 3.5-1. Cultural Resources within the Project Area

Count	Site Number (Primary/Trinomial/ Temporary Number)	Age[a]	Type	Previously Recorded (Yes/No)	Individual NRHP/CRHR Eligibility
1	HDR-Paradise-Site-01	H	Historic refuse scatter	N	Not Eligible
2	HDR-Paradise-Site-02	H	Culvert, ditch, and turnouts	N	Not Eligible
3	P-04-001091	P	BRM – not relocated, presumed destroyed	Y	Not Eligible[b]
4	P-04-001779	H	Paradise train depot and associated railroad features	Y	Unevaluated
5	P-04-001780	H	Two historic residences – destroyed in Camp Fire	Y	Not Eligible[b]
6	P-04-003018	H	Historic structure	Y	Unevaluated
7	P-04-003021	H	Historic structure – destroyed in Camp Fire	Y	Not Eligible[b]
8	P-04-003022	H	Historic structure	Y	Unevaluated
9	P-04-004252	H	Complex of nine historic structures – destroyed in Camp Fire	Y	Not Eligible[b]
10	P-04-004253	H	Historic residence – destroyed in Camp Fire	Y	Not Eligible[b]
11	P-04-004254	H	Historic residence – destroyed in Camp Fire	Y	Not Eligible[b]
12	P-04-004255	H	Historic residence – destroyed in Camp Fire	Y	Not Eligible[b]
13	P-04-004367	P	Lithic and groundstone scatter – not relocated	Y	Not Eligible[b]
14	P-04-004368	P	Lithic and groundstone scatter – not relocated	Y	Not Eligible[b]
15	P-04-004369	P	Lithic and groundstone scatter	Y	Not Eligible
16	P-04-004370	P	BRM, groundstone scatter – not relocated	Y	Not Eligible[b]
17	P-04-004371	P	Flaked stone and groundstone scatter – not relocated	Y	Not Eligible[b]
18	P-04-004372	P	Groundstone scatter – not relocated	Y	Not Eligible[b]
19	P-04-004373	P	Groundstone scatter – not relocated	Y	Not Eligible[b]
20	P-04-004374	P	BRM – not relocated	Y	Not Eligible[b]
21	Bridge 12C-0108	H	Little Chico Creek/Taffee Avenue Bridge, ca. 1931	N	Not Eligible
22	Bridge 12C-0109	H	Little Chico Creek/Crouch Avenue Bridge, ca. 1960	N	Not Eligible
23	Bridge 12C-0179	H	Comanche Creek/Crouch Avenue Bridge, ca. 1940	N	Not Eligible

[a] H = Historical; P = Prehistoric; M = Multi-component.

[b] Resources destroyed in the Camp Fire or not relocated during the survey are considered not eligible for NRHP and CRHR listing.

3.5.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on cultural resources. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.5.2.1 Federal

National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires federal undertakings to consider the effects of the action on historic properties. Historic properties are defined by the Advisory Council on Historic Preservation regulations (36 Code of Federal Regulations [CFR] Part 800) and consist of any prehistoric or historical archaeological site, building, structure, historic district, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 CFR Part 800.16[l]).

To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, historical, and architectural properties) must be inventoried and evaluated for listing in the NRHP.

For projects involving a lead federal agency, cultural resource significance is evaluated in terms of eligibility for listing in the NRHP. For a property to be considered for inclusion in the NRHP, it must be at least 50 years old and meet the criteria for evaluation set forth in 36 CFR Part 60.4.

The Proposed Project will be held to the standards set forth by the National Historic Preservation Act.

Antiquities Act

The Antiquities Act of 1906 (54 USC 320301–320303) provides for fines or imprisonment of any person convicted of appropriating, excavating, injuring, or destroying any historic or prehistoric ruin or monument or other object of antiquity that falls under the jurisdiction of the federal government.

The Proposed Project will be held to the standards set forth by this act.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 (16 USC 470aa et seq.) amended the Antiquities Act, set a broad policy stating that archaeological resources are important to the nation and should be protected, and required special permits before the excavation or removal of archaeological resources from public or Indian lands.

The Proposed Project will be held to the standards set forth by this act.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.) was intended to ensure the protection and rightful disposition of Native American cultural items and burials located on federal or tribal trust lands, and in the possession or control of the federal government. The act requires that an inventory of Native American human remains and funerary objects must be compiled by federal funded agencies and all museums and educational institutions receiving federal funds.

Also, all Indian tribes and representatives identified by the NAHC must be consulted whenever archaeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on federal or tribal lands. Excavation or removal of

any such items also must be done under procedures required by the Archaeological Resources Protection Act.

The Proposed Project will be held to the standards set forth by this act.

The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation
These standards, effective as of 1983, provide technical advice for archaeological and historic preservation practices. Their purposes are (1) to organize the information gathered about preservation activities; (2) to describe results to be achieved by federal agencies, states, and others when planning for the identification, evaluation, registration, and treatment of historic properties; and (3) to integrate the diverse efforts of many entities performing historic preservation into a systemic effort to preserve the nation's culture heritage (48 CFR 44716).

The Proposed Project will be held to these standards.

The Secretary of the Interior's Standards for Rehabilitation
These standards were established by the Secretary of the Interior in 1986 as a way to homogenize rehabilitation efforts of nationally significant historic properties and buildings. These standards pertain to actions involved in returning a property to a state of utility through repair or alteration. This allows for the preservation of historic and cultural values of the property, while giving it an efficient contemporary use (36 CFR 67).

The Proposed Project will be held to these standards.

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings
The Standards for the Treatment of Historic Properties are a compilation of 34 guidelines to promote the responsible preservation of U.S. historic cultural resources. The standards specifically address preservation, rehabilitation, restoration, and reconstruction of historic materials. The standards are not intended to be the sole basis for decision-making in regard to whether a historic property should be saved, but rather are intended to provide consistency in conservation and restoration practice (36 CFR 68).

The Proposed Project will be held to the standards.

3.5.2.2 State

CEQA Statute and Guidelines
CEQA and the CEQA Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to cultural resources.

CEQA Guidelines Section 15064.5(a) define a "historical resource" as including the following:

- A resource listed in, or eligible for listing in, the CRHR;
- A resource listed in a local register of historical resources as defined at PRC Section 5020.1(k);
- A resource identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or

- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR).

A project that causes a "substantial adverse change" in the significance of a historical resource may have a significant effect on the environment (CEQA Guidelines Section 15064.5[b]). CEQA Guidelines Section 15064.5(b)(1) defines "substantial adverse change" as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired."

For archaeological sites, the CEQA Guidelines Section 15064.5l(1) requires that the lead agency first determine whether the site is a "historical resource" as defined in Section 15064.5(a) (defined above). If the site qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource, as described below (CEQA Guidelines Section 15064.5[c[[2]). If the archaeological site does not qualify as a historical resource but does qualify as a "unique archaeological resource," then the archaeological site is treated in accordance with CEQA PRC Section 21083.2, which places certain limits on permissible mitigation measures (CEQA Guidelines Section 15064.5[c][3]). In practice, most archaeological sites that meet the definition of a unique archaeological resource would also meet the definition of a historical resource.

Mitigation measures are discussed in CEQA Guidelines Section 15126.4. Generally, by following the Secretary of the Interior's Standards for the Treatment of Historic Properties or the Secretary of the Interior's Standards for Rehabilitation, impacts can be considered as mitigated to a less-than-significant level per CEQA Guidelines Section 15064.5(b). For archaeological resources, CEQA Guidelines Section 15126.4(b)(3) provides that a public agency should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature.

The Proposed Project will be held to the regulatory requirements imposed by CEQA Statutes and further explained in CEQA Guidelines.

California Register of Historical Resources: Public Resources Code Section 5024.1

The CRHR includes resources that are listed in or formally determined eligible for listing in the NRHP, as well as some designated California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR.

The Proposed Project will be held to the requirements of PRC Section 5024.1.

California Native American Heritage Commission: Public Resources Code Sections 5097.91 through 5097.98

The California NAHC identifies and catalogs places of special religious or social significance to Native Americans and known graves and cemeteries of Native Americans on private lands. PRC Section 5097, as amended, requires consultation with the California NAHC whenever Native American graves are

found. When the California NAHC is notified of human remains, it will immediately notify those persons it believes to be the most likely descendants.

The Proposed Project will be held to the requirements of PRC Sections 5097.91 through 5097.98.

Unique Archaeological Resource

PRC Section 21083.2 defines a unique archaeological resource as follows.

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2).

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

The Proposed Project will be held to the requirements of PRC Section 21083.2.

Health and Safety Code Section 7050.5: Removal of Human Remains

Sections 7050.5(b) and 7050.5(c) of the Health and Safety Code pertain to the discovery of human remains in a location outside a dedicated cemetery. The statute requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the coroner determines, or has reason to believe, the remains to be those of a Native American, the coroner will contact the NAHC by telephone within 24 hours. After notification, NAHC will follow the procedures outlined in PRC Section 5097.98, which includes notification of most likely descendants, if possible, and recommendations for treatment of the remains. The most likely descendants will have 24 hours after notification by the NAHC to make their recommendation.

The Proposed Project will be held to the requirements of Health and Safety Code Section 7050.5.

California Graves Protection and Repatriation Act

Sections 8010 to 8011 of the Health and Safety Code establish a state repatriation policy that is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act.

The Proposed Project will be held to the requirements of this act.

3.5.2.3 Regional and Local

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies and implementation measures related to cultural resources that are relevant to the Proposed Project:

- **Policy OCEP-36**: The *Land Use Constraints Diagram* identifies areas of potential archaeological sensitivity. Proposed development or public works projects within this area will be required to undertake an archaeological survey prior to project approval. Proposed projects outside this area, in locations that have not been significantly disturbed, will be referred to the California Archaeological Inventory, Northeast Information Center, California State University, Chico to undertake an archaeological survey prior to project approval upon recommendation by the Center.
- **Implementation Measure OCEI-18**: Require compliance of all development projects with Appendix K (archeological impacts) of the *Guidelines for Implementation of the California Environmental Quality Act*.
- **Implementation Measure OCEI-19**: When an archaeological survey is required by the Town or recommended by the California Archaeological Inventory, Northeast Information Center, the survey will be undertaken by a qualified professional archaeologist who is certified by the Society of Professional Archaeologists or has equivalent qualifications.
- **Implementation Measure OCEI-20**: Should any historic or pre-historic artifacts be discovered during construction, all work will cease until a qualified professional archaeologist views the site, provides recommendations and gives clearance to continue.

The Proposed Project will be held to the goals and objectives in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to cultural resources that are relevant to the Proposed Project:

- **Policy COS-P14.1**: Historic and cultural resources management will be coordinated with nearby jurisdictions, including the five incorporated municipalities, the Lassen and Plumas National Forests, other planning and regulatory agencies, and local tribes.
- **Policy COS-P14.2**: As part of CEQA and National Environmental Policy Act (NEPA) projects, evaluations of surface and subsurface cultural resources in the county will be conducted. Such evaluations should involve consultation with the Northeast Information Center.
- **Policy COS-P14.3**: The Northeast Information Center and appropriate historic and preservation professionals will be consulted when considering reuse of historic sites.
- **Policy COS-P15.1**: Areas found during construction to contain significant historic or prehistoric archaeological artifacts will be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation. Historic or prehistoric artifacts found during construction shall be examined by a qualified consulting archaeologist or historian to determine their significance and develop appropriate protection and preservation measures.

- **Policy COS-P15.2**: Any archaeological or paleontological resources on a development project site will be either preserved in their sites or adequately documented as a condition of removal. When a development project has sufficient flexibility, avoidance and preservation of the resource will be the primary mitigation measure.
- **Policy COS-P15.3**: Demolition permit application on potentially important historic sites will be subject to discretionary review.
- **Policy COS-P16.2**: Impacts to the traditional Native American landscape will be considered during California Environmental Quality Act or National Environmental Protection Act review of development proposals.
- **Policy COS-P16.3**: Human remains discovered during implementation of public and private development projects will be treated with dignity and respect. Such treatment will fully comply with the federal Native American Graves Protection and Repatriation Act and other appropriate laws.
- **Policy COS-P16.4**: If human remains are located during any ground disturbing activity, work will stop until the County Coroner has been contacted, and, if the human remains are determined to be of Native American origin, the NAHC and most likely descendant have been consulted.
- **Policy COS-P16.5**: Consistent with State local and tribal intergovernmental consultation requirements such as Senate Bill (SB) 18, the County will consult with Native American tribes that may be interested in proposed new development projects and land use policy changes.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to cultural resources that are relevant to the Proposed Project:

- **Policy CRHP-1.1, Historic Preservation Program**: Maintain a comprehensive Historic Preservation Program that includes policies and regulations which protect and preserve the archeological, historical, and cultural resources of Chico.
- **Policy CRHP-2.3, Demolition as Last Resort**: Limit the demolition of historic resources to an act of last resort, to be permitted only if: 1) rehabilitation of the resource is not feasible; 2) demolition is necessary to protect the health, safety, and welfare of its residents; or 3) the public benefits outweigh the loss of the historic resource.
- **Policy CRHP-3.1, Partnerships to Preserve Heritage Resources**: Foster partnerships with interested parties to preserve heritage resources.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

City of Chico Historic Preservation Ordinance

The Historic Preservation Ordinance of the City of Chico's Municipal Code (Chapter 19.37) specifically affords protection for properties listed on the City of Chico's Historic Resources Inventory and provides a mechanism to add historic properties to the Inventory through Landmark Overlay zoning districts. The ordinance also provides development incentives to owners of designated historic property and establishes a number of exempt activities such as ordinary maintenance and repair.

The Proposed Project will be held to the requirements of this ordinance.

3.5.3 Method of Analysis

This section describes the methods used to determine impacts of the Proposed Project on cultural resources.

3.5.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on cultural resources if it would:

- **Impact CUL-1:** Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5.
- **Impact CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5.
- **Impact CUL-3:** Disturb any human remains, including those interred outside of formal cemeteries.

3.5.3.2 Approach to Analysis

Construction, Operation, and Maintenance

Impacts on cultural resources were identified qualitatively based on the Proposed Project's potential to affect previously recorded and newly discovered historical resources, archaeological resources, and human remains.

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The significance of a historical resource would be significantly impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the NRHP, the CRHR, or a local register of historic resources pursuant to PRC Section 5020.1(k).

As discussed in Section 3.5.1.4, Literature Search and Data Limitations, and Section 3.5.1.5, Identification of Historical Resources, cultural resources in the study area were identified through records searches from the Northeast Information Center of the California Historical Resources Information System at California State University, Chico; archival research; and the pedestrian survey.

The analysis of environmental effects focuses on foreseeable changes to cultural resources in the context of effects listed in Section 3.5.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

3.5.4 Impact Analysis

This section describes the potential environmental effects on cultural resources as a result of implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to significantly impact previously recorded and newly discovered prehistoric and historic-era archaeological sites and built-environment resources previously recorded and identified during the field evaluation. Such built-environment resources include prehistoric lithic scatters, bedrock milling features, historic refuse deposits and historic-era structures. Project development could significantly impact resources through ground-disturbing activities, such as open trenching, HDD and micro tunnelling technologies, excavation, and grading, which all have the potential to damage or destroy known and unknown cultural resources that may be present on or below the ground surface, particularly in undeveloped areas.

3.5.4.1 Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5 (Less than Significant Impact)

Construction

Impacts on a historical resource could be associated with construction of the Proposed Project. Excavation and ground disturbing activities as a result of these construction activities have the potential to impact previously recorded, newly identified, and heretofore unknown cultural resources in the study area which, upon further assessment, may constitute a historical resource pursuant to section 15064.5.

Bridges 12C-0108 (1931), 12C-0109 (1960), and 12C-0179 (1940) would all be traversed by the Export Pipeline System at the western end of the Proposed Project near the Chico WPCP. They were each previously evaluated by Caltrans for significance according to CEQA and NRHP criteria. All three bridges are listed in the *Caltrans Bridge Inventory* of local agency bridges as "5. Bridge not eligible for NRHP;" thus, the bridges are not "historical resources" per CEQA Guidelines and will not be impacted by the proposed HDD trenchless techniques for pipeline installation.

Buildings P-04-001780, P-04-003021, P-04-004252, P-04-004253, P-04-004254, and P-04-004255 were all previously recorded within the Core Collection System and Extended Collection System areas but destroyed in the 2018 Camp Fire and are no longer extant. Buildings P-04-001779, P-04-003018, and P-04-003022 were all previously recorded as well and are within the Core Collection System area. None of the eight buildings, extant and non-extant, have been previously evaluated for CRHR and/or NRHP significance. As noted above, an exhaustive built environment inventory and evaluation of the Paradise sewer service area was not conducted. Impacts associated with the Core Collection System and Extended Collection System would be confined to the street side of the public ROW; therefore, the Proposed Project has no potential to impact any built environment resources.

Eight prehistoric archaeological sites, P-04-001091 P-04-004367, P-04-004368, P-04-004370, P-04-004371, P-04-004372, P-04-004373, and P-04-004374 were all previously recorded but not relocated during pedestrian survey for the Proposed Project. This is likely due to a variety of factors. First, the general vicinity of Paradise has been substantially altered since the 2018 Camp Fire. The aftermath of the fire, including both the suppression effort as well as the post-fire cleanup, resulted in drastic changes to ground visibility and local topography. It is likely that these efforts either destroyed or

completely obscured any surface manifestation of the site (P-04-001091) within the Core Collection System area.

Additionally, seven of the previously recorded prehistoric sites (P-04-004367, -004368, -004370, -004371, -004372, -004373, and -004374) were all recorded during construction monitoring along Skyway for a utility trenching project. Field notes associated with this work noted that the observed artifacts were generally collected from spoil piles during monitoring and, following documentation, were placed “out of the ROW” thus removing them from the study area. Careful examination of each of the eight site locations did not reveal any surficial artifacts and the sites are assumed to no longer be extant and would not be impacted by the Proposed Project.

The remaining three sites consist of a prehistoric lithic scatter (P-04-004369) within the Core Collection System, a historic-era refuse scatter (HDR-Paradise-Site-01) along Skyway, and a small historic-era feature complex consisting of a culvert, short ditch, and two irrigation turnouts (HDR-Paradise-Site-02) adjacent to Midway Road. None of the three sites exhibit substantial archaeological deposits, extensive artifact variability, significant architectural features, or association with important persons or events. The lack of artifact densities and variability demonstrates the low potential to yield information important to the prehistory or history of the local area, California, or the nation. Considered individually, none of the evaluated prehistoric sites produced assemblages that could contribute to unique patterns of human occupation or refine existing cultural chronologies. Considered collectively at the landscape level, the extant prehistoric site in the study area contains redundant information better represented at recorded sites outside of the study area. The historic site likewise contained relatively sparse and disturbed archaeological deposits, consisting of fragments of bottles, metal containers, and other household consumables and hardware.

Based on the absence/presence of the previously recorded resources and the significance evaluations, impacts on historical resources from Project construction are considered less than significant.

Mitigation. *No mitigation required.*

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would occur in previously disturbed areas (primarily within paved roads), resulting in no potential to impact previously undisturbed and unknown cultural resources. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would result in a less than significant impact on historical resources.

Mitigation. No mitigation required.

3.5.4.2 Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 (Less than Significant Impact with Mitigation Incorporated)

Construction

Although no "unique" or "historic" cultural resources (as per CEQA definitions) have been documented on the Project site, there is a potential that unrecorded cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities associated with the Export Pipeline System (microtunneling, or the HDD entry/exit pits), Core Collection System and Extended Collection System. The Project is located in a region where significant prehistoric and historic-era cultural resources have been documented. Subsurface disturbances during construction of the Core or Extended Collection Systems or Export Pipeline Systems could potentially destroy or damage undiscovered prehistoric or historic cultural resources. If these resources were to represent "historical resources" as defined by CEQA, a significant impact would occur. If such resource were determined to be unique or historic, a significant impact would occur.

Mitigation. To minimize potentially significant impacts related to unrecorded cultural resources (including archeological resources) during construction of the Proposed Project to a less than significant level, mitigation measures **MM-CUL-1** and **MM-CUL-2** will be implemented.

MM-CUL-1: Targeted Archaeological Monitoring. As described above, the archaeological survey did not include the proposed Export Pipeline System between Midway Road and Skyway due to lack of landowner consent to access. Additionally, although not fully relocated, previous monitoring work along Skyway recorded a series of sparse lithic scatters demonstrating an elevation sensitivity for near-surface archaeological sites. Therefore, based on the lack of previous survey coverage and the number of previously documented archaeological sites in the vicinity, the Project alignment between Midway Road (on the west) and the intersection of Skyway and Neal Road (on the east) will be subject to monitoring during initial ground disturbance by a qualified professional archaeologist. The archaeologist will monitor initial trenching of previously undisturbed deposits, but the monitoring may vary based on the rate of excavation, the materials excavated, and the absence/presence of artifacts and/or cultural features. In the event of an inadvertent discovery during monitoring, the procedures noted in **MM-CUL-2** will be implemented.

MM-CUL-2: Follow Inadvertent Discovery Procedures. If unrecorded cultural resources are encountered during Project-related ground-disturbing activities, even in the absence of an onsite archaeological monitor, a qualified cultural resources specialist will be contacted to assess the potential significance of the find. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) is made during Project-related construction activities, ground disturbances in the area of the find will be halted, and a qualified professional archaeologist will be notified regarding the discovery. The archaeologist will determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation, such as avoidance or data recovery.

Significance after Mitigation. Implementation of **MM-CUL-1** and **MM-CUL-2** would reduce potentially significant impacts resulting from inadvertent damage or destruction of unknown cultural resources during construction to a less than significant level because appropriate procedures would be followed to ensure that any unanticipated cultural resources discovered during Project-related ground-disturbing activities are appropriately handled and documented and that all appropriate parties are contacted and coordinated with in a timely manner, in order to either avoid or minimize impacts on the cultural resources.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities would be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced as noted above. Operation and maintenance activities would occur in previously disturbed areas (mostly within paved roads), resulting in no potential to impact previously undisturbed and unknown cultural resources. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would result in a less than significant impact on archeological resources.

Mitigation. No mitigation required.

3.5.4.3 Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries (Less than Significant Impact)

Construction

No evidence for prehistoric or early historic interments was found in the Proposed Project study area in surface contexts and none of the archaeological sites as described were associated with human remains. However, this does not preclude the existence of buried human remains. Furthermore, human remains are known to occur in the region surrounding the Proposed Project site. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction.

Although much of the study area has been previously disturbed by previous development, it is possible that previously unknown buried human remains could be unearthed and damaged or destroyed during excavation activities associated with construction of the Export Pipeline System, Core Collection System, and Extended Collection System such as grading and excavation related to the trenching, or microtunneling and HDD related to the trenchless crossings. Damage to or destruction of human remains during Project construction or other Proposed Project-related activities would be considered a significant impact. However, in accordance with the California Health and Safety Code Sections 7050.5

and 7052, PRC Section 5097.98, and CEQA Section 15064.5; if human remains are uncovered during ground-disturbing activities, all such activities near the find will be halted immediately, and the Town's designated representative will be notified. The Town's representative will immediately notify the Butte County Coroner and a qualified professional archaeologist. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The Town's responsibilities for acting upon notification of a discovery of Native American human remains are identified in detail in PRC Section 5097.9. The Town or its appointed representative and the professional archaeologist will contact the Most Likely Descendent, as determined by the NAHC, regarding the remains. The Most Likely Descendent, in cooperation with the Town and the landowner, will determine the ultimate disposition of the remains. Since the Proposed Project will comply with the California Health and Safety Code, the PRC, and CEQA, impacts on human remains would be less than significant, and no mitigation is required.

Mitigation. *No mitigation required.*

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced as noted above. Operation and maintenance activities would occur in previously disturbed areas (mostly within paved roads), resulting in no potential to impact previously undisturbed and unknown cultural resources, including human remains. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would result in a less than significant on human remains.

Mitigation. No mitigation required.

3.5.5 Impacts Summary

Table 3.5-2 summarizes the cultural resources impacts of the Proposed Project.

Table 3.5-2. Cultural Resources Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5	LTS	N/A	LTS
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	SI	MM-CUL-1, MM-CUL-2	S/M
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	LTS	N/A	LTS

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

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3.6 Energy

This section describes the environmental setting and regulatory framework for energy resources, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the energy analysis focuses on the increased demand for electricity and transportation fuel as a result of the Proposed Project's construction, operation, and maintenance. None of the Project components are anticipated to consume natural gas, and therefore, a discussion of natural gas is not included in this section. The study area for energy impacts is Butte County.

3.6.1 Environmental Setting

Given the nature of the proposed project, the following discussion focuses on the two sources of energy that are most relevant to the project – electricity for the proposed Project operations and transportation fuel for vehicle trips associated with the Project construction.

3.6.1.1 Statewide Energy Use

In 2019, total energy usage in California was approximately 7,814 trillion British Thermal Units (BTUs) (US Energy Information Administration 2021a). Transportation accounted for 39.3 percent of California's total energy usage, industrial for 23.2 percent, commercial for 18.9 percent, and residential for 18.7 percent (US Energy Information Administration 2021b).

Total electricity generated in California is the sum of all utility scale, in-state generation, and net electricity imports. In 2020, total electricity generation for California was 272,576 gigawatt hours (GWh), down 2 percent, or 5,356 GWh, from 2019 (California Energy Commission [CEC] 2021a). California's non-carbon dioxide emitting electric generation categories (nuclear, large hydroelectric, and renewables) accounted for 51 percent of its in-state generation, compared to 57 percent in 2019 (CEC 2021a). The change is directly attributable to the significantly reduced hydroelectric generation, some 44 percent lower than 2019 generation levels, as drought conditions returned to the state. In 2020, net imports of electricity increased by about 6 percent (4,435 GWh) to 81,663 GWh, partially offsetting the decreased output from California's hydroelectric power plants (CEC 2021a).

The transportation sector is responsible for the largest percentage of the energy consumed in the state. In 2020, Californians consumed approximately 12.5 billion gallons of gasoline and 2.9 billion gallons of diesel fuel (California Department of Tax and Fee Administration 2021a, 2021b). In 2020, gasoline consumption was down 18.8 percent (2.9 billion gallons) from 2019 due to the COVID-19 pandemic (California Department of Tax and Fee Administration 2021a). Diesel fuel consumption in 2020 was down 3 percent (0.1 billion gallons) from 2019 (California Department of Tax and Fee Administration 2021b).

3.6.1.2 Regional Energy Use

Electricity consumption in Butte County in 2020 totaled approximately 1,385 million kilowatt hours (kWh) (CEC 2021b). Of the total electricity consumed in Butte County, approximately 736 million kWh were consumed by residential uses, while 649 million kWh were consumed by non-residential uses.

According to the *BCAG 2020 RTP Travel Demand Model: Model Development Report* (BCAG 2020a), the VMT in Butte County in 2020 was 4,343,919. The Emissions Factor Model (EMFAC 2021 Version: v1.0.1) was used to estimate the transportation fuel consumed in Butte County based on the VMT. In 2020, approximately 0.35 million gallons of gasoline and 0.15 million gallons of diesel were consumed in Butte County (EMFAC 2021).

3.6.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on energy. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.6.2.1 Federal

Corporate Average Fuel Economy

The Corporate Average Fuel Economy standards were first introduced by Congress in 1975 to help reduce the country's dependence on foreign oil. The National Highway Traffic and Safety Administration (NHTSA) sets and enforces the Corporate Average Fuel Economy standards. NHTSA sets the Corporate Average Fuel Economy standards for passenger cars and for light trucks (collectively, light-duty vehicles), and separately sets fuel consumption standards for medium- and heavy-duty trucks and engines. In August 2021, NHTSA released its Notice of Proposed Rulemaking offering new standards for the 2024-2026 model years. The new standards would increase fuel efficiency 8 percent annually for model years 2024-2026 and increase the estimated fleetwide average by 12 miles per gallon for model year 2026, relative to model year 2021. President Biden issued EO 14037 on August 5, 2021, which requires NHTSA to develop fuel economy standards for passenger cars and light duty trucks for model years 2027-2030. In addition, NHTSA will develop medium and heavy-duty fuel efficiency standards beginning as early as model year 2027. At the time of this PEIR preparation, new standards have not been adopted.

The Proposed Project will be held to the Corporate Average Fuel Economy standards.

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 set equipment energy efficiency standards. The law seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. The Renewable Fuel Standard program was created under the National Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. This Renewable Fuel Standard program under this act, commonly referred to as "RFS1", required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012.

The standards set forth by this act are obsolete and would not apply to the Proposed Project.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to achieve energy security in the United States by increasing renewable fuel production, improving energy efficiency and performance, protecting consumers, improving vehicle fuel economy, and promoting research on GHG capture and storage. The Renewable Fuel Standard program under this act, commonly referred to as "RFS2",

expanded the original Renewable Fuel Standard program and increased the volume of renewable fuel required to be blended into transportation fuel to 36 billion gallons by 2022.

The Proposed Project will be held to the standards set forth by this act.

3.6.2.2 State

California Energy Commission

The Warren-Alquist Act of 1974 established the CEC, which is California's primary energy policy and energy planning agency. CEC's core responsibilities include advancing the state's energy policy, achieving energy efficiency, investing in energy innovation, developing renewable energy, transforming transportation, overseeing energy infrastructure, and preparing for energy emergencies.

The Proposed Project will be held to the programs administered by the CEC.

Energy Action Plan

The California Public Utilities Commission approved the State's first Energy Action Plan in 2003 followed by the Energy Action Plan II in 2005. The current plan, Energy Action Plan II, is California's principal energy planning and policy document. The plan examines the state's ongoing actions in the context of global climate change, describes a coordinated implementation plan for state energy policies, and identifies specific actions to ensure that California's energy resources are adequate, reliable, and reasonably-priced.

The Proposed Project will be held to the principles set forth in Energy Action Plan II.

Greenhouse Gas Regulations

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006, which required California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, requiring California to reduce its GHG emissions to 40 percent below 1990 levels by 2030. In November 2017, ARB adopted *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan) (ARB 2017) to reflect the 2030 target as codified by SB 32. The 2017 Scoping Plan was prepared to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the 2017 Scoping Plan focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources.

The Proposed Project will be held to the standards set forth in SB 32 and policies contained in the 2017 Scoping Plan.

Renewable Energy Regulations

SB 1078, signed into law in 2002, established the Renewable Portfolio Standard Program and required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by December 31, 2017. In 2006, SB 107 changed the target date to 2010.

In March 2011, the California Legislature enacted SB X1-2, which required utilities to generate 33 percent of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 set a

three-stage compliance period: 20 percent by December 31, 2013, 25 percent by December 31, 2016, and 33 percent by December 31, 2020. In 2015, SB 350 increased the Renewable Portfolio Standard to 50 percent by the year 2030. In 2018, SB 100 was signed into law, which again increased the Renewable Portfolio Standard to 60 percent by 2030. EO B-55-18 issued in 2018 established a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.

The Proposed Project will be held to the standards in SB 100 and goals in EO B-55-18.

Assembly Bill 1007

AB 1007, which was signed into law in September 2005, required CEC to prepare a statewide plan to increase the use of alternative fuels in California. In accordance with AB 1007, CEC prepared the State Alternative Fuels Plan. The plan presents strategies and actions California must take to increase the use of nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production.

The Proposed Project will be held to the strategies in AB 1007.

Assembly Bill 1493

AB 1493, enacted in 2002, required ARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles whose primary use is non-commercial personal transportation in the state. AB 1493 required that ARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years.

The Proposed Project will be held to the standards in AB 1493.

Advanced Clean Cars

In 2012, ARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars.

The Proposed Project will be held to the principles of this program.

In-Use Off-Road Diesel-Fueled Fleets Regulation

All self-propelled off-road diesel vehicles 25 horsepower or greater used in California (such as bulldozers, loaders, backhoes, forklifts, etc.) and most two-engine vehicles (except on-road two-engine sweepers) are subject to the Regulation for In-Use Off-Road Diesel-Fueled Fleets (Off-Road Diesel Regulation). Adopted by the ARB on July 26, 2007, this regulation aims to reduce NO_X and particulate matter from off-road diesel vehicles operating within California by retiring, replacing, or repowering older engines, or installing diesel exhaust retrofits. Vehicles or engines subject to this regulation must limit their idling to five minutes. While the goal of this regulation is primarily to reduce emissions from diesel vehicles, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

The Proposed Project will be held to the standards set forth by this regulation.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, requires metropolitan planning organizations to include a Sustainable Communities Strategy in its regional transportation plan. The main focus of the Sustainable Communities Strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also a part of a bigger effort to address other development issues within the general vicinity, including transit and VMT, which influence the consumption of petroleum-based fuels.

The Proposed Project will be held to the Sustainable Communities Strategy.

3.6.2.3 Regional and Local

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following goals and objectives related to energy that are relevant to the Proposed Project:

- **Goal OCEG-10**: Maximize Paradise's energy efficiency.
- **Goal OCEG-11**: Become a regional leader in the approach to energy conservation.
- **Objective OCEO-14:** Significantly reduce town-wide energy consumption.

The Proposed Project will be held to the goals and objectives in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to energy that are relevant to the Proposed Project:

- **Policy H-P6.1**: Continue to implement state energy efficiency standards.
- **Policy COS-P3.4**: Solar-oriented and renewable design and grid-neutral development will be encouraged.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to energy that are relevant to the Proposed Project:

- **Policy SUS-3.2, Municipal Energy Use**: Reduce energy and water use in municipal operations.
- **Policy SUS-3.4, Sustainable Fleet**: Support sustainable City vehicles and equipment.
- **Policy SUS-4.1, Green Public Facilities**: Incorporate green building techniques in the site design, construction, and renovation of public projects.
- **Policy SUS-5.2, Energy Efficient Design**: Support the inclusion of energy efficient design and renewable energy technologies in public and private projects.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

Butte County 2021 Climate Action Plan

The *Butte County 2021 Climate Action Plan* (Placeworks 2021) was adopted on December 14, 2021. Strategies in the climate action plan not only result in a reduction of GHG emissions countywide, but they increase overall sustainability and quality of life in the county by facilitating increased access to transportation and services, upgrades to infrastructure that build resiliency for the entire community, energy independence and affordability, and supporting broader economic development initiatives.

The Proposed Project will be held to the strategies in this climate action plan.

City of Chico Climate Action Plan Update

The *City of Chico Climate Action Plan Update* (Rincon Consultants 2021) was adopted on October 19, 2021. Measures in the climate action plan that would result in a reduction of GHG emissions are related to energy efficiency, renewable energy, sustainable transportation, development patterns, solid waste, water, urban trees and greenspace, and community engagement.

The Proposed Project will be held to the strategies in this climate action plan.

3.6.3 Method of Analysis

This section describes the methods used to analyze energy impacts within the study area.

3.6.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on energy if it would:

- **Impact ENG-1:** Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance
- **Impact ENG-2:** Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

3.6.3.2 Approach to Analysis

Impacts on energy were identified qualitatively and quantitatively based on the Proposed Project's potential to result in an increased demand for energy resources.

The analysis of environmental effects focuses on foreseeable changes to energy resources in the context of effects listed in Section 3.6.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

Construction, Operation, and Maintenance

The following methods were used to evaluate the potential impacts of the Proposed Project on energy resources:

- Analysis of diesel and electricity consumption during construction of the Proposed Project.
- Analysis of the operational electricity requirements of the Proposed Project.

- Analysis of the Proposed Project's consistency with all plans, policies, and regulations listed in Section 3.6.2, Regulatory Framework.

For the purposes of this analysis, information was collected on energy resources using the following sources:

- California Energy Consumption Estimates by Source and by End-Use (US Energy Information Administration 2021a, 2021b)
- CEC's Statewide Electricity Generation (CEC 2021a)
- CEC's Electricity Consumption by County (CEC 2021b)
- California's Gasoline Consumption and Diesel Fuel Consumption (California Department of Tax and Fee Administration 2021a, 2021b)
- Butte County VMT Estimates (BCAG 2020a)
- Butte County Gasoline and Diesel Consumption Estimates (EMFAC 2021)

3.6.4 Impact Analysis

This section includes an analysis of the Proposed Project's potential to result in wasteful, inefficient, or unnecessary consumption of energy resources.

3.6.4.1 Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance (Less than Significant Impact)

The Proposed Project will result in an increased demand for energy during its construction, operation, and maintenance. Primary sources of energy use will be electricity and transportation fuels.

Construction

During construction, energy consumption in the form of transportation fuel (gasoline and diesel) would result from operation of construction equipment, hauling trucks, and worker commute vehicles. On-road vehicles, including concrete haul trucks, soil truck haul trips, and other truck materials delivery trips are expected to be the primary source of fuel use, followed by fuel demand of construction equipment and then worker vehicles. Additional energy in the form of electricity would be used for lighting and on-site tools and equipment including, but not limited to, saw cutting machines and generators.

Statewide regulations, such as AB 1493 and Advanced Clean Cars Program, are aimed at improving on-road vehicle fuel efficiency, resulting in reduced fuel consumption. Although the In-Use Off-Road Diesel-Fueled Fleets Regulation is aimed at reducing emissions from off-road diesel vehicles, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling. Refer to Section 3.6.2 for a discussion of statewide legislation aimed at reducing transportation fuel demand. Conformance of vehicles and equipment to these statewide regulations is required and would avoid wasteful, inefficient, or unnecessary consumption of transportation fuel during construction.

Temporary power for lighting and electrical equipment would be readily available on-site because the Proposed Project area is already served by the Pacific Gas and Electric Company (PG&E). Many construction activities associated with the Proposed Project would occur concurrently, resulting in an

increase in electricity demand in the study area. This increase in electricity consumption would be temporary as it would be limited to the construction duration and small in comparison to the total energy demand in Butte County, which was 1,385 million kWh in 2020 (CEC 2021b). Therefore, construction of the Proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy and impacts would be less than significant.

Operation and Maintenance

The SSA includes approximately 1,500 parcels (out of the total 11,500 total parcels within the Town limits). Each septic tank is pumped out every 3 to 5 years. It is assumed that septic tanks are pumped out on an average of 4 years, or 375 days per year. As discussed in Section 2.4, Existing Wastewater Treatment Facilities, septage from the Town is currently hauled to a septage treatment facility in Lincoln, which is located up to 75 miles (or 150 miles round trip) from the Proposed Project. As a result, septage hauling trucks currently drive a total of 56,250 miles per year (150 miles/day x 375 days/year). Based on a fuel consumption of 2.53 miles per gallon of gasoline for septage hauling trucks (US Department of Energy 2020), emptying the existing septic systems for 1,500 parcels would consume 22,233 gallons of gasoline per year. Once the Proposed Project is operational, the 1,500 parcels would no longer require septage hauling, which could result in a beneficial reduction of impacts on gasoline fuel consumption in the study area.

Once constructed and in operation, the Proposed Project would use energy for the collection and treatment of wastewater. Refer to Section 2.9, Energy Consumption during Operations, for a detailed discussion of energy demand during operation of the Proposed Project. As discussed in Section 2.9, the pump stations associated with the Core Collection System would consume electricity to move wastewater to higher elevations. Based on an average flow of 0.464 mgd and standard pump efficiency, pump stations to be installed in the Core Collection System would consume approximately 601,000 kWh/year of electrical energy. Refer to Appendix I Pump Station Energy Consumption Calculation for the detailed energy demand calculations. This increase in electricity consumption represents only 0.04 percent (601,000 kWh / 1,385 million kWh) of the total energy demand in Butte County.

As presented in Section 2.9, the Chico WPCP is currently operating at 6.3 mgd (Chico WPCP monitoring data, RWQCB 2021). The Proposed Project would add an additional 0.109 mgd of wastewater to the Chico WPCP influent at the time of initial connection (estimated for 2026) and 0.464 mgd at build-out if the Extended Collection System component were implemented (estimated for 2057). Chico WPCP operates a 1.1-megawatt, solar photovoltaic facility providing electric power to the WPCP, which reduces the plant's use of utility power by approximately 35 percent. Further, an on-site 335-kilowatt co-generator uses methane produced by the plant processes as a fuel source to produce electricity, which is in turn used at the WPCP (City of Chico 2021a). Therefore, energy efficiency and sustainability measures have already been built into the design of the Chico WPCP. While the Proposed Project would increase the amount of energy needed to treat wastewater at the existing Chico WPCP, it would be well within current capacity at the time of connection and would not result in an inefficient use of energy.

Therefore, operation and maintenance of the Proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy and impacts would be less than significant.

3.6.4.2 Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (No Impact)

Construction, Operation, and Maintenance

As discussed under Impact ENG-1, the Proposed Project would result in an increase in energy demand during its construction, operation, and maintenance. A multitude of state regulations and legislative acts are aimed at improving vehicle fuel efficiency, improving energy efficiency, and enhancing energy conservation. These include, but are not limited to, AB 1493, Advanced Clean Cars Program, In-Use Off-Road Diesel-Fueled Fleets Regulation, SB 100, and 2017 Scoping Plan. Refer to Section 3.6.2 for a discussion of statewide legislation aimed at reducing energy demand and/or improving energy efficiency. The Proposed Project will be subject to compliance with these adopted regulations. Therefore, the Proposed Project would not conflict with a state or local plan for renewable energy or energy efficiency, resulting in no impact.

3.6.5 Impacts Summary

Table 3.6-1 summarizes the energy impacts of the Proposed Project.

Table 3.6-1. Energy Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance	LTS	N/A	LTS
Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	NI	N/A	NI

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

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3.7 Geology, Soils, and Paleontological Resources

This section describes the environmental setting and regulatory framework for geology, soils, and paleontological resources. This section also identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the analysis focuses on geologic hazards, soil erosion, and destruction of paleontological resources in the study area as a result of the Proposed Project's construction, operation, and maintenance. The study area for geology, soils, and paleontological resources refers to the areas within and directly adjacent to the Town of Paradise and areas of unincorporated Butte County and Chico where the proposed pipeline alignment runs.

3.7.1 Environmental Setting

3.7.1.1 Regional Geology

The Paradise area is located somewhat intermediately between the Cascade Geomorphic Province to the north and the Sierra Nevada Geomorphic Province to the south. The geologic characteristics of both systems are manifested in the terrestrial character of the Paradise region. The Cascade system is primarily composed of Cenozoic (or geologically newer) volcanic rocks, including Pliocene intrusions. The geologically older Sierra Nevada system is characterized by massive intrusions of Mesozoic granite into various layers of overlying rocks of varied origin. The majority of the Paradise area is underlain by Pliocene volcanic rocks with those of the Tuscan Formation dominating the northern, southern, and southeastern areas (Town of Paradise and Quad Consultants 2008).

The Chico area is located within the Great Valley Geomorphic Province, which extends 400 miles north to south and 60 miles east to west and is encompassed by the Coast Ranges (metamorphic), the Klamath Ranges (metamorphic), the Cascade Range (volcanic), and the Sierra Nevada Range (granitic and metamorphic). Geophysical evidence suggests that the Great Valley is underlain at depth with granitic rocks of the Sierra Nevada Province. The majority of rocks and deposits found within the Great Valley Geomorphic Province are sedimentary (City of Chico 2010) and includes those of the Modesto Formation, which is located generally along the eastern margin of the Great Valley and dates to the late Pleistocene, that is,126,000–11,700 years ago (Saucedo and Wagner 1992).

3.7.1.2 Regional Topography

The Paradise area is located on the western flanks of the Cascade-Sierra Nevada mountain system. The general elevation of the Paradise area ranges between 1,200 feet above sea level in the southern portion to 2,200 feet above sea level in the northeast. The Paradise area is gently sloping towards the southwest with average slopes of approximately 4 percent. Steeper slopes occur to the west, adjacent to Butte Creek Canyon; to the east, along the margin of the canyon of the West Branch of the Feather River; and in localized stream incisements such as Berry Canyon and Clear Creek to the south. Nearly 88 percent of Paradise sits on slopes of less than 30 percent (Town of Paradise and Quad Consultants 2008).

The topography of the Chico area varies from relatively gentle sloped terrain in the western portion to increasingly hilly terrain at the eastern edge of Chico and into the surrounding unincorporated portions of the Chico area. Average elevation throughout Chico is approximately 230 feet above mean sea level (City of Chico 2010).

3.7.1.3 Seismicity

California is a seismically active region; seismic activity is concentrated in tectonically active regions, such as the Pacific Coast, the Sierra Nevada Range, and the Cascade Range. The active tectonism in these regions is due to movements of the earth's tectonic plates. The strength of an earthquake is generally expressed in two ways: magnitude and intensity. Magnitude is commonly measured on the Richter scale, while intensity is measured on the Modified Mercalli Intensity scale. The Richter scale magnitude is a measure of the energy released at the focus of the earthquake. The Modified Mercalli scale measures the intensity on a scale of I to XII of ground shaking as determined from observations of an earthquake's effect on people, structures, and the earth's surface.

Butte County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period (Butte County 2010). This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, that is, light to strong. As a result, the California Geological Survey has defined the entire Butte County as a seismic hazard zone (Butte County 2010).

3.7.1.4 Site Geology

Based on a review of DOC's Geologic Map of California, the study area is underlain by the following geologic units: Tertiary pyroclastic and volcanic mudflow deposits, and Quaternary alluvium and marine deposits (DOC 2015b). The Quaternary alluvium and marine deposits are described as alluvium, lake, playa, and terrace deposits that are unconsolidated and semi-consolidated (DOC 2015b). The volcanic rocks are of Tertiary age, while the marine and non-marine (continental) sedimentary rocks are of Pleistocene-Holocene age (DOC 2015b).

3.7.1.5 Geologic Hazards

Faults and Fault Rupture

The California Geological Survey has established the following fault classifications based on the age of last displacement:

- Faults that have shown movement within the last 200 years are historic faults.
- Faults that have shown movement in the past 11,000 years are Holocene faults.
- Faults that have shown movement within the last 700,000 years are Late Quaternary faults.
- Faults that have shown movement within the last 1.6 million years are Quaternary faults.
- Faults that lack recognized evidence of Quaternary displacement or show evidence of no displacement during the Quaternary time are Pre-Quaternary faults.

The classification of "active" is applied to historic and Holocene age faults; "potentially active" is applied to Quaternary and Late Quaternary age faults; and "inactive" is applied to Pre-Quaternary age faults. These classifications were developed by the California Geological Survey and were adopted by the Alquist-Priolo Earthquake Fault Zoning Act of 1972 to help delineate Special Studies Zones where detailed geologic investigations are required prior to development to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake induced ground failure.

The only fault in Butte County considered active and subject to the Alquist-Priolo Earthquake Fault Zoning Act is the Cleveland Hills fault, which runs in a nearly north-south orientation directly south of Lake Oroville (Butte County 2010). This fault last ruptured in 1975 causing an earthquake that measured 5.7 on the Richter scale and had an estimated Mercalli Scale rating of up to VII, which indicates that it was felt by all and damage was minor to moderate (Butte County 2010).

The study area is not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2019a). No known active faults traverse the study area.

Ground Shaking

Ground shaking is a general term referring to the motion of the earth's surface resulting from an earthquake. Ground shaking is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of an earthquake, distance from the epicenter, and local geologic conditions.

The closest mapped active fault is the Cleveland Hills fault, which is located approximately 22 miles to the east of the study area. A review of the *Earthquake Shaking Potential for California* map (Branum et al. 2016) indicates that the potential for ground shaking during earthquakes within the study area is low.

Liquefaction

Liquefaction is a process in which uniform, clean, loose, fine sandy, and silty sediments below the water table temporarily lose strength during an earthquake and behave as a viscous liquid rather than a solid. Liquefaction can cause the soil beneath a structure to lose strength, which may result in the loss of foundation-bearing capacity. This loss of strength commonly causes the structure to settle or tip. Loss of bearing strength can also cause light buildings with basements, buried tanks, and foundation piles to rise buoyantly through the liquefied soil.

According to Figure 4-106 in the *Butte County Local Hazard Mitigation Plan Update* (Butte County 2019b), liquefaction potential in the study area is as follows: generally low with Paradise, generally low and generally moderate within unincorporated Butte County, and generally moderate within Chico.

Landslides

Landslides refer to a wide variety of processes that result in the perceptible downward and outward movement of soil, rock, and vegetation under gravitational influence. Landslides may be triggered by both natural and human-induced changes in the environment that result in slope instability. The susceptibility of an area to landslides depends on many variables including steepness of slope, type of slope material, structure and physical properties of materials, water content, amount of vegetation, and proximity to areas undergoing rapid erosion or changes caused by human activities such as mining, construction, and changes to surface drainage areas.

According to Figure 4.6-2 in the *Butte County General Plan 2030 EIR* (Butte County 2010), landslide potential in the study area is as follows: low to moderate and moderate within Paradise, moderate and low to none within unincorporated Butte County, and low to none within Chico.

Expansive Soils

Expansive soils shrink and swell with changes in moisture content as the clay minerals in these soils expand and contract. Expansive soils contain clay minerals that greatly increase in volume when they absorb water and shrink when they dry. When structures are located on expansive soils, foundations have the tendency to rise during the wet season and shrink during the dry season. This movement can create new stresses on various sections of the foundation and connected utilities and can lead to structural failure and damage to infrastructure. Cracked foundations, floors, and basement walls are typical types of damage done by swelling soils. Damage to the upper floors of the building can occur when motion in the structure is significant.

According to Figure 4.6-3 in the *Butte County General Plan 2030 EIR* (Butte County 2010), expansive potential in the study area is as follows: low within Paradise, low and moderate within unincorporated Butte County, and moderate within Chico.

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface owing to subsurface movement of earth materials often caused by groundwater or oil extraction. The potential effects of land subsidence include differential changes in elevation and gradients of stream channels, drain and water transport structures, failure of water well casings due to compressive stresses generated by compaction of aquifer system, and compressional strain in engineering structures and houses (Peterson 2021).

To date, no land subsidence has been recorded in Butte County (Peterson 2021). Land subsidence monitoring occurs on a continuous basis within Butte County, as required by Chapter 33A, Basin Management Objectives, of the Butte County Code of Ordinances (Peterson 2021).

3.7.1.6 Paleontological Resources

Paleontological resources are considered to be significant if they are scientifically judged to provide important data concerning key research interests in the study of taxonomy, evolution, biostratigraphy, paleoecology, or taphonomy. Although a paleontological records search with the University of California, Museum of Paleontology was not conducted for the Proposed Project, sufficient data are available to assess the potential for paleontological resources.

Best current professional practices to characterize paleontological sensitivity are guided by the Bureau of Land Management's Potential Fossil Yield Classification System, which has a multi-level scale based on demonstrated yield of fossils (Bureau of Land Management 2016). Vertebrate fossils are known to occur intermittently but with low predictability in the Modesto Formation, resulting in a Potential Fossil Yield Classification ranking of Class 3 or moderate. The mitigated negative declaration/environmental assessment prepared by Caltrans for the State Route 70 Corridor Improvements Project noted 137 previously recorded Modesto Formation fossils, including 22 vertebrate fossils, in Butte County (Caltrans 2018).

The reduced sensitivity within the Quaternary alluvial deposits on the floor of the Great Valley (Class 2 – low) and the Pliocene volcanic rocks along Skyway and underlying Paradise (Class 1 – very low) generally do not precipitate additional management measures. Late quaternary sediments are typically too young for fossilization and volcanic flows generally incinerate organic matter, precluding

preservation of paleontological resources. However, it is important to note that the descriptions for the class assignments serve as guidelines rather than as strict definitions and, further, the system applies to the entirety of the geologic formation. The classification is not intended to be applied to specific paleontological localities or small areas within units.

3.7.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on geology, soils, and paleontological resources. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.7.2.1 Federal

Earthquake Hazards Reduction Act

In October 1977, the United States Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. The Earthquake Hazards Reduction Act established the National Earthquake Hazard Reduction Program. The purpose of this program is to reduce the risks to life and property in the United States from earthquakes through the establishment and maintenance of an effective national earthquake risk reduction program. Member agencies in the National Earthquake Hazard Reduction Program are the USGS, the National Science Foundation, the Federal Emergency Management Agency (FEMA), and the National Institute of Standards and Technology.

The Proposed Project will be held to the standards and programs set forth by this act.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act was passed on March 30, 2009. The Paleontological Resources Preservation Act is intended to preserve, manage, and protect paleontological resources on lands administered by the Bureau of Land Management, the Bureau of Reclamation, the National Parks Service, and the USFWS.

The Proposed Project will be held to the standards set forth by the Paleontological Resources Preservation Act.

3.7.2.2 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC Sections 2621 to 2630) was enacted in 1972 to reduce the hazard of surface faulting to structures designed for human occupancy. The act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and issue appropriate maps, which are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, the permitting agency must require a geologic investigation to demonstrate that buildings intended for human habitation would not be constructed on active faults.

The Proposed Project will be held to the standards set forth by this act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690 to 2699.6) directs the DOC to identify and map areas prone to earthquake liquefaction hazards, earthquake-induced landslides, and amplified ground shaking. The act requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development.

The Proposed Project will be held to the standards set forth by this act.

General Permit for Construction Activities

The State of California adopted the Construction General Permit (CGP), Order No. 2012 0006 DWQ, amending Order No. 2009 0009 DWQ, effective July 17, 2012. The CGP regulates construction site stormwater management. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the general permit for discharges of stormwater associated with construction activity.

Permit applicants are required to submit a Notice of Intent to the SWRCB and to prepare a SWPPP. The SWPPP identifies best management practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on pollutants. The BMPs identified are directed at implementing both sediment and erosion control measures and other measures to control chemical contaminants.

The Proposed Project will be held to the requirements of the CGP.

Paleontological Resources

CEQA includes in its definition of historical resources "…any object [or] site …that has yielded or may be likely to yield information important in prehistory…" (14 California Code of Regulations [CCR] Section 15064.5[a][3]), which is typically interpreted as including fossils and other paleontological resources. More specifically, destruction of a "…unique paleontological resource or site or unique geologic feature…" constitutes a significant impact under CEQA pursuant to CEQA Guidelines Appendix G. Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in the project; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring, data recovery excavation, and/or avoidance.

The Proposed Project will be held to the definitions in the CEQA Guidelines.

Public Resources Code Section 5097.5

PRC Section 5097.5 states that no person will knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.

The Proposed Project will be held to the regulations in PRC Section 5097.5.

Society of Vertebrate Paleontology

The Society of Vertebrate Paleontology has guidance for assessing and mitigating paleontological resources that could potentially be impacted from land development. This guidance is included in the *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (Society of Vertebrate Paleontology 2010). As part of the assessment process for paleontological resources, the Society of Vertebrate Paleontology's guidance groups rock units into a high, undetermined, low, or no potential category for containing significant paleontological resources. These categories then determine the level of mitigation required, or further assessment prior to construction, for adequate protection or salvage of paleontological resources within a project area.

The Proposed Project will be held to the Society of Vertebrate Paleontology's guidance.

3.7.2.3 Regional and Local

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to geology, soils, and paleontological resources that are relevant to the Proposed Project:

- **Policy SP-15:** Development projects should be designed to minimize soil erosion and will be required to comply with all Town of Paradise-adopted soil erosion standards maintained by the Paradise Community Development Department.
- **Policy SP-16:** The Town should require all development proposals on sites that contain slopes exceeding 20 percent, and/or which border or include significant and sensitive stream courses or natural drainageways, to include programs for replanting and slope stabilization, erosion control plans, and to incorporate designs which minimize grading and cut-and-fill.
- **Policy SP-17:** Building on slopes in excess of 30 percent should not be permitted.

The Proposed Project will be held to the policies in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to geology, soils, and paleontological resources that are relevant to the Proposed Project:

- **Policy HS-P6.1:** Appropriate detailed seismic investigations will be completed for all public and private development projects in accordance with the Alquist-Priolo Earthquake Fault Zoning Act.
- **Policy HS-P7.1:** Site-specific geotechnical investigations will be required to assess landslide potential for private development and public facilities projects in areas rated "Moderate to High" and "High" in Figure HS-4 or the most current available mapping
- **Policy HS-P8.1:** Site-specific geotechnical investigations will be required to assess erosion potential for private development projects and public facilities in areas rated "Very High" in Figure HS-7 or the most current available mapping.
- **Policy HS-P9.1:** Site-specific geotechnical investigations will be required to assess risks from expansive soils for private development projects and public facilities in areas rated "High" in Figure HS-8 or the most current available mapping.

- **Policy COS-P14.2:** As part of CEQA and NEPA projects, evaluations of surface and subsurface cultural resources in the County will be conducted. Such evaluations should involve consultation with the Northeast Information Center.
- **Policy COS-P15.2:** Any archaeological or paleontological resources on a development project site will be either preserved in their sites or adequately documented as a condition of removal. When a development project has sufficient flexibility, avoidance and preservation of the resource will be the primary mitigation measure.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policy related to geology, soils, and paleontological resources that is relevant to the Proposed Project:

- **Policy S-3.1, Potential Structural Damage:** Prevent damage to new structures caused by seismic, geologic, or soil conditions.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

Grading Ordinances

Chapter 15.02 – 2019 California Building Standards Code of the Town's municipal code requires that a grading permit be obtained from the Town Engineer before any grading, clearing, or grubbing activities (Town of Paradise 2022c). Application for a grading permit requires submittal of a grading plan. The grading plan, and accompanying site map, will show the following: existing and proposed contours, proposed limits of cuts and fills and other earthwork, existing off-site structures and other off-site improvements, public and private easements of record, typical sections of areas to be graded, all proposed uses for the site, and any other special features.

Chapter 13 – Grading and Mining of Butte County's municipal code states that the application for a grading permit will include the following: location map, plot plan, description of the work to be done and materials to be used, location of all drainage to and from the site, location of culverts and natural watercourses, details of proposed drainage structures, description of the methods to be used for erosion and sediment control, and locations of anticipated stockpile areas (Butte County 2021c).

Chapter 16.28 Grading Regulations – Permits of Chico's municipal code states that application for a grading permit requires submittal of a grading plan (City of Chico 2021b). The grading plan will include detailed plans, dimensions, and grading specifications. If required by the building official, a soils engineering report and/or engineering geology report must be prepared, and any recommendations included in these reports will be a part of the grading plan submittal.

The Proposed Project will be held to these grading permit requirements.

3.7.3 Method of Analysis

This section describes the methods used to analyze geology, soils, and paleontological resources impacts within the study area.

3.7.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on geology, soils, and paleontological resources if it would:

- **Impact GEO-1:** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

    1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
    2. Strong seismic ground shaking;
    3. Seismic-related ground failure, including liquefaction; and/or
    4. Landslides.

- **Impact GEO-2:** Result in substantial soil erosion or the loss of topsoil
- **Impact GEO-3:** Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
- **Impact GEO-4:** Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property
- **Impact GEO-5:** Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater
- **Impact GEO-6:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

3.7.3.2 Approach to Analysis

Impacts were identified qualitatively based on the Proposed Project's potential to result in geologic, seismic, and soil-related hazards.

The adverse effects on geology, soils, and paleontological resources are evaluated in the context of criteria listed in Section 3.7.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

Construction, Operation, and Maintenance

Geology and Soils

The methods used for analyzing impacts on geology and soils included review of information from published maps, and Town, City and County publications and reports pertaining to geology and soils in the study area. The primary data sources for impact analysis include the following:

- *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008)
- *Chico 2030 General Plan Update EIR* (City of Chico 2010)
- *Butte County General Plan 2030 EIR* (Butte County 2010)

- DOC's geologic maps, seismic hazard zone maps, ground shaking potential map, and other publications (DOC 2015b, 2019; Branum et al. 2016)
- *Butte County Local Hazard Mitigation Plan Update* (Butte County 2019b)

Paleontological Resources

The methods used for analyzing impacts on paleontological resources included a review of information from published geologic maps, scientific literature, and reports pertaining to paleontological resources in the study area. The primary data sources for impact analysis include the following:

- Geologic Map of the Chico Quadrangle (Saucedo and Wagner 1992)
- Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands (Bureau of Land Management 2016)
- Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (Society of Vertebrate Paleontology 2010)

Paleontological resources are considered to be significant and/or unique if one or more of the following criteria apply:

- The fossil is a type of specimen or member of a rare species.
- The fossil is complete, or it includes an element different from, or more complete than, those already known for its species.
- The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct.
- The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein.
- The fossils provide data regarding the development of biological communities or interaction between paleo-botanical and paleo-zoological biotas.
- The fossils demonstrate unusual or spectacular circumstances in the history of life.
- The fossils are unusually, uniquely, or exceptionally well preserved.
- The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important.

3.7.4 Impact Analysis

This section describes the potential environmental impacts resulting from implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to result in public safety and health risks from seismic and geologic hazards; result in substantial soil erosion; impacts related to soils incapable of supporting septic tanks; and destroy a unique paleontological resource. The geology, soils, and paleontological resources impact analysis focuses on impacts from construction, operation,

and maintenance of the Core Collection System, the Export Pipeline System, and the Extended Collection System.

3.7.4.1 Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (No Impact)

Construction, Operation, and Maintenance

The Cleveland Hills fault, which is located approximately 22 miles to the east of the study area, is the only fault in Butte County considered active and subject to the Alquist-Priolo Earthquake Fault Zoning Act. The study area is not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2019a). No known active faults traverse the study area. Therefore, the Proposed Project would not result in substantial adverse effects involving rupture of a known earthquake fault, resulting in no impact.

Mitigation. No mitigation required.

(b) Strong seismic ground shaking (Less than Significant Impact with Mitigation Incorporated)

Ground shaking is a general term referring to the motion of the earth's surface resulting from an earthquake. The closest mapped active fault is the Cleveland Hills fault, which is located approximately 22 miles to the east of the study area. A review of the *Earthquake Shaking Potential for California* map (Branum et al. 2016) indicates that the potential for ground shaking during earthquakes within the study area is low.

Construction

Ground disturbing activities during construction of the Core Collection System, Extended Collection System, and Export Pipeline System would include the use of vibration-generating equipment such as vibratory plate compactors, which may exacerbate ground shaking in the study area. Summaries of equipment, crews, and materials used in the modeling are included in Sections 2.5.1.3 and 2.5.2.4, for the Core Collection System and Export Pipeline System, respectively; it is assumed that equipment, crews, and materials for the Expanded Collection System would be similar in nature to the Core Collection System.

Therefore, construction of the Proposed Project may exacerbate ground shaking in the study area. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts involving ground shaking during construction of the Proposed Project to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards. Prior to construction, the Town will obtain the services of a qualified, licensed geotechnical engineer to prepare a design-level geotechnical report with specific recommendations to address geologic hazards, seismic safety, and soil conditions during construction.

The Town will review the geotechnical report with the geotechnical engineer to develop viable measures that will avoid or minimize risks associated with ground shaking, liquefaction, landslides, unstable soils, and expansive soils during construction. The Town will incorporate these measures into all contractor construction documentation as special conditions, which will be enforceable as contract provisions.

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts involving ground shaking during construction of the Proposed Project would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate ground shaking. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would not result in substantial adverse effects involving ground shaking, resulting in a less than significant impact.

Mitigation. No mitigation required.

(c) Seismic-related ground failure, including liquefaction (Less than Significant Impact with Mitigation Incorporated)

Liquefaction is a process in which uniform, clean, loose, fine sandy, and silty sediments below the water table temporarily lose strength during an earthquake and behave as a viscous liquid rather than a solid. According to Figure 4-106 in the *Butte County Local Hazard Mitigation Plan Update* (Butte County 2019b), liquefaction potential in the study area is as follows: generally low with Paradise, generally low and generally moderate within unincorporated Butte County, and generally moderate within Chico.

Construction

Ground disturbing activities during construction of the Core Collection System and Export Pipeline System would include the use of vibration-generating equipment such as vibratory plate compactors, which may exacerbate liquefaction in the study area. Similar to the Core Collection System, the use of vibration-generating equipment for ground disturbing activities during construction of the Extended Collection System may exacerbate liquefaction in the study area.

Therefore, construction of the Proposed Project may exacerbate liquefaction in the study area. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts involving liquefaction during construction of the Proposed Project to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Impact GEO-1(b) for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts involving liquefaction during construction of the Proposed Project would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities would occur in previously disturbed areas (mostly within paved roads), resulting in no potential to exacerbate liquefaction. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would not result in substantial adverse effects involving liquefaction, resulting in a less than significant impact.

Mitigation. No mitigation required.

(d) Landslides (Less than Significant Impact with Mitigation Incorporated)

Landslides refer to a wide variety of processes that result in the perceptible downward and outward movement of soil, rock, and vegetation under gravitational influence. According to Figure 4.6-2 in the *Butte County General Plan 2030 EIR* (Butte County 2010), landslide potential in the study area is as follows: low to moderate and moderate within Paradise, moderate and low to none within unincorporated Butte County, and low to none within Chico.

Construction

Ground disturbing activities during construction of the Core Collection System and Export Pipeline System would include the use of vibration-generating equipment such as vibratory plate compactors, which may exacerbate landslides in the study area. Similar to the Core Collection System, the use of vibration-generating equipment for ground disturbing activities during construction of the Extended Collection System may exacerbate landslides in the study area.

Therefore, construction of the Proposed Project may exacerbate landslides in the study area. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts involving landslides during construction of the Proposed Project to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Impact GEO-1(b) for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts involving landslides during construction of the Proposed Project would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate landslides. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would not result in substantial adverse effects involving landslides, resulting in a less than significant impact.

Mitigation. No mitigation required.

3.7.4.2 Impact GEO-2: Result in substantial soil erosion or the loss of topsoil (Less than Significant Impact)

Construction

Construction activities often increase the runoff potential of disturbed areas. Construction activities, including ground disturbance, excavation, and paving, associated with the construction of the Core Collection System, the Export Pipeline System, and the Extended Collection System would remove ground cover and expose and disturb soil. Exposed and disturbed soils are vulnerable to wind and water erosion.

Construction activities will conform to the federal, state, and local regulations related to soils described in Section 3.7.2. As part of the Proposed Project, the Town will obtain coverage under the CGP from the SWRCB. The Town will be required to prepare a SWPPP to comply with the SWRCB's CGP. The SWPPP will identify BMPs to be implemented on-site to minimize soil erosion during construction, including sediment and erosion control measures and other measures to control chemical contaminants. The SWPPP will also contain a visual monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a waterbody listed on the CWA 303(d) list for sediment.

In addition, the Proposed Project will be required to comply with the grading permit requirements of Paradise, Butte County, and Chico. The grading permit process would ensure that erosion control measures are incorporated into the Project plans and implemented during construction.

Based on these factors, impacts from soil erosion or the loss of topsoil during construction of the Proposed Project would be less than significant.

Mitigation. No mitigation required.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities that could expose or disturb soil. Therefore, operation and maintenance of the Proposed Project would not result in substantial soil erosion or the loss of topsoil, resulting in no impact.

Mitigation. No mitigation required.

3.7.4.3 Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (Less than Significant Impact with Mitigation Incorporated)

Land subsidence results in a slow-to-rapid downward movement of the ground surface as a result of the vertical displacement of the ground surface, usually resulting from groundwater withdrawal. To date, no land subsidence has been recorded in Butte County (Peterson 2021). As previously noted, landslide potential in the study area is as follows: low to moderate and moderate within Paradise, moderate and low to none within unincorporated Butte County, and low to none within Chico (Butte County 2010). Also previously discussed, liquefaction potential in the study area is as follows: generally low with Paradise, generally low and generally moderate within unincorporated Butte County, and generally moderate within Chico (Butte County 2019b).

Construction

Ground-disturbing activities during construction of the Core Collection System and Export Pipeline System would include the use of vibration-generating equipment such as vibratory plate compactors, which may exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse in the study area. Similar to the Core Collection System, the use of vibration-generating equipment for ground disturbing activities during construction of the Extended Collection System may exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse in the study area.

Therefore, construction of the Proposed Project may exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse in the study area. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction of the Proposed Project to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Impact GEO-1(b) for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction of the Proposed Project would be less than significant.

Operation and Maintenance

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during operation and maintenance of the Proposed Project would be less than significant.

Mitigation. No mitigation required.

3.7.4.4 Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property (Less than Significant Impact with Mitigation Incorporated)

Expansive soils shrink and swell with changes in moisture content as the clay minerals in these soils expand and contract. According to Figure 4.6-3 in the *Butte County General Plan 2030 EIR* (Butte County 2010), expansive potential in the study area is as follows: low within Paradise, low and moderate within unincorporated Butte County, and moderate within Chico.

Construction

Ground disturbing activities during construction of the Core Collection System and Export Pipeline System would include the use of vibration-generating equipment such as vibratory plate compactors, which may exacerbate risks associated with expansive soils in the study area. Similar to the Core Collection System, the use of vibration-generating equipment for ground disturbing activities during construction of the Extended Collection System may exacerbate risks associated with expansive soils in the study area.

Therefore, construction of the Proposed Project may exacerbate risks associated with expansive soils in the study area. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts associated with expansive soils during construction of the Proposed Project to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Impact GEO-1(b) for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts associated with expansive soils during construction of the Proposed Project would be less than significant.

Operation and Maintenance

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate risks associated with expansive soils. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to expansive soils during operation and maintenance of the Proposed Project would be less than significant.

Mitigation. No mitigation required.

3.7.4.5 Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (No Impact)

Construction, Operation, and Maintenance

The Proposed Project includes a Core Collection System that would replace individualized septic systems within the Paradise sewer service area and provide a connection to the Chico WPCP via an Export Pipeline System. The Proposed Project also includes an Extended Collection System, which would allow for additional parcels within the Town limits to apply to connect to the sewer service area on a first-come, first-served basis up to the limits of the sewer system capacity. No portion of the Proposed Project incorporates septic tanks or alternative wastewater disposal systems.

If the Project is approved and implemented, up to 1,500 parcels within the sewer service area would be converted to the sewer system and would no longer use septic tanks. The Proposed Project would serve as a new wastewater management solution to address the economic and environmental concerns of the current failed or failing septic systems. Under existing conditions, the privately owned septic tanks and leach fields with subsurface disposal systems have resulted in the continual exceedance of soil capacities to absorb and treat wastewater. Overall, there would be beneficial impacts on soils by replacing septic systems with a wastewater treatment solution. Therefore, the Proposed Project would not locate septic tanks or alternative wastewater disposal systems on soils incapable of adequate support, resulting in no impact.

Mitigation. No mitigation required.

3.7.4.6 Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant Impact with Mitigation Incorporated)

As noted above in Section 3.7.1.6, paleontological sensitivity with the Modesto Formation in the study area varies from very low along Skyway and Paradise to moderate in and around the Chico area.

Construction

Excavations associated with the Core and Extended Collection Systems are unlikely to reach a sufficient depth to encroach on the formation. However, due to the depth of ground disturbance associated with microtunneling and/or HDD during construction of the Export Pipeline System, the Proposed Project has the potential to intersect with the geological unit. Although the likelihood of

encountering a paleontological resource during construction is low for most of the study area, ground disturbance during construction activities could disturb unknown paleontological resources and impacts are considered potentially significant.

Mitigation. To minimize potentially significant impacts on paleontological resources during construction of the Proposed Project to a less than significant level, mitigation measure **MM-GEO-2** will be implemented.

MM-GEO-2: Inadvertent Discovery Protocol. If paleontological resources are discovered during earth-moving activities, the construction crew will immediately cease work within a 50-foot radius of the find and notify the Town's Project Manager. Construction work will be halted until the collection of fossil specimens has been completed. The collection and treatment actions will occur after recovery of specimens and once scientific value can be confirmed and documented. If fossils are found, treatment actions will include sampling for microfossils, conducting paleomagnetic analysis, identifying and preparing fossils, arranging for a repository, and preparing a final report.

Significance after Mitigation. With implementation of **MM-GEO-2**, impacts on paleontological resources during construction of the Proposed Project would be less than significant.

Operation and Maintenance

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact paleontological resources. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts on paleontological resources during operation and maintenance of the Proposed Project would be less than significant.

Mitigation. No mitigation required.

3.7.5 Impacts Summary

Table 3.7-1 summarizes the geology, soils, and paleontological resources impacts of the Proposed Project.

Table 3.7-1. Geology, Soils, and Paleontological Resources Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact GEO-1(a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	NI	N/A	NI
Impact GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic	SI	MM-GEO-1	S/M

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
ground shaking			
Impact GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	SI	MM-GEO-1	S/M
Impact GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	SI	MM-GEO-1	S/M
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	LTS	N/A	LTS
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	SI	MM-GEO-1	S/M
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	SI	MM-GEO-1	S/M
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	NI	N/A	NI
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	SI	MM-GEO-2	S/M

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.7.6 References

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3.8 Greenhouse Gas Emissions

This section describes the environmental setting and regulatory framework for GHG emissions, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the analysis focuses on emissions of GHGs in the study area during construction, operation, and maintenance of the Proposed Project. GHG emissions effects are not localized to areas where they are produced. Climate change is a global phenomenon resulting from the combined effects of GHG emissions produced worldwide. While the true study area affected by GHG emissions is global, for purposes of this PEIR, the study area is considered as the State of California.

3.8.1 Environmental Setting

3.8.1.1 Climate Change and GHG Emissions

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and the World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are concerned primarily with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1,1,1,2 tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, fossil fuel combustion accounted for 92.4 percent of CO_2 emissions in 2019 (USEPA 2021b). Transportation was the largest emitter of CO_2 in 2019 followed by electric power generation (USEPA 2021b). In California, transportation was the largest source of GHG emissions in 2019, followed by electric power (ARB 2021d).

3.8.1.2 GHG Emissions Inventories

An emissions inventory that identifies and quantifies the primary human generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes recent information on global, national, California, and local GHG emission inventories.

Global Emissions

Worldwide emissions of GHGs in 2018 were 33.51 billion metric tons (MT) of carbon dioxide equivalent (CO_2e) per year (International Energy Agency 2021). Global estimates are based on country inventories developed as part of programs of the United Nations Framework Convention on Climate Change.

Federal Emissions

In 2019, total US emissions of GHGs were 6,558.3 million MT of CO_2e (USEPA 2021b). Total US emissions increased by 1.8 percent from 1990 to 2019, down from a high of 15.6 percent above 1990 levels in 2007. Emissions decreased from 2018 to 2019 by 1.7 percent (113.1 million MT CO_2e). Net

emissions (including sinks) were 5,769.1 million MT of CO_2e. Overall, net emissions decreased 1.7 percent from 2018 to 2019 and decreased 13 percent from 2005 levels. Between 2018 and 2019, the decrease in total GHG emissions was largely driven by the decrease in CO_2 emissions from fossil fuel combustion. The decrease in CO_2 emissions from fossil fuel combustion was a result of a 1 percent decrease in total energy use and reflects a continued shift from coal to less carbon intensive natural gas and renewables in the electric power sector.

California Emissions

The *California Greenhouse Gas Emissions for 2000 to 2019: Trends of Emissions and Other Indicators* (ARB 2021d) is an important tool in tracking progress of California's climate programs toward achieving the statewide GHG goals. In 2019, emissions from GHG emitting activities statewide were 418.2 million MT of CO_2e, 7.2 million MT of CO_2e lower than 2018 levels and almost 13 million MT of CO_2e below the 2020 GHG target of 431 million MT of CO_2e (ARB 2021d). Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2016, statewide GHG emissions dropped below the 2020 GHG target and have remained below the target since then.

Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 tons per person to 10.5 tons per person in 2019, a 25 percent decrease (ARB 2021d). Overall trends in the inventory also continue to demonstrate that the carbon intensity of California's economy; i.e., the amount of carbon pollution per million dollars of gross domestic product is declining. From 2000 to 2019, the carbon intensity of California's economy decreased by 45 percent while the gross domestic product increased by 63 percent. In 2019, gross domestic product grew 2.6 percent while the emissions per gross domestic product declined by 4.1 percent compared to 2018 (ARB 2021d).

3.8.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on GHG emissions. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.8.2.1 Federal

United States Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497, the U.S. Supreme Court found that GHGs are air pollutants covered by the Federal Clean Air Act. The court held that USEPA must determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

The Proposed Project will be held to the decision in *Massachusetts v. Environmental Protection Agency*.

3.8.2.2 State

Executive Order S-3-05

In June 2005, Governor Schwarzenegger issued EO S-3-05, which established the following GHG emissions reduction targets: 1) reduce GHG emissions to 2000 levels by 2010, 2) reduce GHG

emissions to 1990 levels by 2020, and 3) reduce GHG emissions to 80 percent below 1990 levels by 2050.

The Proposed Project will be held to the principles of EO S-3-05.

Assembly Bill 32

In September 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. California met its 2020 reduction goal in 2018.

The standards set forth by this act are obsolete and would not apply to the Proposed Project.

Executive Order B-30-15

On April 20, 2015, Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. California's emission reduction target of 40 percent below 1990 levels by 2030 would make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050.

The Proposed Project will be held to the principles of EO B-30-15.

Senate Bill 32

SB 32 was signed into law on September 8, 2016, and expands upon AB 32 to reduce GHG emissions. SB 32 sets into law the mandated GHG emissions target of 40 percent below 1990 levels by 2030 written into EO B-30-15.

The Proposed Project will be held to the standards set forth by SB 32.

Climate Change Scoping Plan

The 2017 Scoping Plan (ARB 2017) reflects the 2030 target as codified by SB 32 (Section 0 Energy). The 2017 Scoping Plan outlines several high-level objectives and goals for reducing GHG emissions in the water sector, including reducing the carbon footprint of water systems and water uses for both surface and groundwater supplies through integrated strategies that reduce GHG emissions while meeting the needs of a growing population, improving public safety, fostering environmental stewardship, aiding in adaptation to climate change, and supporting a stable economy. According to the 2017 Scoping Plan, the 2030 target of 260 million MT of CO_2e requires the reduction of 129 million MT of CO_2e, or approximately 33.2 percent, from the state's projected 2030 business-as-usual scenario emissions level of 389 million MT of CO_2e (ARB 2017).

The Proposed Project will be held to the targets in the 2017 Scoping Plan.

Assembly Bill 1493

AB 1493 of 2002 (Pavley Bill) required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In September 2004, pursuant to this directive, the ARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created the Pavley standards. In September 2009, the ARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created the Pavley II standards.

The Proposed Project will be held to the Pavley II standards.

Advanced Clean Cars Program

In January 2012, the ARB approved a new emissions control program called the Advanced Clean Cars Program for model years 2017 through 2025. The program includes the Zero Emission Vehicle Program, which is designed to achieve California's long-term emission reduction goals by requiring manufacturers to offer for sale specific numbers of zero-emission vehicles, which include battery electric, fuel cell, and plug-in hybrid electric vehicles.

The Proposed Project will be held to the goals of the Advanced Clean Cars Program.

3.8.2.3 Regional and Local

Butte County Air Quality Management District

BCAQMD is the air quality regulating authority in Butte County. The *CEQA Air Quality Handbook* (BCAQMD 2014) includes analysis requirements for construction and operational emissions. BCAQMD has not adopted thresholds of significance for GHG emissions. Instead, BCAQMD recommends thresholds for construction and operational GHG emissions: 1) compliance with a qualified GHG reduction strategy, or 2) compliance with the lead agency's threshold, or 3) consistency with the goals of AB 32.

Although considered during the analysis, BCAQMD has not adopted thresholds of significance for GHG emissions that apply to the Proposed Project.

Town of Paradise General Plan

The Town of Paradise General Plan (Town of Paradise and Quad Consultants 2008) does not contain any objectives or policies that specifically address GHG emissions. The Town has not yet adopted a climate action plan or any other plan to quantify existing GHG inventories or provide goals and measures to reduce GHG emissions in the Town.

Although considered during the analysis, the Town has not adopted any plans or policies for GHG emissions that apply to the Proposed Project. Therefore, the Town uses and complies with the provisions of federal and State regulations.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to GHG emissions that are relevant to the Proposed Project:

- **Policy COS-P1.1**: Greenhouse gas emission impacts from proposed development projects will be evaluated as required by the CEQA.
- **Policy COS-P1.2**: New development projects will mitigate greenhouse gas emissions on-site or as close to the site as possible.

The Proposed Project will be held to the policies in the Butte County General Plan 2030.

Butte County 2021 Climate Action Plan

The *Butte County 2021 Climate Action Plan* (Placeworks 2021) was adopted on December 14, 2021. Butte County is committed to reducing GHG emissions to 6.0 MT CO_2e per person by 2030 and 2.0 MT

CO_2e per person by 2050, consistent with the 2017 Scoping Plan guidance. Butte County is also setting forth an interim target of 4.0 MT CO_2e per person by 2040. The climate action plan identifies 15 strategies that, if implemented, will allow the County to achieve its GHG emissions reductions targets.

The Proposed Project will be held to the strategies in this climate action plan.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to GHG emissions that are relevant to the Proposed Project:

- **Policy SUS-6.1, Greenhouse Gas Reduction Efforts**: Support local, regional, and statewide efforts to reduce emissions of greenhouse gases linked to climate change.
- **Policy SUS-6.2, Greenhouse Gas Inventory and Climate Action Plan**: Maintain a Greenhouse Gas Emissions Inventory and implement the Climate Action Plan to make progress toward meeting the City's greenhouse gas emissions reduction goal.
- **Policy SUS-6.3, Greenhouse Gas Emissions and CEQA**: Analyze and mitigate potentially significant increases in greenhouse gas emissions during project review, pursuant to the California Environmental Quality Act.
- **Policy SUS-6.4, Community Trees**: Continue to support the planting and maintenance of trees in the community to increase carbon sequestration.

The Proposed Project will be held to the policies in the Chico 2030 General Plan.

City of Chico Climate Action Plan Update

The *City of Chico Climate Action Plan Update* (Rincon Consultants 2021) was adopted on October 19, 2021. The City of Chico is committed to a GHG emissions reduction target of 2.71 MT of CO_2e per person (or 292,437 MT of CO_2e in total emissions) by 2030. This corresponds to an 80 percent reduction in per capita emissions (or a 46 percent reduction in total emissions) below 1990 levels by 2030, exceeding the SB 32 target of 40 percent reduction in total emissions by 2030. To achieve the GHG emissions reduction target, the climate action plan includes 13 measures related to energy efficiency, renewable energy, sustainable transportation, development patterns, solid waste, water, urban trees and greenspace, and community engagement.

The Proposed Project will be held to the strategies in this climate action plan.

3.8.3 Method of Analysis

This section describes the methods used to analyze impacts on GHG emissions within the study area.

3.8.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on GHG emissions if it would:

- **Impact GHG-1:** Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment

- **Impact GHG-2:** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of GHG

3.8.3.2 Approach to Analysis

Impacts on GHG emissions were identified qualitatively and quantitively based on the Proposed Project's potential to generate substantial GHG emissions.

The analysis of environmental effects focuses on foreseeable changes to GHG emissions in the context of effects listed in Section 3.8.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

Greenhouse Gas Emissions Thresholds

BCAQMD has not adopted thresholds for GHG emissions. BCAQMD's recommends the following thresholds for construction and operational GHG emissions: compliance with a qualified GHG reduction strategy, or compliance with the Lead Agency's threshold, or consistency with the goals of AB 32. The Town (or Lead Agency) has not adopted a climate action plan, nor does it include thresholds of significance for evaluating GHG emissions using either a bright-line or an efficiency-based approach. Additionally, SB 32, which expands on AB 32, is the current legislation to reduce GHG emissions within California.

In the absence of locally adopted numeric thresholds for GHG emissions, it is appropriate to evaluate the Proposed Project's impacts against thresholds established by another jurisdiction. The adjoining air districts are the Tehama County Air Pollution Control District (comprising of Tehama County), Northern Sierra Air Quality Management District (comprising of Nevada, Sierra, and Plumas counties), Glenn County Air Pollution Control District (comprising of Glenn County), Colusa County Air Pollution Control District (comprising of Colusa County), and Feather River Air Quality Management District (comprising of Sutter and Yuba counties). Except for Tehama County Air Pollution Control District, none of these air districts have established or adopted a threshold for determining the significance of GHG impacts. The Tehama County Air Pollution Control District has established a threshold of 900 MT CO_2e per year for operational GHG emissions but has not established a threshold for construction emissions (Tehama County Air Pollution Control District 2015).

The next closest air district with adopted construction GHG thresholds of significance based on current legislation (SB 32) is the Sacramento Metropolitan Air Quality Management District (SMAQMD). For typical land use projects, SMAQMD recommends use of a 1,100 MT CO_2e per year threshold for construction and operational emissions (SMAQMD 2021). SMAQMD's threshold is consistent with GHG emissions reduction goals set forth by SB 32, which mandates a GHG emissions target of 40 percent below 1990 levels by 2030. Refer to Section 3.8.2, Regulatory Framework, for more information on SB 32. Therefore, the Town in its discretion is using the SMAQMD threshold of 1,100 MT CO_2e per year to determine significance of GHG emissions.

Construction

Impacts on GHG emissions during construction of the Proposed Project were analyzed quantitatively. Construction of the Core Collection System, Export Pipeline System, and Extended Collection System

would generate GHG emissions from the operation of construction equipment, hauling of materials, and commute of construction crews. GHG emissions associated with construction of the Core Collection System and Export Pipeline System were estimated using CalEEMod 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operation from a variety of land use projects. Construction emissions were estimated in CalEEMod using a combination of information presented in Chapter 2 and model defaults. The area of disturbance for the Core Collection System presented in Section 2.5.1.1 and Export Pipeline System presented in Section 2.5.2.1 were used as inputs in CalEEMod. The construction schedules for the Core Collection System and Export Pipeline System presented in Section 2.6 were used in CalEEMod. Types and quantities of equipment, construction crew size, excavation and fill quantities, and number of truck trips presented in Sections 2.5.1.3 and 2.5.2.3 were used as inputs to CalEEMod. GHG emissions associated with construction of the Extended Collection System were estimated using comparable measures and assumptions to the Core Collection System. GHG impacts were determined by comparing the GHG emissions generated during construction of the Core Collection System, Export Pipeline System, and Extended Collection System against the appropriate thresholds. As noted above, the assessment uses the SMAQMD threshold of 1,100 MT CO_2e per year to determine significance of GHG emissions during construction.

Operation and Maintenance

Impacts on GHG emissions during operation and maintenance were assessed qualitatively based on the information in Section 2.8, Operations and Maintenance.

3.8.4 Impact Analysis

This section describes the potential environmental impacts on GHG emissions as a result of implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to generate GHG emissions and conflict with a plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

3.8.4.1 Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Less than Significant Impact)

Construction

Construction activities associated with the Proposed Project would generate short-term GHG emissions from the operation of construction equipment, hauling of materials, and commute of construction crews.

GHG emissions generated during construction of the Core Collection System and Export Pipeline System were estimated using CalEEMod. The unmitigated construction GHG emissions are summarized in Table 3.8-1. The detailed CalEEMod output is included in Appendix D Emissions Modeling. The total GHG emissions generated during construction of the Core Collection System and the Export Pipeline System were compared with appropriate GHG thresholds to determine significance.

Table 3.8-1. Unmitigated Construction GHG Emissions

Year	GHG Emissions (MT CO_2e)
Core Collection System	
2023	706.62

Year	GHG Emissions (MT CO_2e)
2024	3,032.48
2025	522.31
Total	4,261.41
Export Pipeline System	
2023	655.68
2024	793.39
Total	1,449.07
Overall Total Emissions	**5,710.48**

Source: CalEEMod (see Appendix D)

Notes: MT = metric tons, CO_2e = carbon dioxide equivalent, GHG = greenhouse gas

As shown in Table 3.8-1, the Core Collection System and the Export Pipeline System would generate a total of 5,710 MT CO_2e of unmitigated GHG emissions over the construction duration. This total is amortized over the expected 30-year life of the Proposed Project to yield a yearly emissions volume of approximately 190 MT CO_2e.

As described in Section 3.8.3, the threshold of significance adopted by SMAQMD (1,100 MT CO_2e per year) will be used to determine significance of GHG emissions.

The amortized unmitigated GHG emissions during construction of the Core Collection System and Export Pipeline System would be approximately 190 MT CO_2e per year, which is below SMAQMD's threshold of significance of 1,100 MT CO_2e per year.

The construction methodology for the Extended Collection System would be similar to the Core Collection System. Crews and equipment used for the Extended Collection System would be similar to the Core Collection System, except that the duration would be shorter. Therefore, the GHG emissions generated during construction of the Extended Collection System would be similar to those generated during construction of the Core Collection System. The amortized unmitigated GHG emissions associated with construction of the Core Collection System (4,261 MT CO_2e / 30 years = 142 MT CO_2e per year) would not exceed SMAQMD thresholds (1,100 MT CO_2e per year). Similar to the Core Collection System, amortized unmitigated GHG emissions associated with construction of the Extended Collection System would not exceed SMAQMD thresholds.

Based on the discussion above, the Proposed Project would not exceed the SMAQMD thresholds for GHG emissions during construction. Therefore, construction of the Proposed Project would generate GHG emissions that have a less-than-significant impact on the environment.

Mitigation. No mitigation required.

Operation and Maintenance

Operation and maintenance activities, as described in Section 2.8, would generate GHG emissions from the use of vehicles. However, GHG emissions from operations and maintenance activities would be minimal and immeasurable due to the infrequency of these activities. Therefore, operation and maintenance of the Proposed Project would generate GHG emissions that have a less-than-significant impact on the environment.

Mitigation. No mitigation required.

3.8.4.2 Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (No Impact)

As discussed under Section 3.8.3, SB 32 is the current legislation to reduce GHG emissions within California.

Construction

The Proposed Project would generate GHG emissions during construction. As indicated under Impact GHG-1, the GHG emissions generated during construction would not exceed SMAQMD's threshold of significance of 1,100 MT CO_2e per year. SMAQMD's threshold is consistent with GHG emissions reduction goals set forth by SB 32, which mandates a GHG emissions target of 40 percent below 1990 levels by 2030. Since the construction GHG emissions generated by the Proposed Project are below SMAQMD's threshold of significance, it would not conflict with SB 32 GHG emissions reduction goals. Therefore, construction of the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, resulting in no impact.

Mitigation. No mitigation required.

Operation and Maintenance

Operation and maintenance activities, as described in Section 2.8, would generate GHG emissions from the use of vehicles. However, GHG emissions from operations and maintenance activities would be minimal and immeasurable due to the infrequency of these activities. Therefore, operation and maintenance of the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, resulting in no impact.

Mitigation. No mitigation required.

3.8.5 Impacts Summary

Table 3.8-2 summarizes the GHG emissions impacts of the Proposed Project.

Table 3.8-2. GHG Emissions Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	LTS	N/A	LTS
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions	NI	N/A	NI

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.8.6 References

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3.9 Hazards and Hazardous Materials

This section describes the environmental setting and regulatory framework for hazards and hazardous materials, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the analysis focuses on hazards and hazardous materials that may be present in the study area and the use of hazardous materials during implementation of the Proposed Project's construction, operation, and maintenance. The study area for hazards and hazardous materials is defined as the area of disturbance for the Proposed Project and a 500-foot buffer to account for potential adjoining properties with soil and groundwater contamination. However, the potential for hazards and hazardous material effects are not limited to the immediate study area but can extend to locations where removed materials are transported after use and to sensitive receptors that may be present in the vicinity of the study area. Therefore, transport of materials and sensitive receptors are also considered when addressing the potential for effects.

3.9.1 Environmental Setting

3.9.1.1 Site Description and History

The study area consists of the Town and primarily rural land between the Town and City. The Core Collection System is in the Town in the vicinity of residences and businesses, while the Export Pipeline System passes through mostly vacant agricultural land along Skyway Road near the Feather River in unincorporated Butte County (see Figure 2-1, Project Location in Chapter 2, Project Description). The site contains overhead utility lines and roadways as well as agricultural, residential, commercial, and industrial areas. In 2018, much of the Town of Paradise was destroyed by the Camp Fire. Historical land uses were similar to present day land uses in the area. As discussed in Section 0 Wildfire, the Core Collection System and Extended Collection System are in a Local Responsibility Area (LRA) Very High Fire Hazard Severity Zone (FHSZ) (California Department of Forestry and Fire Protection [CALFIRE] 2008). Farther south of Paradise, the Export Pipeline traverses Very High, Moderate and High FHSZ in the State Responsibility Area (SRA). The Chico WPCP is in a LRA Non-Very High FHSZ. Please refer to Section 0 for more information on existing conditions and detailed evaluation of potential effects for wildfire from implementation of Proposed Project. The closest sensitive receptors to the Proposed Project are the residential dwelling units along Entler Avenue in Chico, which are located within 50 feet of the proposed pipeline alignment (Google Earth 2022). Fourteen schools exist within one-quarter mile of the Core and Extended Collection Systems in Paradise, including both public and private schools. No schools exist within one-quarter mile of the Export Pipeline System in unincorporated Butte County or Chico. No public airports exist within two miles of the study area. The *Butte County Local Hazard Mitigation Plan Update* (Butte County 2019b), *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008), and *Chico 2030 General Plan* (City of Chico 2017) provide emergency evacuation, action, and response plans for county wide and city-wide emergencies.

3.9.1.2 Previous Site Investigations

Database Searches

Database searches were conducted on the Department of Toxic Substances Control (DTSC) Envirostor database and the SWRCB GeoTracker database to identify any active and closed sites where releases

or spills of hazardous materials have occurred within the study area. The search performed for this assessment was conducted in April 2022. Several sites were identified as containing potentially hazardous materials handling, storage, or incidents in the computerized regulatory databases searched on a list of sites complied pursuant to California Government Code Section 65962.5. In total, thirty-six sites were identified in the study area, but only one site was identified as a site of concern because it is still under remediation and is not yet considered closed.

One state response site and one school investigation site were identified within the Core Collection System footprint of the Town. A state response site is a site that the DTSC is leading the remediation of the site. A school investigation site is a site that DTSC is investigating for contamination. The state response site is in the core collection system at 8336 Skyway at a former air conditioning and radiator repair facility. The site has been fully remediated from arsenic and lead contamination found in the soil and certified by DTSC. Contaminated soils were disposed of, and the site was restored by backfilling the excavation with clean soil. Groundwater monitoring was performed to confirm that no groundwater contamination remained. The 8336 Skyway site currently has land use restrictions to limit the use of the property for commercial and industrial uses. The school investigation site is in the Extended Collection System at Ridgeview Continuation High School, located at 5944 Maxwell Drive in Paradise; however, the site is no longer active and no clean up action is required at this site according to DTSC. No sites were identified in the study area along the Export Pipeline System (Envirostor 2022).

Thirty-four leaking underground storage tank (LUST) sites and cleanup program sites exist in the study area for the Core and Extended Collection Systems in Paradise; however, only one of the sites remains open. The open LUST site is located within the Extended Collection System footprint but not within the Core Collection System footprint (GeoTracker 2022). This site is called the Cypress Lane Paradise site and is located at 1620 Cypress Lane in Paradise. During Camp Fire debris removal, a 500-gallon residential leaking underground storage tank containing kerosine was discovered at the Cypress Lane Paradise site. The tank has been subsequently removed; however, the site has not yet been remediated. While several open and closed leaking underground storage tank (LUST) sites and cleanup program sites exist near the Export Pipeline System alignment, only one closed LUST site exists within the Export Pipeline System alignment footprint (Envirostor 2022). Because this site is closed, it is no longer considered a threat from hazardous materials.

3.9.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on hazards and hazardous materials. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.9.2.1 Federal

Hazardous Waste Management

The Federal Toxic Substances Control Act of 1976 and the Resource Conservation and Recovery Act of 1976 established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste.

The Proposed Project will be subject to these hazardous waste management regulations.

Asbestos National Emission Standards for Hazardous Air Pollutants

The USEPA's Asbestos National Emission Standards for Hazardous Air Pollutants regulations specify work practices for asbestos to be followed during demolition and renovation of all structures, installations, and buildings (excluding residential buildings that have four or fewer dwelling units).

The Proposed Project will be subject to the Asbestos National Emission Standards for Hazardous Air Pollutants during construction.

Universal Waste Management

40 CFR Part 273 governs the collection and management of widely generated waste, including batteries, pesticides, mercury-containing equipment, and bulbs. This regulation streamlines the hazardous waste management standards and ensures that such waste is diverted to the appropriate treatment or recycling facility.

Hazardous waste generated by the Proposed Project will be subject to 40 CFR Part 273.

U.S. Department of Labor, Occupational Safety and Health Administration)

29 CFR Part 1910, Occupational Safety and Health Standards, requires facilities that use, store, manufacture, handle, process, or move hazardous materials to conduct employee safety training; inventory safety equipment relevant to potential hazards; have knowledge on safety equipment use; prepare an illness prevention program; provide hazardous substance exposure warnings; prepare an emergency response plan, and prepare a fire prevention plan. 29 CFR Part 1926 establishes similar safety and health regulations for construction.

The Proposed Project will be held to the standards of the Occupational Safety and Health Administration.

U.S. Department of Transportation

Transportation of hazardous materials is regulated by the US Department of Transportation's Office of Hazardous Materials Safety. The office formulates, issues, and revises hazardous materials regulations under the Federal Hazardous Materials Transportation Law.

Hazardous materials transport associated with the Proposed Project will be subject to these regulations.

3.9.2.2 State

California Hazardous Waste Control Law

The California Hazardous Waste Control Law is administered by the California Environmental Protection Agency to regulate hazardous wastes. The California Hazardous Waste Control Law lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

The waste generated by the Proposed Project will be subject to conformance with the Hazardous Waste Control Law.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace.

The Proposed Project will be subject to the California Occupational Safety and Health Administration's standards.

Field Act

Under the Field Act, the Department of General Services is required to supervise the design and construction, reconstruction, or alteration of any school buildings to ensure that the plans and specifications comply with adopted rules, regulations, and building standards for the protection of life and property.

The Proposed Project will be subject to the standards of the Field Act.

Lead-Based Paint

The California Department of Public Health enforces lead laws and regulations related to the prevention of lead poisoning in children, prevention of lead poisoning in occupational workers, accreditation and training for construction-related activities, lead exposure screening and reporting, disclosures, and limitations on the amount of lead found in products. Accredited lead specialists are required to find and abate lead hazards in a construction project and to perform lead-related construction work in an effective and safe manner. Specific regulations include:

California Health & Safety Code Section 105250: Establishes a program to accredit lead-related construction training providers and certify individuals to conduct lead-related construction activities.

California Civil Code Sections 1102 to 1102.16: Requires the disclosure of known lead-based paint hazards upon sale of a property.

California Labor Code Sections 6716 to 6717: Provides for the establishment of standards that protect the health and safety of employees who engage in lead-related construction work, including construction, demolition, renovation, and repair.

California Health & Safety Code Sections 105185 to 105197: Establishes an occupational lead poisoning prevention program to register and monitor laboratory reports of adult lead toxicity cases, monitor reported cases of occupational lead poisoning to ascertain lead poisoning sources, conduct investigations of take-home exposure cases, train employees and health professionals regarding occupational lead poisoning prevention, and recommended means for lead poisoning prevention.

The Proposed Project will be subject to conformance with all lead-based paint regulations.

State Water Resources Control Board

The SWRCB protects water quality in California by setting statewide policy. The SWRCB supports the nine Regional Water Quality Control Boards, which, within their areas of jurisdiction, protect surface and groundwater from pollutants discharged or threatened to be discharged to the waters of the state.

The Proposed Project will subject to SWRCB regulations to protect water quality.

California Health and Safety Code – Handling and Storage of Hazardous Waste

In California, the handling and storage of hazardous materials is regulated by Chapter 6.95 of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a Hazardous Materials Business Plan.

The Proposed Project will be subject to the principles of the California Health and Safety Code for the handling and storage of hazardous waste.

California Health and Safety Code – Transportation of Hazardous Waste

In California, transportation of hazardous waste is regulated under Chapter 6.5 of the California Health and Safety Code. Under Section 21560, hazardous waste generators must complete a manifest for the waste before it is transported or offered for transportation.

Transportation of hazardous waste associated with the Proposed Project will be subject to the standards of Chapter 6.5 of the California Health and Safety Code.

Emergency Response/Evacuation Plans

The state of California passed legislation authorizing the Office of Emergency Services to prepare a Standard Emergency Management System program, which sets forth measures by which a jurisdiction should handle emergency disasters.

The Proposed Project would not conflict with and will be held to the standards of the local emergency response and evacuation plans.

California Disaster and Civil Defense Master Mutual Aid Agreement

The California Disaster and Civil Defense Master Mutual Aid Agreement states that all resources and facilities of the state, including all political subdivisions, shall voluntarily aid and assist each other in the event of a disaster by the interchange of services, including rescue, relief, evacuation, rehabilitation, and reconstruction (California Office of Emergency Services 1950).

The Proposed Project is a part of the California Disaster and Civil Defense Master Mutual Aid Agreement.

3.9.2.3 Regional and Local

Butte County Local Hazard Mitigation Plan Update

The *Butte County Local Hazard Mitigation Plan Update* (Butte County 2019b) includes an assessment of the county's risk and vulnerability related to natural and other identified hazards and a comprehensive mitigation strategy which includes actions and projects designed to mitigate or reduce the impacts of those hazards and to increase community resiliency.

The Proposed Project will be held to the strategies in the *Butte County Local Hazard Mitigation Plan Update*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following goals, policies related to hazards and hazardous materials that are relevant to the Proposed Project:

- **Goal HS-11**: Reduce risks from wildland fire and urban fire.
- **Policy HS-P11.1**: Fire hazards will be considered in all land use and zoning decisions, environmental review, subdivisions review and the provision of public services.
- **Policy HS-P11.2**: Create communities that are resistant to wildfire by supporting the implementation of community wildfire protection plans and wildfire fuel load reduction measures in coordination with the appropriate government, community group, or non-profit organization and California Department of Forestry and Fire Protection (CALFIRE).
- **Policy HS-P11.3**: The County supports the Wildfire Mitigation Action Plan, the Butte County Local Hazard Mitigation Plan (LHMP), and the Butte Unit Community Wildfire Protection Plan prepared by CALFIRE and will cooperate with the Butte County Fire Department and the Butte County Fire Safe Council in implementing these plans.
- **Policy HS-P11.4**: New development projects will meet current fire safe ordinance standards for adequate emergency water flow, emergency vehicle access, signage, evacuation routes, fuel management, defensible space, fire safe building construction and wildfire preparedness.
- **Goal HS-12**: Protect people and property from wildland or urban fires.
- **Policy HS-P12.4**: All development projects in wildland urban interface areas in High or Very High Fire Hazard Severity Zones will provide, at a minimum, small-scale water systems for fire protection.
- **Goal HS-13**: Identify safe and effective evacuation routes and access for fire prevention and suppression
- **Policy HS-P13.1**: New development in High or Very High Fire Hazard Severity Zones, as shown in Figure HS-9, shall identify access and egress routes and make improvements or contribute to a fund to develop upgrade and maintain these routes.
- **Goal HS-14**: Reduce risks from the harmful effects of hazardous materials.
- **Policy HS-P14.1**: Hazardous materials carrier routes shall be designated to direct hazardous materials transport away from populated areas.
- **Policy HS-P14.3**: Hazardous and toxic materials shall be transported only along the designated highway and rail routes shown in Figure HS-11.
- **Policy HS-P14.4**: Proponents of new hazardous waste management facilities shall demonstrate that potential environmental impacts can be mitigated as a condition of approval.
- **Goal HS-15**: Ensure that Butte County is prepared for emergency situations.
- **Policy HS-P15.3**: Emergency access routes shall be kept free of traffic impediments.

Hazardous Materials Joint Powers Agreement

The Hazardous Materials Joint Powers Agreement was initiated in December 1990 by Butte County and its five cities: Biggs, Chico, Gridley, Oroville, and the Town of Paradise. It is governed and enforced by the fire chiefs of the six signatory agencies.

The study area is located within the jurisdiction of the Hazardous Materials Joint Powers Agreement.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following goals, policies, and actions related to hazards and hazardous materials that are relevant to the Proposed Project:

- **Goal S-1**: Minimize the loss of life and property resulting from natural and human-caused hazards.
- **Policy S-1.1, Emergency Preparedness**: Promote public safety from hazards that may cause death, injury, or property damage through emergency preparedness and awareness.
- **Action S-1.1.1, Emergency Plan Maintenance**: Maintain, and update as needed, the City's Emergency Plan to guide emergency management in the City.
- **Action S-1.1.2, Emergency Response Awareness**: Promote community preparedness for hazards and awareness of emergency notification methods.
- **Action S-1.1.3, Incident Training**: Continue to participate in the Federal Emergency Management Agency's National Incident Management System program, which provides a standardized approach to emergency incidents.
- **Goal S-4**: Continue to provide effective and efficient fire protection and prevention services to Chico area residents.
- **Policy S-4.1, Fire Safety Staffing**: Maintain adequate fire suppression and prevention staffing levels.
- **Policy S-4.2, Interagency Coordination**: Continue to maintain interagency relationships to maximize fire protection services and support programs that reduce fire hazards.
- **Policy S-4.3, Fire Safety Standards and Programs**: Support the development and implementation of standards and programs to reduce fire hazards and review development and building applications for opportunities to ensure compliance with relevant codes.
- **Goal S-8**: Reduce the potential for public exposure to hazardous materials or the accidental releases of toxic or hazardous substances.
- **Policy S-8.1, Hazardous Materials Safety Coordination**: Support efforts to reduce the potential for accidental releases of toxic and hazardous substances.
- **Action S-8.1.1, Planning for Hazardous Materials Safety**: Consult with the State Office of Emergency Services, the State Department of Toxic Substances Control, the California Highway Patrol (CHP), Butte County, and other relevant agencies regarding hazardous materials routing and incident response programs.
- **Policy S-8.2, Reduce Toxic Materials Use**: Reduce the use of hazardous and toxic materials in City operations.

The Proposed Project will be subject to the goals, policies, and actions of the *Chico 2030 General Plan*.

Town of Paradise General Plan

The *Town of Paradise Safety Element* (2022) and the *Town of Paradise Hazardous Waste Management Element* (2022) include the following goals, objectives, and policies related to hazards and hazardous materials that are relevant to the Proposed Project:

Safety Element (updated June 2022)

- **Goal SG-1:** Assure that law enforcement and fire protection services are enhanced sufficiently to meet the demands of new and existing land use development

- **Goal SG-2:** Provide adequate access, including emergency vehicle access and evacuation, to all new parcels and existing parcels where feasible.
- **Goal SG-3:** Strive to protect the Paradise community from injury, loss of life and property damage resulting from catastrophes and hazardous conditions.
- **Goal SG-6:** Improve the communication systems used during Town-wide emergencies, such as wildland fires, earthquakes or volcanic occurrences.
- **Objective SO-2:** Maintain an overall fire insurance (ISO) rating of three or better, and an emergency fire response within five minutes for 90% of all emergency incidents within Town limits.
- **Objective SO-3:** Maintain the *Paradise Multihazard Disaster Plan* and conduct practice exercises throughout the life of the *General Plan*.
- **Policy SP-1**: New and unmitigated land use development shall not cause the police and fire protection services emergency response times to full below the service levels established by this plan.
- **Policy SP-2**: Through the development review process, adequate roads shall be required to be constructed and/or improved for emergency vehicle access, particularly in high wildland fire hazard areas.
- **Policy SP-3**: Future development should be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.
- **Policy SP-5**: The Town should promote fire prevention by continuing to require brush removal and fuel load clearing as ongoing conditions of development approval and property maintenance.
- **Policy SP-8:** The Town shall encourage Butte County to enforce standards conforming to the fire safety standards established by the state Board of Forestry for state responsibility areas within the Paradise secondary and tertiary planting areas, including:

    - Road standards for fire equipment access
    - Standards for signs identifying streets, roads and buildings
    - Minimum private water supply reserves for emergency fire use
    - Fuel breaks and greenbelts
    - Land use policies and safety standards that take into account the recurrent nature of wildland fires
    - Design standards establishing minimum road widths and clearances around structures
    - Emergency preparedness protocol and procedures
    - Maximum length of cul-de-sac roadways

- **Policy SP-13**: The Town shall attempt to require all new development to comply with the airport height restriction policy, airport safety area(s) policies and land use guidelines for safety compatibility of the Paradise Skypark Airport Land Use Plan.
- **Policy SP-14**: Detrimental and toxic discharge into natural waterways shall not be permitted.

Hazardous Waste Management Element (updated June 2022)

- **Goal SG-7:** Provide for the safe disposal and handling of toxic and hazardous waste.

- **Goal SG-8:** Direct and promote hazardous waste management practices and technologies that will, in order of priority:
    - Reduce the use of hazardous substances and the generation of hazardous wastes at their source;
    - Recover and recycle the remaining waste for reuse to the extent feasible;
    - Treat those wastes not amenable to source reduction or recycling so that the environment and community health are not harmed by their ultimate release or disposal;
    - Ensure the safe transportation and disposal of treated hazardous waste residuals in repositories made secure from liquids that might create a toxic leachate and contaminate groundwater.
- **Goal SG-9**: Reduce the need for additional hazardous waste disposal sites.
- **Objective SO-7:** Minimize the generation of hazardous wastes by seeking waste reduction alternatives which are safe, economically viable, and which represent the best technology available to the generator.
- **Policy SP-24:** The county, and each city, shall require that all local land use decisions on siting specified hazardous waste management facilities are consistent with the goals and policies and the siting criteria contained in the Hazardous Waste Management Plan.

The Proposed Project will be subject to the goals, objectives, and policies of the *Safety Element* and *Hazardous Waste Management Element*.

3.9.3 Method of Analysis

This section describes the methods used to analyze hazards and hazardous materials within the study area.

3.9.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on hazards and hazardous materials if it would:

- **Impact HAZ-1**: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- **Impact HAZ-2**: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- **Impact HAZ-3**: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- **Impact HAZ-4**: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment
- **Impact HAZ-5**: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area

- **Impact HAZ-6**: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- **Impact HAZ-7**: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

3.9.3.2 Approach to Analysis

Construction, Operations and Maintenance

A desktop analysis was completed to collect and analyze data related to hazards and hazardous materials in the study area. Information was collected on known hazardous material sites within the study area and GIS data and aerial imagery were used to identify the hazardous sites within the study area. Additionally, the following resources were used for data collection:

- Envirostor Database (Envirostor 2022)
- GeoTracker Database (GeoTracker 2022)
- CALFIRE's Fire Hazard Severity Zone Maps (CALFIRE 2008)

The potential impacts from construction, operation and maintenance of the Proposed Project on hazards and hazardous materials were evaluated qualitatively using known hazardous materials site data and quantitatively using regulations that would be applicable to the Proposed Project.

3.9.4 Impact Analysis

This section describes the environmental impacts on hazards and hazardous materials that could result from implementation of the Proposed Project. The analysis considers consistency with existing policies and regulations, as well as impacts to the study area from hazards and hazardous materials that the Proposed Project may introduce to the study area.

3.9.4.1 Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Less than Significant with Mitigation Incorporated)

Construction

The Proposed Project would involve the transport and use of common construction materials such as vehicle fuels, grease, asphalt, concrete, lubricants, and drilling fluids which could pose a threat as hazardous materials. Using these materials, including their routine transport and disposal, carries the potential for an accidental release into the local environment, including near the waterbodies that are the locations of the proposed trenchless crossings (Butte Creek, Comanche Creek and Little Chico Creek). However, the Proposed Project will require the implementation of a SWPPP and coverage under the NPDES construction general permit for discharges of storm water associated with construction and land disturbance activities. The SWPPP will include measures to safely use and store such hazardous materials to reduce impacts. One open LUST site, located at 1620 Cypress Lane Paradise, exists in the study area within the Extended Collection System footprint. While the tank has been removed from this site, it has not yet been fully remediated and has the potential to contain contaminated soils that could be encountered during extended sewer line construction. However, any contaminated soils or groundwater encountered by the project will be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES construction general permit thus

reducing impacts. Additionally, any hazardous materials encountered, including contaminated soils, will be managed and disposed of in accordance with California Department of Toxic Substances Control regulations. Further, the Proposed Project will comply with Regional, State, and Federal requirements for the transport, use, and disposal of hazardous materials. However, with vehicle and equipment use comes the potential for spills during maintenance and refueling which would be a significant impact. As a result, the Proposed Project would have a significant impact on hazards to the public or environment created through routine transport, use, or disposal of hazardous materials.

Mitigation. To minimize significant impacts from the routine transport, use, or disposal of hazardous materials associated with the construction of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-1** will be implemented**.**

MM-HAZ-1: Vehicle Equipment Access and Fueling: During construction, the Town will require and enforce through encroachment permit conditions and construction documents that all vehicle traffic associated with Proposed Project-related activities will be confined to established roads, staging areas, and parking areas. Additionally, maintenance or refueling of vehicles or equipment must occur in designated areas and/or secondary containment away from waterbodies.

Significance after Mitigation. With implementation of **MM-HAZ-1**, impacts from the transport, use, or disposal of hazardous materials would be reduced to a less than significant level.

Operation and Maintenance

Operation and maintenance of the Proposed Project would require the routine inspection of the Core and Extended Collection Systems and Export Pipeline System. This would involve the use of trucks and equipment that would use fuel and grease. However, these vehicles would be operated in areas that already experience vehicle traffic and these inspections would be very infrequent, not increasing the potential for fuel and grease drips significantly over existing levels. Therefore, the Proposed Project would have a less-than-significant impact on hazards to the public or environment created through routine transport, use, or disposal of hazardous materials.

Mitigation: No mitigation required.

3.9.4.2 Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant Impact)

Construction

As discussed above, the Proposed Project would involve the use of common construction materials such as vehicle fuels, grease, asphalt, concrete, lubricants, and drilling fluids that would be hazardous if they were to accidentally be released into the environment. However, the Proposed Project will be required to implement a SWPPP with best management practices to reduce the likelihood and severity of the release of construction related pollutants like fuel and grease to a less-than-significant level. Any contaminated soils or groundwater encountered by the project will be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES construction general permit reducing impacts to a less-than-significant level. Therefore, the Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions

involving the release of hazardous materials into the environment and impacts would be less than significant.

Mitigation: No mitigation required.

Operation and Maintenance

As discussed above, Operation and Maintenance of the Proposed Project would require the routine inspection of the Core and Extended Collection Systems and Export Pipeline System. This would involve the use of trucks and equipment that would use fuel and grease. However, these vehicles would be operated in areas that already experience vehicle traffic and inspections will be performed periodically according to the schedule discussed in Section 2.8, Proposed Operations and Maintenance; as a result, operation and maintenance of the Proposed Project would not increase the potential for fuel and grease drips significantly over existing levels. Therefore, the Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; impacts would be less than significant during operation and maintenance.

Mitigation: No mitigation required.

3.9.4.3 Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant Impact)

Construction

Fourteen schools exist within one-quarter mile of the Core and Extended Collection Systems in Paradise. No schools exist within one-quarter mile of the Export Pipeline System in unincorporated Butte County or Chico. As discussed above, although the Proposed Project has the potential to emit hazardous materials or substances through the use of common construction materials, the risk of release would be reduced through implementation of the Project SWPPP.

The Proposed Project would require construction vehicles to be operated within the study area over the construction duration, which could result in emissions of air quality pollutants within one-quarter mile of an existing school. Fuel combustion results in the release of air quality pollutants that can be considered hazardous. Air quality impacts are discussed in Section 3.3 Air Quality. As discussed in Section 3.3, construction activities would be temporary and short-term. Only portions of the study area would be disturbed at a time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location in the study area. Operation of construction equipment within portions of the study area would allow for the dispersal of TAC emissions by avoiding continuous construction activity in the portions of the study closest to existing sensitive receptors. Additionally, the Proposed Project will implement BCAQMD BMPs (listed in Section 3.3 Air Quality) to reduce diesel particulate matter. Therefore, with implementation of a Project SWPPP, BCAQMD BMPs, and consistency with hazardous materials handling and air quality district requirements, impacts from construction within one-quarter mile of an existing school would be less than significant.

Mitigation: No mitigation required.

Operation and Maintenance

As discussed above, operation and maintenance of the Proposed Project would require the periodic inspection of the Core and Extended Collection Systems and Export Pipeline System. This would involve the use of a small number of trucks and equipment that would use and emit potentially hazardous materials. However, these vehicles would be operated in areas near schools that already experience vehicle use and these inspections would be performed once or twice a year according to the schedule discussed in Section 2.8, Proposed Operations and Maintenance; therefore, the inspections would not increase the potential for emissions significantly over existing levels.

As discussed in Section 2.8 Proposed Operation and Maintenance, while the Core Collection System, Extended Collection System, and Export Pipeline System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. As discussed for the periodic inspections, pipeline repairs would involve the use of a small number of trucks and equipment that would use and emit potentially hazardous materials. However, this effort would be temporary and rare, and these vehicles would be operated in areas near schools that already experience vehicle use. Therefore, the Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste that would have a significant impact within one-quarter mile of a school and impacts would be less than significant.

Mitigation: No mitigation required.

3.9.4.4 Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (Less than Significant Impact with Mitigation Incorporated)

Construction, Operation, and Maintenance

A desktop search of the Envirostor and GeoTracker databases was performed to find known potentially hazardous sites in the study area. As described above, one open site at 1620 Cypress Lane was identified in the study area during the desktop search. The site was classified as an open LUST site. While the tank has been removed from this site and would not pose a threat from a new release of kerosine, the site has not yet been fully remediated and has the potential to contain contaminated soils that could be encountered during extended sewer line construction. However, any contaminated soils encountered by the project will be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES construction general permit thus reducing impacts. Additionally, any hazardous materials encountered, including contaminated soils and groundwater, will be managed and disposed of in accordance with California Department of Toxic Substances Control regulations. Further, the Proposed Project will have to comply with regional, state, and federal requirements for the transport, use, and disposal of hazardous materials. However, while unlikely, the potential remains to encounter contaminated soils from the Cypress Lane site. As a result, the Proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 that would create a significant hazard to the public or the environment and impacts would be significant.

Mitigation. To minimize potentially significant impacts from being located on a hazardous materials site associated with construction, operation, and maintenance of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-2** will be implemented.

MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan. Prior to any work set to occur within 500 feet of the Cypress Lane Site, a parcel-specific contaminated soil management plan shall be prepared to address the known contamination at the site for submittal to and approval by DTSC. The plan shall include specific hazards and provisions for how soils and groundwater will be managed at the Cypress Lane Site. The plan shall provide requirements for soil testing and characterization, soil disposal protocols, protocols governing the discovery of unknown contaminants, and soil management. The plan shall also include health and safety provisions including training requirements for site workers who may be handling contaminated material, including the transport and disposal of contaminated material; chemical exposure hazards in soil, groundwater, or soil vapor that are known to be present at the property; and mitigation and monitoring measures that are protective of the site worker and public health and safety. These health and safety provisions shall be prepared to meet OSHA requirements, Title 29 of the CFR 1910.120 and CCR Title 8, Section 5192, and all applicable federal, state, and local regulations and agency ordinances related to the proposed management, transport, and disposal of contaminated media during implementation of work and field activities. The plan shall be signed and sealed by a Certified Industrial Hygienist, who is licensed by the American Board of Industrial Hygiene. The plan shall be enforced by DTSC or another applicable regulator and included as a requirement of construction/in construction documents.

Significance after Mitigation. With implementation of **MM-HAZ-2**, impacts from work located at a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 that would create a significant hazard to the public or the environment would be reduced to a less than significant level.

3.9.4.5 Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area (No Impact)

Construction, Operation, and Maintenance

There are no public airports within 2 miles of the Proposed Project. Therefore, the Proposed Project would have no impact on safety hazards or excessive noise for people residing or working in the project area due to nearby airports.

Mitigation: No mitigation required.

3.9.4.6 Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant with Mitigation Incorporated)

Construction

The Proposed Project study area includes emergency evacuation routes, and all four lanes of Skyway would be required to be available in some emergency situations. Construction would be completed in phases and would not require permanent road closures. For locations where the pipeline is being

installed along existing Town public ROW, there would be single-lane road closures with traffic controls around the work areas. Temporary full road closures are not anticipated; however, could occur, if necessary for public safety for a short duration (approximately 2-4 hours).

However, installation of the Export Pipeline System would occur along Skyway. Therefore, the construction area for the Export Pipeline System along Skyway could potentially interfere with the flow of evacuation traffic. As a result, the impact on an emergency response or emergency evacuation plan would be significant during construction.

Mitigation. To minimize significant impacts on an emergency response and emergency evacuation plan associated with construction of the Proposed Project to a less than significant level, mitigation measures **MM-HAZ-3, MM-HAZ-4, MM-HAZ-5, and MM-HAZ-6** will be implemented.

As discussed in Section 3.9.2.3, any contractor on the project, whether in the Town, City or County, will be required to implement procedures defined in the *Butte County Local Hazard Mitigation Plan Update*, as adopted and annexed by the Town of Paradise. As stated in Section 3.9.2.3, The Butte County Local Hazard Mitigation Plan Update (Butte County 2019b) includes an assessment of the county's risk and vulnerability related to natural and other identified hazards and a comprehensive mitigation strategy which includes actions and projects designed to mitigate or reduce the impacts of those hazards and to increase community resiliency. The Proposed Project will be held to the strategies in the Butte County Local Hazard Mitigation Plan Update. In addition, the same section also refers to the *Butte County General Plan 2030* (Butte County 2012), noting that the Town would be held accountable to multiple goals and associated policies related to hazards and hazardous material, such as: "Policy HS-P15.3: Emergency access routes shall be kept free of traffic impediments." Finally, Section 3.9.2.3 also states that the Town will be held to their own policies presented in drafts of the "*Town of Paradise General Plan*, Safety Element (1994) and Hazardous Waste Management Element (1994)". Policies within these elements include: Policy SP-1: New and unmitigated land use development shall not cause the police and fire protection services emergency response times to fall below the service levels established by this plan, and Policy SP-2: Through the development review process, adequate roads shall be required to be constructed and/or improved for emergency vehicle access, particularly in high wildland fire hazard areas. Proposed Project mitigation measures, discussed below support implementation of the County and Town policies by ensuring evacuation routes would not be blocked during an emergency, that emergency response services have access to major routes, which is critical during an emergency, and that there is a plan for rapid demobilization in a situation requiring evacuation.

MM-HAZ-3: Road Closure Restrictions. The Proposed Project will require a Butte County encroachment permit. The standard Butte County encroachment permit requires that "at least one lane of any public road … shall be kept open for travel by the general public at all times." Skyway consists of four lanes of traffic, two in each direction. The Proposed Project will require a Town of Paradise encroachment permit for work within the Town limits.

The Proposed Project will be held accountable to the *Butte County Local Hazard Mitigation Plan Update* and policies included in the *Butte County General Plan* and the Town's draft *Safety Element* (1994) and *Hazardous Waste Management Element* (1994). Further, during construction,

to minimize the potential for impeding emergency response vehicles at any time, the Proposed Project will only close one lane of traffic at any given time, other than short instances where a two-lane closure might be required for relocation of large equipment; this will be a requirement stated in the construction documents issued by the Town. Therefore, three lanes of Skyway will always remain open.

MM-HAZ-4: Rapid Demobilization Plan. **The Proposed Project will be held accountable to the *Butte County Local Hazard Mitigation Plan Update* and policies included in the *Butte County General Plan* and the Town's draft *Safety Element* (1994) and *Hazardous Waste Management Element* (1994). Further, in** the contractor construction documentation issued by the Town, as part of special conditions, the contractor will be required to prepare a rapid demobilization plan covering the one Skyway lane it occupies; this will be enforceable as a contract provision. **D**emobilization **would require** the contractor **to cover** any open trench with metal plates sufficiently strong to carry vehicle traffic, patching cut pavement, removing traffic barrier rails (if used), and moving construction equipment completely clear of the road. During fire season, the contractor will be required to have sufficient metal plating on-site to immediately cover any open trench, and conversely the length of open trenching will be limited to the amount of metal plating on-site. The contractor will also be required to have sufficient cold-mix asphalt on site to temporarily patch any cut road surface. The plan will be reviewed and approved by the Public Works Director and enforced by the Town.

MM-HAZ-5: Evacuation Warning Procedures. The Proposed Project will be held accountable to the *Butte County Local Hazard Mitigation Plan Update* and policies included in the *Butte County General Plan* and the Town's draft *Safety Element* (1994) and *Hazardous Waste Management Element* (1994). Further, to minimize the potential for impeding emergency response vehicles and at the direction of the Town **during an evacuation,** the contractor will cease all construction operations and implement the rapid demobilization plan **(MM-HAZ-4)**. As part of the rapid demobilization plan approved by the Public Works Director and enforced by the Town as a contract provision, the contractor will be required to demobilize off of Skyway, leaving all four lanes clear for public traffic and emergency crews, within four hours if no traffic barrier rails are being used and within eight hours if traffic barrier rails are being used. Again, other than short instances where a two-lane closure might be required for public safety, during construction, three of the four lanes of Skyway will be continuously open.

MM-HAZ-6: Traffic Management Plan. During final design, the Town will require that the engineering designer prepare a Traffic Management Plan that complies with *Section 110.7 Traffic Control Plans of*

the Highway Design Manual (Caltrans 2020), that will be included in the contractor construction documentation as special conditions, enforceable as a contract provision, and implemented by the construction contractor. The designer will submit the plan to the Town of Paradise, Butte County, and City of Chico's transportation and engineering departments for review and approval before it is included in the construction documents. The plan will be enforced by the Town and/or contracted construction manager hired by the Town for the project. The plan will be prepared in accordance with professional engineering standards and will include, but not be limited to, the following requirements:

- Schedule truck trips outside of the peak traffic hours, when feasible.
- Store all equipment and materials in designated staging areas.
- Use of signage to guide vehicles, bicyclists, and pedestrians through and/or around the construction areas.
- Install traffic control devices where traffic conditions warrant.
- Provide safe detours to reroute vehicle, bicycle, and pedestrian traffic.
- Encourage construction crews to park at staging areas to limit lane closures in the public right-of-way.
- Consult with Butte Regional Transit prior to construction to coordinate bus stop relocations (as necessary).
- Coordinate all construction activities with the emergency service providers in the area.
- Stop all construction work during any period of time declared as a Red Flag Warning. A Red Flag Warning is issued by the National Weather Service for weather events that may produce an increased risk of fire danger.
- Post notices and/or appropriate signage to notify the public of upcoming construction activities, including exact location, schedule, and duration. This will include alternative access routes if a short-term full-lane closure will be required to transport equipment.
- The Traffic Management Plan will be enforced by the Town of Paradise.

Significance after Mitigation. With implementation of **MM-HAZ-3**, **MM-HAZ-4 MM-HAZ-5** and **MM-HAZ-6**, impacts on an emergency response or evacuation plan would be reduced to a less than significant level.

Operation and Maintenance

No full or partial road closures would be required for routine inspections and maintenance activities. These activities would occur periodically, as described in Section 2.8, Proposed Operations and Maintenance, and would require few vehicles so they would not alter the traffic volumes on roads in the study area. Therefore, the Proposed Project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant.

Mitigation: No mitigation required.

3.9.4.7 Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

Construction, Operation, and Maintenance

As discussed in Section 0, Wildfire, the Study Area is in a LRA Very High FHSZ in Paradise. The export pipeline passes through State or Federal Responsibility Area Very High, High, and Moderate FHSZs (CALFIRE 2008). Project construction and routine maintenance would temporarily expose workers to hazards associated with being in areas with high wildfire danger. Therefore, impacts would be significant.

Mitigation. To minimize significant impacts from wildfire risk associated with construction of the Proposed Project to a less than significant level, mitigation measures **MM-HAZ-1, MM-HAZ-7, MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-7: **Incorporate Fire Prevention Measures**. Require that construction crews and equipment avoid circumstances that could cause wildfire and that crews and staff have access to fire-prevention equipment onsite. Specific fire prevention measures include: fire extinguishers or other approved fire suppressants are to be available at all times, proper storage of flammable materials, safe cutting and welding practices, proper installation of temporary electrical equipment, and use of dust-collecting apparatus on power equipment.

MM-HAZ-8: Incorporate Public Safety Measures. Requires that the public will receive adequate warning of construction activities and any dangerous condition that might result from the use of fences, barriers, lights, flagging, guards, and signs. A plan for these notifications will be incorporated into the Traffic Management Plan.

MM-HAZ-9: Wildland Fire Area. The Contractor will be advised that the Town of Paradise is in a Wildland Fire Area and during the summer months the fire hazard is EXTREME.

Significance after Mitigation. With implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8, and MM-HAZ-9**, impacts from exposing people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires would be reduced to a less than significant level. Please see Section 0 Wildfire for a complete analysis of the potential for impacts and details on each of the mitigation measures.

3.9.5 Impacts Summary

Table 3.9-1 summarizes the hazards and hazardous materials impacts of the Proposed Project.

Table 3.9-1. Hazards and Hazardous Materials Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	S/M	MM-HAZ-1	LTS

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTS	N/A	LTS
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LTS	N/A	LTS
Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	S/M	MM-HAZ-2	LTS
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	NI	N/A	NI
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	S/M	MM-HAZ-3, MM-HAZ-4, MM-HAZ-5, MM-HAZ-6	LTS
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	S/M	MM-HAZ-1, MM-HAZ-7, MM-HAZ-8, and MM-HAZ-9	LTS

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.9.6 References

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3.10 Hydrology and Water Quality

This section describes the environmental setting and regulatory framework for hydrology and water quality, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the hydrology and water quality analysis addresses hydrology, surface water quality, groundwater, and floodplains in the study area where hydrology and water quality are most susceptible to change as a result of the Proposed Project's construction, operation, and maintenance. The study area for hydrology and water quality is the groundwater underlying the site, and the surface waterbodies immediately surrounding the Proposed Project in Butte County, Chico, and Paradise, including the west branch of the Feather River, Little Butte Creek, Butte Creek, Little Chico Creek, and Comanche Creek. The Sacramento River is also part of the study area for hydrology and water quality because the treated wastewater from the Chico WPCP would continue to be discharged to the Sacramento River.

3.10.1 Environmental Setting

3.10.1.1 Regional Context

Butte County is located in the Sacramento River Hydrological Region. This region includes the Sacramento River, which is the longest river system in California, and its tributaries, including the Pit, Feather, American, and Bear Rivers. The Sacramento River Hydrological Region is the primary water source for many of the urban and agricultural areas of California. Surface storage reservoirs provide much of the water supply in the region (Butte County 2012).

Approximately 69 percent of Butte County's water needs are provided by surface water sources and approximately 31 percent of water needs are supplied by groundwater sources. Approximately 90 percent of water demand in Butte County is agricultural, 5 percent wildlife, and 5 percent residential (Butte County 2012).

3.10.1.2 Surface Water

According to the Hydrologic Unit Code (HUC) data provided by the NRCS (2018), the study area crosses the following nine hydrologic units:

- Dry Creek (HUC12 180201580401)
- Little Dry Creek (HUC12 180201580403)
- Little Butte Creek (HUC12 180201580201)
- Lake DeSalba-Butte Creek (HUC12 180201580202)
- Hamlin Slough (HUC12 180201580203)
- Dubock Slough-Little Butte Creek (HUC12 180201580204)
- Durham Slough-Butte Creek (HUC12 180201580205)
- Comanche Creek (HUC12 180201580301)
- Little Chico Creek (HUC12 180201580302)

Feather River watershed accumulates in Lake Oroville and supplies the majority of surface water supply to Butte County residents and businesses as a part of the State Water Project. The water rights

of local irrigation districts are provided through the California water rights priority system (Butte County 2010).

3.10.1.3 Groundwater

Groundwater makes up approximately 75 percent of residential water supply in Butte County. The availability of groundwater depends on climactic, geologic, and hydrologic conditions. Primary sources of groundwater recharge in Butte County are precipitation, infiltration from streams, inflow and percolation of irrigation water in agricultural areas. Groundwater reserves in the county are found in sedimentary deposits of the Sacramento Valley and mountainous areas to the east and north. Major portions of groundwater occur in floodplain and alluvial fan deposits and are unconfined or semi-unconfined (Butte County 2012).

Butte County is located within the Sacramento Valley groundwater basin. The groundwater basin and its subbasins are primarily located in the western portion of Butte County; groundwater in the eastern portion of the county is found in more limited amounts within volcanic, metamorphic, and granite rock. The Sacramento Valley Groundwater Basins include East Side Basin, East Butte Subbasin, Vina Subbasin, and West Butte Subbasin (Butte County 2010). The Proposed Project is underlain by each of these subbasins.

Depth to groundwater varies substantially throughout the study area, particularly underneath the Core and Extended Collection Systems. Depth to groundwater underneath the collection system varies so greatly due to the Andesite Volcanic formations in this area and the perched water zones. Because of this, groundwater in this area is not consistently monitored by the Groundwater Management Authorities (DWR 2004). Underneath the Export Pipeline System in the Vina Subbasin (Chico area), groundwater levels in the unconfined portion of the aquifer system are encountered at approximately 5 to 7 feet during normal precipitation and up to approximately 16 feet during periods of drought. Annual fluctuation in the confined or semiconfined portion of the aquifer system is approximately 15 to 25 feet during normal years and up to approximately 30 feet during periods of drought (DWR 2004). Depth to groundwater adjacent to Butte Creek, south of Chico, vary between 45 to 121 feet below ground surface depending on agricultural pumping, and wet versus drought conditions (Peterson 2019).

The Butte County Department of Public Health, Environmental Health Division issues well drilling permits for all wells drilled throughout the county. The number of well permit applications provide a general indication of the development of the groundwater resources and potential drilling activities. According to the most recent Butte County Water Inventory and Analysis, Butte County had over 12,000 domestic wells and 2,500 irrigation wells in 2015 (Butte County 2016).

3.10.1.4 Water Quality

The study area is located within the Sacramento Valley Basin which falls under the control of the RWQCB. The Water Quality Control Plan for the Central Valley Region was revised in May 2018. The regulatory mechanism for the discharge of pollutants into the water is the NPDES permit program, which is designed to protect water quality by regulating point sources of pollutants (City of Chico 2017). The Town's sewer system would fall under the City's NPDES permit (Section 2.4.2 Chico Water Pollution Control Plant).

Beneficial Uses

Beneficial uses are a very important aspect of water quality management in California. State law defines beneficial uses of California's waters that may be protected against degradation to include, and not be limited to, "…domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050 (f)). Existing beneficial uses are present at the following surface waterbodies in the vicinity of the study area:

- **Big Chico Creek (Hydro Unit Number 509.14):** Agriculture, Recreation, Freshwater Habitat, Migration, and Spawning Habitat
- **Black Butte Reservoir Butte Creek (Hydro Unit Number 522.12):** Agriculture, Recreation, Freshwater Habitat, Spawning Habitat, and Wildlife Habitat

Comanche Creek, Little Butte Creek, Butte Creek, Little Chico Creek have not been assigned beneficial uses.

Feather River

Water quality in Feather River has been identified by the State of California as impaired by copper, mercury, toxicity and more than 15 pesticides including diazinon chlorpyrifos and lindane (USEPA 2021c).

Town of Paradise

Historical use of high-density septic systems and leach fields in Paradise have resulted in surface and groundwater contamination. As discussed in Section 2.3, Project Background, in 1983 James Montgomery Consulting Engineers performed a Phase I Wastewater Management Study for the Town of Paradise to identify existing and potential water quality or public health problems associated with the continued use of individually managed on-site wastewater treatment systems. Results of this study showed evidence of high levels of fecal coliform and septic system effluent in water supply resulting in degradation of water quality. It was therefore recommended in this study that a sewer system or centralized wastewater management facilities be considered in the Town (Montgomery 1983). This led to the development of the Town of Paradise Onsite Wastewater Management Zone in 1992 (S. Hartman, personal communication, November 19, 2021), which is still active and would remain so with implementation of the Proposed Project for those parcels that would not or had not yet connected to the sewer system.

According to the Paradise Irrigation District (PID) *Annual Consumer Confidence Report*, contaminants that may be present in source water (rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells) as a result of historical septic system usage and wastewater discharges include microbial contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; and organic chemical contaminants, including synthetic and volatile organic chemicals (PID 2019).

Data from the USEPA indicates that leakage of waste from septic leach fields can reach a water source and result in microorganisms, including bacteria, viruses, and parasites being present in the water supply (USEPA 2021d). Unabsorbed phosphorus in leach fields can also travel in groundwater toward a waterbody and become a source of contamination. Additionally, some nitrogen may be removed as

wastewater flows through septic systems and the soil. However, nitrogen that remains can enter the underlying groundwater and flow towards a surface waterbody. If there are a number of septic systems in a small area, the nitrogen flowing through groundwater could overload a waterbody causing eutrophication (USEPA 2020). In addition to contamination from septic systems and leach fields, fire damage from the 2018 Camp Fire caused a potential for pipes to be contaminated with volatile organic compounds such as benzene and others. Volatile organic compounds are known carcinogens, and even low levels of volatile organic compounds are dangerous over time (PID 2019).

City of Chico

According to the *Chico 2030 General Plan*, the primary issues related to surface and groundwater quality in Chico are urban stormwater runoff, groundwater contamination from septic tanks, infiltration of urban stormwater runoff, and pollutants from dry cleaning and industrial uses (City of Chico 2017). In 1985, the City of Chico and Butte County adopted the Nitrate Action Plan to address high levels of nitrates in portions of the groundwater under Chico that resulted from the widespread use of septic tanks within the urban area. As a result, the *Chico Urban Area Nitrate Compliance Plan ("Nitrate Action Plan")* was developed to provide consistency between Chico and Butte County land use and utility infrastructure policies (City of Chico 2017). Also, because of the Nitrate Action Plan, the City of Chico completed sanitary sewer installation in high nitrate areas (referred to as Nitrate Area 3N and Nitrate Area 3S) in 2021.

3.10.1.5 Tsunami, Seiche, and Flood Hazards

According to the DOC tsunami map, the Proposed Project is not located within a tsunami hazard area (DOC 2019b). Further, because the study area is in an inland area away from oceans or other large waterbodies, a seiche is unlikely to occur.

Butte Creek Diversion Channel (National Levee ID 5205000592) is a federal levee that traverses the study area. Therefore, the Proposed Project will be subject to USACE Section 408 permitting requirements. Other Butte County levees also traverse the study area along Comanche Creek and Little Chico Creek; however, these levees are locally constructed, operated and maintained (USACE 2016).

Most of the study area is in a FEMA minimal flood hazard zone. Portions of the study area are also located within Moderate Flood Hazard Areas, which are areas susceptible to a 0.2 percent annual chance or 500-year flood, and Special Flood Hazard Areas, which are areas that are susceptible to a 1 percent annual chance or 100-year flood (FEMA 2020; Butte County 2021d). The Export Pipeline System crossing of Butte Creek and the segment of the pipeline located along Crouch Avenue are located in a Special Flood Hazard Area (Butte County 2021d). In Butte County, a number of developed impoundments and natural wetlands store some of the county's surface water supply and provide flood protection. These developed impoundments include Oroville Dam and Reservoir on the Feather River, Thermalito Afterbay, Thermalito Forebay, Paradise Reservoir, and Magalia Reservoir, and various smaller water storage reservoirs.

3.10.1.6 Stormwater Management

As required by Phase II of the NPDES, Butte County operates under a Small Municipal Separate Storm Sewer System (MS4) stormwater permit, which authorizes the discharge of stormwater to surface water

in the state from small municipal separate storm sewer systems. The Town's MS4 Permit is currently operating under an approved waiver secured in 2021 due to the reduced population associated with the 2018 Camp Fire and other factors. See Section 2.4.2 for information on the Chico WPCP and associated NPDES permit.

3.10.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on hydrology and water quality. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.10.2.1 Federal

Clean Water Act

The Federal Water Pollution Control Act of 1948 was the first major United States law to address water pollution. Amended in 1972, the law became commonly known as the CWA (33 USC Section 1251). The CWA established the structure for regulating discharge of pollutants into waters of the United States and regulating quality standards for surface waters.

CWA Section 404 (33 USC Section 1344) enables regulation of the discharge of dredged or fill material into waters of the United States, including wetlands. To comply with CWA Section 404, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any unavoidable impacts.

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants, waives or denies CWA Section 401 certification. Decisions made by states or tribes are based on the proposed project's compliance with USEPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the SWRCB is the primary regulatory authority for CWA Section 401 requirements.

The Proposed Project will be subject to surface water quality and wastewater standards under the CWA.

National Pollutant Discharge Elimination System

The NPDES permit was established in the CWA to regulate municipal and industrial discharges to surface waters of the US. The ultimate objective of the CWA is zero pollutant discharge, but it recognizes the need for a system to regulate non-zero pollutant discharges until the zero-pollutant objective is feasible. CWA Section 402 established NPDES for this purpose. The NPDES regulates all pollutant discharges, particularly point source discharges, to the waters of the US.

The Proposed Project will be required to obtain a NPDES permit for discharges during construction. During operations, the Town's sewer system would fall under the City's existing NPDES permit (Section 2.4.2 Chico Water Pollution Control Plant).

Construction General Permit

The CGP (NPDES No. CAS000002, SWRCB Order No. 2012-0006-DWQ) authorizes the discharge of stormwater (and certain unauthorized non-stormwater discharges) from construction sites that disturb 1 acre or more of land, and from smaller sites that are part of a larger, common plan of development. For all projects subject to the CGP, the applicant is required to hire a qualified developer to develop and implement an effective SWPPP. All project registration documents, including the SWPPP, are required to be uploaded into the SWRCB's online Stormwater Multiple Application and Report Tracking System at least 30 days prior to construction.

The Proposed Project will be required to obtain a CGP and implement a SWPPP during construction.

Section 14 of the Rivers and Harbors Appropriation Act of 1899, Section 408

Under Section 408 (33 USC Section 408), any use or alteration of a Civil Works project is subject to the approval of USACE. This requirement was established in Section 14 of the Rivers and Harbors Act of 1899. Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project.

The Proposed Project will be subject to compliance with Section 408.

3.10.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented by the SWRCB at the state level and the regional water boards within the nine regions designated. The regional water boards carry out planning, permitting, and enforcement activities related to water quality in California. The regional water boards are responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements or conditional waivers to waste discharge requirements. Waste discharge requirements are required by the regional water boards for activities that may affect water quality.

The Proposed Project will be subject to waste discharge and water quality standards under the Porter-Cologne Water Quality Control Act.

Clean Water Act Section 401 Water Quality Certification

A CWA Section 401 water quality certification is required for activities that require CWA Section 404 permits issued by USACE. As mentioned above, the SWRCB has primary regulatory authority for CWA Section 401 requirements for protecting water resources. Enforcement of these requirements is also handled by the nine regional water boards depending upon location of the potential impacts. The RWQCB will be responsible for CWA Section 401 for this project.

The Proposed Project will be subject to Section 401 for protecting water resources.

Delegated Permit Authority

California has been delegated permit authority for the NPDES permit program, including storm water permits for all areas except tribal lands. Issuance of CWA Section 404 permits remains the

responsibility of USACE; however, the state actively uses its CWA Section 401 certification authority to safeguard that CWA Section 404 permits will comply with state water quality standards.

The Proposed Project will be under the authority of the State of California for Section 401 certification and the NPDES permit program.

State Definition of Covered Waters

Under California state law, waters of the state refer to "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050). Therefore, water quality laws apply to both surface water and groundwater. After the United States Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, the Office of Chief Counsel of the State Water Resources Control Board released a legal memorandum confirming the state's jurisdiction over isolated wetlands. In general, the SWRCB regulates discharges to isolated waters in much the same way as they do for waters of the United States, but the regulation is via Porter-Cologne Water Quality Control Act rather than the CWA.

The Proposed Project will be subject to laws regulating isolated waters and waters of the United States.

Central Valley Flood Protection Board

The Central Valley Flood Protection Board exercises regulatory authority within its jurisdiction to maintain the integrity of the existing flood control system and designated floodways by issuing permits for encroachments. The jurisdiction of the Central Valley Flood Protection Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River, the San Joaquin River, and designated floodways (23 CCR Section 2). Projects that encroach in a designated floodway or regulated stream, or within 10 feet of the toe of a state-federal flood control structure (levee), require an encroachment permit and the submission of an associated application, including an environmental assessment questionnaire. A project must demonstrate that it will not reduce the channel flow capacity and that it will comply with channel and levee safety requirements. In cooperation with USACE, the Central Valley Flood Protection Board enforces standards for the construction, maintenance, and protection of adopted flood control plans that will protect public lands from floods.

The Central Valley Flood Protection Board has jurisdiction over waterbodies in the Project Area and will be subject to its standards.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB adjudicates water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

Since the Town's sewer system would fall under the City's NPDES permit (Section 2.4.2 Chico Water Pollution Control Plant), the Proposed Project is within the jurisdiction of the SWRCB and will be subject to its standards and permitting requirements.

3.10.2.3 Regional and Local

Water Quality Control Plan (Basin Plan)

The proposed Project is under the jurisdiction of the RWQCB. The RWQCB implements the *Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region* (RWQCB 2018) to regulate surface and groundwater quality in the region. The Basin Plan covers the entire Sacramento and San Joaquin River Basins. The Basin Plan lists beneficial uses and water quality objectives to protect those uses. The Proposed Project is in the Sacramento River Basin and will follow the requirements laid out in that portion of the Basin Plan.

The Proposed Project will be subject to the requirements of the RWQCB and the Basin Plan.

Municipal Separate Storm Sewer Systems

CWA Section 402(p) requires the issuance of NPDES permits for five categories of stormwater dischargers, including MS4s. Pursuant to CWA Section 402, NPDES permits are required and issued for discharges from an MS4 serving a population of 100,000 or more for the Phase I MS4 Municipal Program and serving a population of 10,000 or more for the Phase II Small MS4 Program. As discussed, Butte County operates under Small MS4 stormwater permit.

The Proposed Project is located in an area that operated under a Small MS4 stormwater permit.

Town of Paradise General Plan

The Proposed Project will be subject to the policies, goals and actions of the *Town of Paradise General Plan*. The *General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to hydrology and water quality that are relevant to the Proposed Project:

- **Policy SP-17:** Development projects shall be designed to minimize soil erosion and shall be required to comply with all Town of Paradise adopted soil erosion standards maintained by the Town Engineering Office.
- **Policy OCEP-23:** Stream courses identified and designated as significantly important shall be carefully protected from the impacts of land use development, both within and outside the Town limits.
- **Policy OCEP-25:** Natural riparian vegetation along creeks will be protected.

Town of Paradise Stormwater Ordinance (Ord. No. 548, Section 1, Adopted September 9, 2014)

The Town of Paradise has adopted an ordinance relating to Stormwater Quality Management for the purpose of protecting and promoting the health, safety, and general welfare of the citizens of the Town. The purpose of the ordinance is also to protect and enhance the water quality, beneficial uses, habitats, and ecosystems in receiving waters by reducing pollution and pollutant loads discharged in urban runoff from areas within the Town's jurisdiction, and by prohibiting non-stormwater discharges to municipal storm drain systems.

The Proposed Project will be subject to regulations in the Town of Paradise Stormwater Ordinance.

Butte County General Plan 2030

The Proposed Project will be subject to the policies, goals and actions of the *Butte County General Plan 2030*. The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to hydrology and water quality that are relevant to the Proposed Project:

- **Policy W-P1.4**: Where appropriate, new development shall be Low Impact Development (LID) that minimizes impervious area, minimizes runoff and pollution and incorporates best management practices.
- **Policy W-P1.8**: The County supports conversion from septic systems to public sewer service, where feasible.
- **Policy W-P2.1**: The County supports solutions to ensure the sustainability of community water supplies.
- **Policy W-P2.2**: The County may continue the Four-County Memorandum of Understanding (MOU) with Colusa, Glenn, Tehama and Sutter Counties, and may support the development of the Northern Sacramento Valley Integrated Regional Water Management Plan.
- **Policy W-P2.6**: The County supports water development projects that are needed to supply local demands.
- **Policy W-P2.7**: The Butte County Water Commission and the Department of Water Resource Conservation shall continue to be utilized as important partners in the water resource planning process.
- **Policy W-P3.3**: The County shall protect groundwater recharge and groundwater quality when considering new development projects.
- **Policy W-P4.4**: Opportunities to recover and utilize wastewater for beneficial purposes shall be promoted and encouraged.
- **Policy W-P4.6**: New development projects shall adopt best management practices for water use efficiency and demonstrate specific water conservation measures.
- **Policy W-P4.7**: County facilities shall adopt water conservation measures and when appropriate retrofit existing facilities to improve water conservation.
- **Policy W-P5.2**: New development projects shall identify and adequately mitigate their water quality impacts from stormwater runoff.
- **Policy W-P5.4**: Temporary facilities shall be installed as necessary during construction activities to adequately treat stormwater runoff from construction sites.

Butte County Groundwater Conservation Ordinance (Chapter 33)

In November 1996, the voters in Butte County approved an ordinance to protect the groundwater resources in Butte County. One of the stated purposes of the ordinance was that the groundwater underlying Butte County is a significant water resource which must be reasonably and beneficially used and conserved for the benefit of the overlying land by avoiding extractions which harm the Butte Basin aquifer, causing exceedance of the safe yield or a condition of overdraft. The ordinance is now codified as Chapter 33 of the Butte County Code relating to groundwater conservation. The Proposed Project would not extract or use groundwater resources during construction and operations and would not conflict with the Butte County Groundwater Conservation Ordinance.

The Proposed Project will be subject to regulations in the Butte County Groundwater Conservation Ordinance.

Butte County Integrated Water Resources Plan

The purpose of the *Butte County Integrated Water Resources Plan* (CDM 2005) is to document the stakeholder-centered process used by Butte County to develop water resources policy recommendations for consideration by the Butte County Board of Supervisors. This plan is part of the Butte County's proactive Integrated Water Resources Program.

The Proposed Project will be subject to standards in the Butte County Integrated Water Resources Plan.

Four-County Memorandum of Understanding

The counties of Butte, Colusa, Glenn, and Tehama share common surface water and groundwater resources. The purpose of the Four-County Memorandum of Understanding is to establish the mutual understandings of the four counties with respect to their voluntary joint efforts toward regional coordination, collaboration and communication. Treated wastewater from the Proposed Project would be discharged into the Sacramento River in accordance with the City's NPDES permitting requirements. The Proposed Project will also include a Frac-out Plan, which will outline all standard BMPs, monitoring, and contingency procedures in the event of frac-out during ground disturbing activities to protect groundwater resources. Therefore, the Proposed Project will be subject to the standards of and will not conflict with the Four-County Memorandum of Understanding.

Chico 2030 General Plan

The Proposed Project will be subject to the policies, goals and actions of the *Chico 2030 General Plan*. The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to hydrology and water quality that are relevant to the Proposed Project:

- **Policy OS-3.1, Surface Water Resources**: Protect and improve the quality of surface water.
- **Policy OS-3.2, Protect Groundwater**: Protect groundwater and aquifer recharge areas to maintain groundwater supply and quality.
- **Policy OS-3.3, Water Conservation and Reclamation**: Encourage water conservation and the reuse of water.

Chico Urban Area Nitrate Compliance Plan

The *Chico Urban Area Nitrate Compliance Plan* (Butte County 2000) was prepared in response to the contamination of groundwater in the Chico Urban Area by nitrate, a form of nitrogen, and the subsequent issuance of Prohibition Order No. 90-126 adopted by the RWQCB on April 27, 1990. The discharge from individual septic systems was the primary source of groundwater nitrate contamination that exceeded drinking water standards set by the USEPA and the SWRCB. Nitrate levels that exceed the standards pose a threat to public health and are subject to regulation. The *Chico Urban Area Nitrate Compliance Plan* supersedes the Nitrate Action Plan, which was adopted by the Butte County Board of Supervisors and Chico City Council in 1985.

The Proposed Project will support the initiates of the *Chico Urban Area Nitrate Compliance Plan* by implementing an improved sewer collection system.

3.10.3 Method of Analysis

This section describes the methods used to analyze hydrology and water quality within the study area.

3.10.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on hydrology and water quality if it would:

- **Impact HYD-1**: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality
- **Impact HYD-2**: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin
- **Impact HYD-3**: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

  (a) Result in substantial erosion or siltation on or off-site
  (b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
  (c) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff
  (d) Impede or redirect flood flows

- **Impact HYD-4**: In flood hazard zones, risk release of pollutants due to Project inundation
- **Impact HYD-5**: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

3.10.3.2 Approach to Analysis

Construction, Operation and Maintenance

A desktop analysis was completed to collect and analyze data related to hydrology and water quality in the study area. Key sources of information and plans include the following:

- *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008)
- *Chico 2030 General Plan* (City of Chico 2017)
- *Butte County General Plan 2030* (Butte County 2012)
- Butte County Public Works Information interactive GIS map (Butte County 2021d)
- FEMA Flood Insurance Rate Maps (FEMA 2011)
- DOC California tsunami maps (DOC 2019b)

This analysis of environmental effects focuses on foreseeable changes to the existing hydrologic conditions in the context of effects criteria listed in Section 3.10.3.1, CEQA Significance Criteria. The analysis considers each of the major Project components, as appropriate, in the context of construction, (specifically as to off-site staging areas), operation, and maintenance.

This analysis of water quality effects considers the potential for the Proposed Project to affect local and regional quality. In evaluating the potential for adverse water quality effects, this analysis considers existing data, reports, or studies on surface water quality that characterize baseline surface water quality in the study area.

Groundwater impacts were assessed based on whether construction, operation, and maintenance of the Proposed Project would result in permanent decreases in the groundwater table or water levels in an aquifer underlying the study area. Hydrology impacts are considered the permanent addition of new impervious surfaces, alterations in drainage patters, alteration of a stream or river, and increased runoff or erosion and siltation as a result of construction, operation, and maintenance of the Proposed Project.

Flood hazard, tsunami, and seiche were also considered in the study area per CEQA guidelines. A tsunami is a catastrophic ocean wave, usually caused by a submarine earthquake, an underwater or coastal landslide, or a volcanic eruption. A seiche is a temporary disturbance or oscillation in the water level of a partially enclosed body of water, especially one caused by changes in atmospheric pressure. Tsunami hazards were assessed using the DOC tsunami map (2019), and the likelihood of the occurrence of a seiche was determined based on the Proposed Project's topography and proximity to oceans and other large bodies of water. Neither tsunami or seiches are issues in this area and are not evaluated further; however, flood risks were determined to be worthy of evaluation in this area using FEMA floodplain data and USACE's National Levee Database.

3.10.4 Impact Analysis

This section describes the potential environmental effects on hydrology and water quality as a result of implementation of the Proposed Project. Excavation and ground disturbing activities because of construction activities, particularly near waterbodies, have the potential to impact hydrology and water quality in the study area. Inadvertent fuel or chemical spills associated with the operation of construction vehicles and equipment during construction could also impact water quality in the study area.

Operation and maintenance activities associated with the newly proposed Core and Extended Collection Systems and Export Pipeline would employ typical municipal wastewater collection systems methodology, as described in Section 2.7 Proposed Operation and Maintenance. These activities would minimize the potential for sanitary backups, pump station outages, and sewer main breaks.

3.10.4.1 Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (Less than Significant Impact with Mitigation Incorporated)

Construction

The lack of a viable sewer infrastructure in the study area has negatively affected groundwater and surface water quality through increases in nutrients and contaminants from failing septic tanks. As discussed in Section 3.10.1, Environmental Setting, the primary issues related to water quality in Chico are urban stormwater runoff, groundwater contamination from septic tanks, infiltration of urban stormwater runoff, and pollutants from dry cleaning and industrial uses. In addition, there are high

levels of nitrates in portions of the groundwater under Chico that resulted from the widespread use of septic tanks within the urban area.

Likewise, historical use of high-density septic systems and leach fields in Paradise have resulted in surface and groundwater contamination. According to the PID *Annual Consumer Confidence Report*, contaminants that may be present in source water (rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells) as a result of historical septic system usage and wastewater discharges include microbial contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; and organic chemical contaminants, including synthetic and volatile organic chemicals (PID 2019). High levels of fecal coliform and septic system effluent have also degraded water quality because of septic system usage in the study area (Montgomery 1983). The Proposed Project would improve groundwater and surface water quality in the study area by developing a wastewater collection, treatment, and dispersal solution that fits the needs of the Town.

Depth to groundwater in the study area varies significantly and is not monitored under the Core and Extended Collection Systems. Groundwater underneath the Export Pipeline System can vary anywhere from 5 to 7 feet in some areas of Chico and between 45 and 121 feet near Butte Creek (DWR 2004; Peterson 2019). Collection pipes would be trenched using mechanical trench and backfill methods anywhere from 3 feet to 15 feet below ground surface. The Export Pipeline System would be constructed using open cut methods up to 10 feet deep, and trenchless crossings (microtunneling or HDD). As discussed in Section 2.5.2 Export Pipeline System, trenchless crossings would occur at least 20 feet below the creek bed and would involve constructing pits at either end of the crossing. See Section 2.5.2.2 Construction Methods for more information on trenchless crossings.

Construction activities described above near the waterbodies located along and intersecting the study area, including Butte Creek, Little Butte Creek, Little Chico Creek, and Comanche Creek, would have the potential to impact water quality through sediment discharge and potential frac-out during trenching. Frac-out occurs when drilling fluid penetrates fractured bedrock or seeps into the environment that surrounds the bedrock. There is also a possibility that groundwater would be encountered during excavations and construction associated with the Core Collection System, the Export Pipeline System, and the Extended Collection System; however, dewatering would likely not be necessary. Operation of construction vehicles and equipment in the vicinity of waterbodies could also result in water quality impacts through the inadvertent release of fuels or chemicals in the event of an accident.

Launching and receiving pits used for trenchless crossings would be set back to avoid riparian vegetation, which would also minimize affects to surface water quality. The Town will require that the contractor comply with the SWRCB's CGP, which requires the preparation and implementation of a SWPPP, prior to construction and ground disturbing activities. The construction SWPPP will require BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements and stormwater management. The SWPPP must also contain a visual monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a waterbody listed on the CWA 303(d) list for sediment.

In addition to the CGP, the Project will require regulatory permits from USACE (Sections 404 and 408), the Regional Board (Section 401), and the CDFW (Streambed Alteration Agreement). The Project will also require a Small MS4 Permit. These permits are briefly described below:

- Section 404 enables regulation of the discharge of dredged or fill material into waters of the United States, including wetlands. To comply with CWA Section 404, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any unavoidable impacts.
- Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project.
- Under CWA Section 401, federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants, waives or denies CWA Section 401 certification.
- CDFW requires a Lake and Streambed Alteration Agreement when a project activity may substantially adversely affect fish and wildlife.
- The MS4 permit is designed to reduce the amount of sediment and other pollutants entering state waters from stormwater systems.

The Proposed Project will comply with applicable permitting requirements during construction. However, there is still potential for adverse water quality impacts during construction. If implementation of the project were to cause adverse water quality impacts, this would result in a significant impact.

Mitigation. To minimize potentially significant impacts on water quality associated with construction of the Proposed Project to a less than significant level, mitigation measures **MM-HAZ-1, MM-HYD-1, MM-HYD-2,** and **MM-BIO-15** will be implemented.

MM-HAZ-1: Vehicle and Equipment Access and Fueling (see Section 0 Hazards and Hazardous Materials for description)

MM-HYD-1: Stormwater Management and Treatment Plan. As special conditions to the contractor construction documentation, the Town will require that the contractor prepare and implement a Proposed Project-specific Stormwater Management and Treatment Plan that addresses construction-related activities. The plan will include all of the SWPPP and Small MS4 permits, as well as the Construction BMPs included in MM-HYD-2 below, and will be enforceable as a contract provision.

MM-HYD-2: Construction Best Management Practices: Prior to initiation of ground- disturbing activities within 250 feet of vernal pools or 100 feet of other aquatic resources, construction BMPs will be employed on-site to prevent degradation to on-site and off-site aquatic resources. Methods will include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs will be in place prior to initiation of any construction activities and will remain until construction activities are completed. All erosion control methods will be maintained until all on-site soils are stabilized.)

MM-BIO-15: Frac-Out-Plan (see Section 0 Biological Resources for description)

Significance after Mitigation. With implementation of **MM-HAZ-1**, **MM-HYD-1**, **MM-HYD-2**, and **MM-BIO-15**, impacts on water quality would be reduced to a less than significant level.

Operation and Maintenance

Compliance with standard federal, state, and local regulations and policies related to water quality would also be required during operation of the Proposed Project. Operation and maintenance activities would employ typical municipal wastewater collection systems methodology, as described in Section 2.7, Proposed Operation and Maintenance. These activities would minimize the potential for sanitary backups, pump station outages, and sewer main breaks. As discussed in Section 2.8 Proposed Operation and Maintenance, while the Core Collection System, Extended Collection System, and Export Pipeline System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Each system will have in place pressure gauges to help detect the loss of pressure resulting from a break, which in turn will notify the Town Wastewater Department that such a break has occurred. The Town Wastewater Department will develop an Operations Response Plan as part of its overall operations and maintenance processes that will provide direction for handling such an occurrence. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. The Town Wastewater Department will also have on-hand the equipment and spare parts necessary to rapidly implement a repair.

The Chico WPCP is licensed to treat 12 mgd of wastewater and is operating at 6.3 mgd (Chico WPCP monitoring data, Central Valley Regional Water Quality Control Board 2021). The Proposed Project would add a maximum of an additional 0.464 mgd of wastewater to the system during operations, which would then be discharged into the Sacramento River. Consistent with existing conditions, the treated wastewater from the Chico WPCP would continue to be discharged to the Sacramento River through a submerged outfall diffuser and is regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). This incremental increase in discharge as a result of the Proposed Project is within the permitted allowance and would not violate water quality standards or waste discharge requirements.

The Proposed Project will comply with water quality standards and would not conflict with waste discharge requirements. The Proposed Project would not degrade surface or ground water quality but would beneficially impact water quality once operational. There would be no impact during operations and maintenance.

Mitigation. *No mitigation required.*

3.10.4.2 Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (Less than Significant Impact)

Construction

The Proposed Project is in the Sacramento Valley Groundwater Basin. The Project would not involve the use of groundwater for construction of the Core Collection System, Export Pipeline System, or Extended Collection System, which could otherwise carry potential for interference with current groundwater recharge, possible depletion of groundwater supplies, or interference with wells. However,

there is potential that groundwater would be encountered during construction of the Core Collection System, Export Pipeline System, and Extended Collection System. Depth to groundwater in the study area varies significantly and is not monitored under the Core Collection System and Extended Collection System. Groundwater underneath the Export Pipeline System can vary anywhere from 5 to 7 feet in some areas of Chico and between 45 and 121 feet near Butte Creek (DWR 2004; Peterson 2019).

The Core Collection System pipelines would be installed anywhere from 3 to 15 feet below ground surface. Trenchless crossings for the Export Pipeline System would be required for installing the pipe beneath the feature (creek, highway, or railroad). Trenchless crossings via microtunneling methods under SR 99 and the Union Pacific Railroad would occur at depths of 30 feet below the roadway and rail centerlines, respectively. Trenchless crossings via HDD methods under Butte Creek, Comanche Creek, and Little Chico Creek would occur between 20 to 30 feet below the creek bed. Water encountered during pit excavation for the trenchless crossings would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Perched water and nuisance water encountered in trenches during open cut construction methods for installation of the Core Collection System and Extended Collection System would be collected via sump pump to a Baker Tank for settling and reused for truck dust control. Perched water and nuisance water could also discharge to surface water or infiltrate into the ground after sediment removal.

Any localized lowering of the groundwater table as a result of the construction methods described above would be anticipated to recover quickly and would not cause a net deficit in aquifer volume or a lowering of the groundwater table. Most of the proposed construction of the Core Collection System, Export Pipeline System, and Extended Collection System would occur within the existing ROW and conditions would be restored to current conditions once construction is complete. Therefore, the Proposed Project would not introduce impervious surfaces that would have the potential to impede groundwater recharge because the ROW or other area disturbed during construction would be restored and impacts would be less-than-significant during construction.

Operation and Maintenance

No groundwater would be required to operate or maintain the Proposed Project. Therefore, no impact would occur on groundwater supply and recharge during operations and maintenance.

Mitigation. *No mitigation required.*

3.10.4.3 Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(a) Result in substantial erosion or siltation on or off-site (Less than Significant Impact with Mitigation Incorporated)

Construction

The Core Collection System, Export Pipeline System, and Extended Collection System would primarily occur within the existing ROW on previously disturbed areas and would only rise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas,

and at the Chico WPCP Connection. All surfaces would be restored to their original conditions and would not introduce new impervious surfaces.

Temporary water quality impacts could result from sediment discharge from areas of disturbance and construction near water resources. Construction work would not take place inside of any waterbodies and the Project would not result in the alteration of a stream or river. The Proposed Project would involve trenchless crossings underneath Butte Creek, Comanche Creek, and Little Chico Creek via HDD methods. The crossings would be required to have a minimum depth of 20 feet below the waterbody with a launching and receiving pit on either end of the crossing. As discussed in Section 2.5.2 Export Pipeline System, and shown in Figure 2-12 Typical HDD Installation, there would be an approximate 10- by 5- foot launching and receiving pit and additional protected space on either end of the waterbody.

Portions of the Core Collection System and the Extended Collection System would be constructed near waterbodies. Prior to construction and ground disturbing activities, the Town will require that the contractor comply with SWRCB's CGP, which requires the preparation and implementation of a SWPPP. The construction SWPPP will require BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements and stormwater management. In addition to the CGP, the Project will also require a Small MS4 Permit and will comply with mandates set forth in these permits. Potential still exists for construction activities to result in erosion or siltation. Therefore, impacts would be significant.

Mitigation. To minimize potentially significant impacts on erosion or siltation associated with construction of the Proposed Project to a less than significant level, mitigation measure **MM-HYD-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan. (see Impact HYD-1 for description)

Significance after Mitigation. With implementation of **MM-HYD-1**, impacts on erosion and siltation would be reduced to a less than significant level.

Operation and Maintenance

Post construction, no changes are proposed to the current operational discharge of treated water to the Sacramento River that would potentially alter the drainage patterns or course of the waterway or create additional erosion or siltation. Maintenance activities would not require in-water work and would therefore not alter the course of a stream or river or create erosion and siltation. Therefore, impacts during operation and maintenance would be less than significant.

Mitigation. No mitigation required.

(b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site (Less than Significant Impact with Mitigation Incorporated)

Construction

Construction of the Proposed Project, including the Core Collection System, Export Pipeline System, and Extended Collection System would primarily occur within the existing public ROW and below

ground and would only rise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP Connection. Disturbed areas would be backfilled, and surfaces would be restored to pre-construction conditions once construction is complete. Additional impervious surfaces that could increase surface water runoff and create flooding on- or off-site are not proposed. As a result, after construction, runoff and flooding conditions would be similar to current conditions. There would be no additional runoff into a FEMA floodplain as a result of the Proposed Project. As discussed, the Town will require that the contractor comply with SWRCB's CGP, which requires the preparation and implementation of a SWPPP. However, the potential for on- or off-site flooding still exists during construction and impacts would be considered significant.

Mitigation. To minimize potentially significant impacts on flooding associated with construction of the Proposed Project to a less than significant level, mitigation measures **MM-HYD-1** and **MM-HYD-3** will be implemented.

MM-HYD-3: Flood Protection Plan. Prior to construction, the Town will require that the contractor prepare and implement a Flood Protection Plan for the Proposed Project. The Flood Protection Plan must include evacuation routes in the event of a flood, and will include the implementation of temporary flood barriers, such as sandbags, berms or portable fence systems, to be set up around the perimeter of the construction work area in high flood hazard areas, as discussed in Section 3.10.1.5, Tsunami, Seiche and Flood Hazards.

Significance after Mitigation. With implementation of **MM-HYD-1** and **MM-HYD-3**, impacts on flooding would be reduced to a less than significant level.

Operation and Maintenance

Once operational, it is possible that the Proposed Project could indirectly foster or accommodate regrowth in Paradise, leading to the construction of additional impervious surfaces (see Section 4.4 Growth Inducing Impacts). However, new developments would be subject to approval by the Town of Paradise and compliance with applicable design standards, codes and regulations concerning surface runoff and drainage. Maintenance activities would not require in-water work and would therefore not alter the course of a stream or river or create flooding. Therefore, impacts during operations, and maintenance would be less than significant.

Mitigation. No mitigation required.

(c) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff (Less than Significant Impact with Mitigation Incorporated)

Construction

As discussed in Impact HYD-3 (b) above, the Proposed Project would not increase the amount of runoff in the study area. The Proposed Project would not introduce new impervious surfaces because the ROW or other area disturbed during construction would be restored. During construction of the Core Collection System, Export Pipeline System, and Extended Collection System, runoff will be controlled through the implementation of a Construction SWPPP.

During construction and ground disturbing activities associated with installation of the Core Collection System, Export Pipeline System, and Extended Collection System, construction flows to existing drainage systems may occur, as well as potential sources of polluted runoff. BMPs and compliance with mandates set forth in the CGP and Small MS4 Permit would help prevent runoff from entering nearby existing drainage systems. However, the potential for polluted runoff still exists during construction. Impacts would therefore be significant. As discussed, implementation of mitigation measures **MM-HYD-1** and **MM-HYD-3** will reduce potentially significant impacts.

Significance after Mitigation. With implementation of **MM-HYD-1** and **MM-HYD-3**, impacts on polluted runoff would be reduced to a less than significant level.

Operation and Maintenance

After construction is complete, stormwater runoff conditions would be similar to pre-construction conditions given that most work would have occurred below ground and disturbed surfaces would be backfilled and restored. During operation of the Proposed Project, the treated wastewater from the Chico WPCP would continue to be discharged to the Sacramento River through a submerged outfall diffuser and is regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). Maintenance activities would not require in-water work and would therefore not alter the course of a stream or river or create polluted runoff. Impacts from runoff and polluted runoff during operation and maintenance would be less than significant.

Mitigation. No mitigation required.

(d) Impede or redirect flood flows (Less than Significant Impact)

Construction

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. The Core Collection System, Export Pipeline System, and Extended Collection System would require work near waterbodies in some areas, as shown in Figure 2-1, Project Location. However, construction would not occur within any waterbodies.

Construction of the Export Pipeline System would involve trenchless crossings below Butte Creek, Comanche Creek, and Little Chico Creek at depths of at least 20 feet below the creek bed using HDD methods. As discussed in Section 3.10.1 Environmental Setting, levees also traverse the study area along Comanche Creek, Little Chico Creek, and Butte Creek Diversion Channel. Levees located along Comanche Creek and Little Chico Creek are locally constructed, operated and maintained (USACE 2016). Butte Creek Diversion Channel (National Levee ID 5205000592) is a federal levee that traverses the study area (USACE 2016). Launching and receiving pits would be set back sufficiently far from the levees to avoid potential impacts from the pits. The tunnels themselves would pass under the levees, but at a sufficient depth to avoid impacting them. Waters within Butte Creek, Comanche Creek and Little Chico Creek would therefore not be redirected or impeded. Additionally, with compliance with applicable permits, impacts from impeding or redirecting flood flows would be less than significant.

Mitigation. No mitigation required.

Operation and Maintenance

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. Maintenance activities would not require in-water work and would therefore not alter the course of a stream or river or impede or redirect flows. Impacts during operation and maintenance would be less than significant.

Mitigation. No mitigation required.

3.10.4.4 Impact HYD-4: In flood hazard zones, risk release of pollutants due to Project inundation (Less than Significant Impact with Mitigation Incorporated)

Construction

Most of the study area is in a minimal flood hazard zone. However, in some areas there is a 0.2 percent or 1 percent chance that the study area would flood in any given year (FEMA 2020, Butte County 2021d). Levees also traverse the study area along Comanche Creek, Little Chico Creek, and Butte Creek Diversion Channel. Levees located along Comanche Creek and Little Chico Creek are locally constructed, operated and maintained (USACE 2016). Butte Creek Diversion Channel (National Levee ID 5205000592) is a federal levee that traverses the study area (USACE 2016). Therefore, the Proposed Project will be subject to USACE Section 408 permitting requirements. The Proposed Project will comply with Section 408 permitting requirements and will be designed in accordance with USACE standards. As discussed in Section 3.10.2, Regulatory Framework, Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project. Impacts on the Butte Creek Diversion Channel and other levees in the study area would be avoided because construction of the Export Pipeline System would involve a trenchless crossing at Butte Creek, Comanche Creek and Little Chico Creek at least 20 feet below the waterbody, and no physical modifications to the waterbody or the levee are proposed. Further, no other Project components would impact Butte, Comanche, and Little Chico Creeks. However, because there is a possibility that the study area could experience flooding, this impact would be significant. As discussed, implementation of **MM-HYD-3** would reduce potentially significant impacts.

Significance after Mitigation. With implementation of **MM-HYD-3**, impacts from the release of pollutants due to Proposed Project inundation would be reduced to a less than significant level.

Operation and Maintenance

Treated water would continue to be discharged to the Sacramento River in compliance with flow and water quality standards laid out in the NPDES Permit No. CA0079081 (Order No. R5-2016-0023). Therefore, impacts during operation and maintenance would be considered less than significant.

Mitigation. No mitigation required.

3.10.4.5 Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than Significant Impact with Mitigation Incorporated)

Construction

The current wastewater system in Paradise is characteristic of a high percentage of failed or failing septic systems, which can create a public health risk due to the potential for direct or indirect public contact with sewage. The lack of a viable sewer infrastructure also poses an environmental threat to groundwater and surface water quality. As discussed under Impact HYD-1, the Proposed Project would improve groundwater and surface water quality and increase water supplies in the study area by developing a wastewater collection, treatment, and dispersal solution that fits the needs of the Town. As noted in the California Water Boards' *Strategic Plan Summary: 2008–2012* (SWRCB 2008), improving groundwater quality and increasing water supplies are two key objectives of the State of California. The Proposed Project will align with these state goals.

During construction, the Proposed Project will involve the preparation and compliance with a construction SWPPP. The Project will require regulatory permits from USACE (Section 404), the Regional Board (Section 401), CDFW (Streambed Alteration Agreement), CGP and Small MS4 Permit. With implementation of requirements within Section 404, 408, 401, the Streambed Alteration Agreement, CGP, MS4 Permit, and other standard water treatment BMPs, the Proposed Project will comply with applicable permitting requirements during construction.

Additionally, as discussed in Impact HYD-2, the Proposed Project would not include the use of groundwater. The Proposed Project would not introduce additional impervious surfaces that would have the potential to impede groundwater recharge, and no impact on a sustainable groundwater management plan or ordinance, such as the Butte County Groundwater Conservation Ordinance, would occur.

A Water Quality Control Plan for the Central Valley Region was revised in May 2018. The regulatory mechanism for the discharge of pollutants into the water is the NPDES permit program, which is designed to protect water quality by regulating point sources of pollutants (City of Chico 2017). The Proposed Project will comply with NPDES permitting. However, there is potential that water quality impacts could occur during construction. Impacts would therefore be significant.

Significance after Mitigation. With implementation of **MM-HYD-1**, impacts on a water quality control plan or sustainable groundwater management plan would be reduced to a less than significant level.

Operation and Maintenance

Compliance with standard federal, state, and local regulations and policies related to water quality would also occur during operation and maintenance of the Proposed Project. As discussed under Impact HYD-1, the Proposed Project would add an additional 0.464 mgd of wastewater to be treated at Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). The additional 0.464 mgd of wastewater is within the permitted allowance. Based on these factors, there would be no impact on a water quality control plan or sustainable groundwater management plan during operation and maintenance.

Mitigation. No mitigation required.

3.10.5 Impacts Summary

Table 3.10-1 summarizes the hydrology and water quality impacts of the Proposed Project.

Table 3.10-1. Hydrology and Water Quality Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	S/M	MM-HAZ-1, MMBIO-1, MM-HYD-2, MM-HYD-1	LTS
Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	LTS	N/A	LTS
Impact HYD-3(a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on or off-site	S/M	MM-HYD-1	LTS
Impact HYD-3(b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	S/M	MM-HYD-1, MM-HYD-3	LTS
Impact HYD-3(c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	S/M	MM-HYD-1, MM-HYD-3	LTS
Impact HYD-3(d): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Impede or redirect flood flows	LTS	N/A	LTS
Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation	S/M	MM-HYD-3	LTS
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	S/M	MM-HYD-1	LTS

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.10.6 References

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3.11 Land Use and Planning

This section describes the environmental setting and regulatory framework for land use and planning, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the land use analysis focuses on land use designation and planning characteristics for Butte County, Paradise, and Chico in the study area. For the purposes of this PEIR, the land use and planning study area is defined as the land use designations within the proposed Core and Extended Collection Systems and the Export Pipeline System. This includes land use designations of the Town and City as well as the land use designations for Butte County and the unincorporated areas of Butte County.

3.11.1 Environmental Setting

The Proposed Project would fall within the Town's land use jurisdiction, the City's land use jurisdiction, and the County's land use jurisdiction for unincorporated areas of Butte County. Land use designations do not apply to the County, Town or City ROWs, but are noted here as they would be adjacent to the Proposed Project located primarily in County, City and Town roads (ROW). In the Town, the Proposed Project study area would be adjacent to lands with Residential, Commercial, Industrial, Community Service, Public Institutional, and Recreational land use designations; installing components of the Core Collection System, such as pipelines or pump stations could require temporary or permanent easements on parcels with Residential, Commercial, Industrial, Community Service, and Public Institutional land use designations. Within unincorporated Butte County along the Skyway segment of the pipeline, the Proposed Project study area would remain within the County ROW and be adjacent to land with Agriculture, Residential, Recreation, Commercial, Planned Unit Development, Public, Resource Conservation, and Industrial land use designations. In the City, the Proposed Project study area would be adjacent to land with Open Space, Special Planning Area, Residential, Public, and Manufacturing land use designations. The small segment of the pipeline that crosses private property after leaving Skyway occurs in the City (Section 2.5.2.4 Easement or Encroachment Requirements; Figure 2-8) and would require temporary and permanent easements on two parcels with a land use designation of Regional Commercial. Land use designations within the study area are presented in Figure 3.11-1.

3.11.1.1 Town of Paradise General Plan

The current *Town of Paradise General Plan* was initially adopted by the Paradise Town Council on October 4, 1994. As noted in Section 2.2.1 Pre-fire History, since 1994, it continuously has been reviewed and amended for consistency and applicability. Amendments to the General Plan since 1994 can be found in Appendix B Town of Paradise 1994 General Plan Resolution and Amendments and are incorporated when referencing the *Town of Paradise General Plan* or *General Plan* in this document.

The *General Plan* serves as a long-term guide for orderly growth and development in Paradise. The General Plan also forms the foundation for zoning, subdivision regulation, and other planning decisions. The document is the third general plan adopted by the Town since its incorporation in 1979 and is organized into three separate volumes: Volume I – Policy Document, Volume II - Environmental Impact Report and Volume III – Environmental Setting. Volume I, the Policy Document, contains a

comprehensive assemblage of all mandatory general plan elements and an additional, non-mandatory Education and Social Services element.

The Housing Element has been periodically updated, with the most recent *Town of Paradise 2022–2030 Housing Element Update* (as submitted to the California Department of Housing and Community Development [HCD]) and adopted by Town Council on June 14, 2022 (Town of Paradise 2022a). In the Housing Element, the Town Council adopted an implementation measure to create a Sewer Service Overlay zone if and when the Proposed Project moves forward. This makes the Paradise Housing Element consistent with the Butte County Association of Governments' (BCAG) Regional Housing Needs Allocation (RHNA) and current State Housing Element law.

In order for the Housing Element to be adopted by the Town, which it was, the document was reviewed and conceptually approved by HCD, which regulates general plans in California, as well as specific elements of those plans (https://www.hcd.ca.gov/community-development/housing-element). Certification of the Housing Element by HCD, which included consideration of the full *General Plan*, is confirmation of the continued validity of the local government's *General Plan*. As of May 25, 2022, the Town Planning Director has also provided a review of the *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) and confirmed that all required elements are current (see all amendments to the *General Plan* since 1994 in Appendix B: Town of Paradise 1994 General Plan Resolution and Amendments). The Town of Paradise Planning Commission adopted Resolution No. 13-04 finding the *Town of Paradise 1994 General Plan* with updates "substantially complies with the statutory mandates under Government Code Section 65302" and recommended that the Town Council adopt the amendments to the Housing Element. (Appendix B Town of Paradise 1994 General Plan Resolution and Amendments). The Commission found the *Town of Paradise General Plan*, as updated, remains a valid document because of the slow growth and change of the town.

State legislation now requires the Safety Element be updated whenever the Housing Element is updated. Therefore, the Town's Safety Element was updated at the same time as the *2022-2030 Housing Element*. It is currently in the process of review by CalFire and then will be reviewed by the Department of Conservation. After these reviews, and before adoption, it will be available for public review and comment.

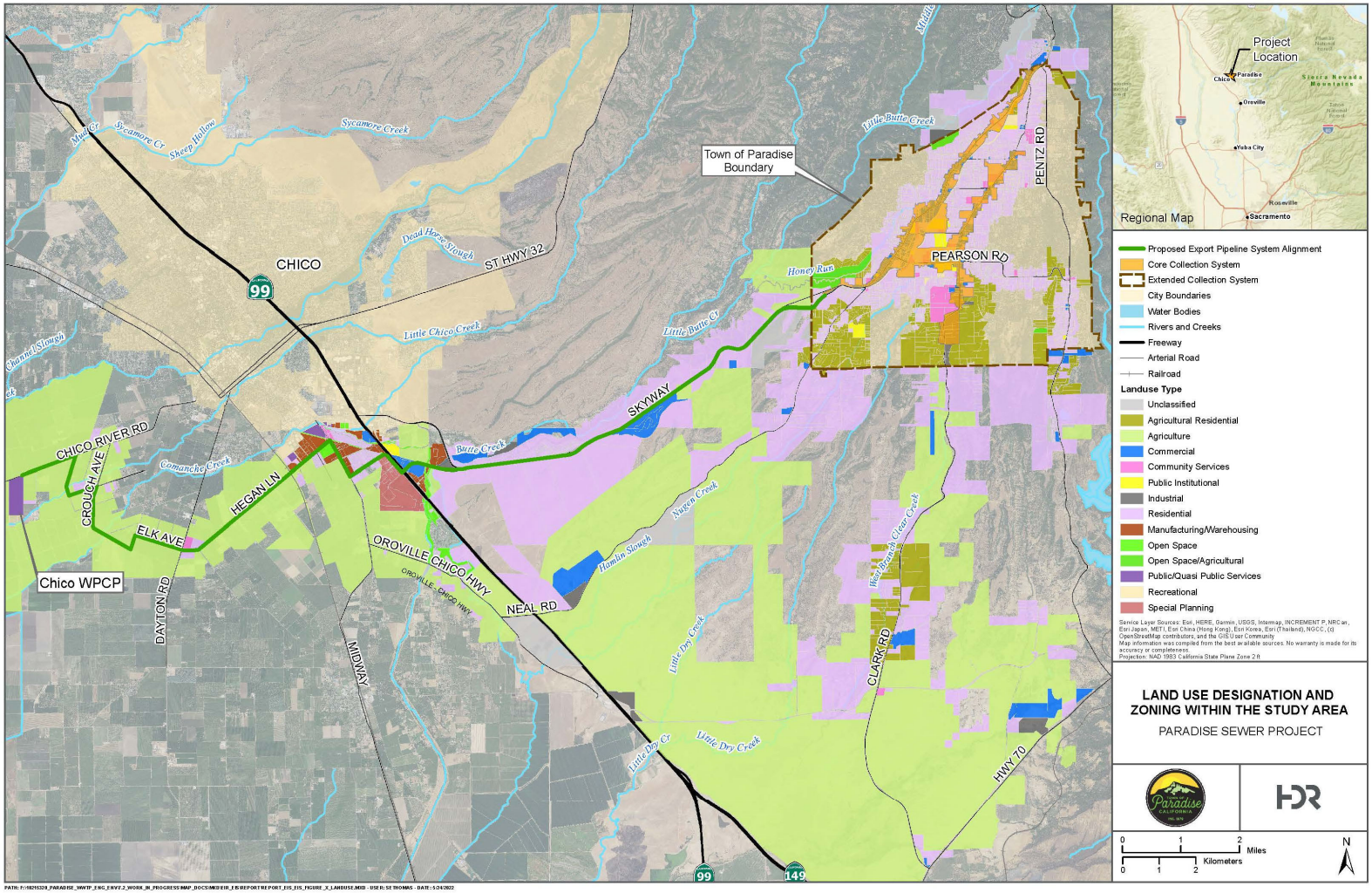

Figure 3.11-1. Land Use Designation and Zoning within the Study Area

3.11.1.2 Butte County General Plan

The *Butte County General Plan 2030* (Butte County 2012) was updated and adopted on October 26, 2010 (Butte County Resolution 10-152) and Amended on November 6, 2012 (Butte County Resolution 12-124). Butte County General Plan 2030 represents the conclusion of a multi-year effort begun in 2006 to comprehensively update the County's General Plan to provide areas for future growth and conservation until the year 2030. The Butte County General Plan 2030 Action Plan was updated by the Board of Supervisors in April 2018 for an additional 5-year planning period, ending in 2023 (Butte County Board of Supervisors Resolution No. 18-069). The Action Plan includes information related to the timing, primary and additional responsible agencies, and estimate costs for each action. The Action Plan also includes a Post General Plan 2030 Adoption Strategy to address future changes and corrections to the General Plan (https://www.buttecounty.net/dds/Planning/Butte-County-General-Plan).

3.11.1.3 Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) was adopted in April 2011and provides a comprehensive, long-range policy framework for the growth and preservation of Chico. The policies of the Plan apply to all properties within the City limits (https://chico.ca.us/general-plan-other-planning-documents).

3.11.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on land use and planning. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.11.2.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding land use and planning are relevant to the Proposed Project.

3.11.2.2 State

California State Planning and Zoning Law (California Government Code Sections 65000 to 66037)
The California State Planning and Zoning Law generally delegates local land use and development decisions to the respective city or county and provides laws that pertain to the land use regulations set out by the local government's general plan requirements, specific plans, and zoning.

3.11.2.3 Regional and Local

Town of Paradise "Dig Once" Policy
The Town of Paradise adopted the "Dig Once" Policy in 2019 to rebuild the Town's infrastructure after the 2018 Camp Fire. Per this policy, the Town strives to place all utility lines underground and direct utility agencies and companies to coordinate with each other when constructing and maintaining their infrastructure. This coordination would lessen the impact on the Town's roadways. Full relocation of utilities is estimated to take 5 years to complete, and work has already begun in Paradise.

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) with updates includes the following goals, objectives, and policies related to land use and planning that are relevant to the Proposed Project:

- **Goal LUG-2**: Accommodate a rate of growth consistent with the physical and infrastructural limitations in Paradise.
- **Objective LUO-2**: Stimulate and accommodate commercial/industrial growth while maintaining the current quality of life.
- **Objective LUO-4**: Carefully manage and control population growth, while stimulating local economic growth.
- **Policy ESP-6**: School sites should have on a timely basis access to all utilities and services, including sewer, water, gas, electricity, and drainage.
- **Implementation Measure LUI-7**: Identify subareas, pipeline routes and priorities for the sewer system and complete construction for a sewer system to serve the central area of Paradise.
- **Policy LUP-27**: The Town shall create a Central Commercial area generally bounded by Skyway, the Paradise Memorial Trailway, Elliott Road, and Pearson Road, evidencing the following: ready access from a variety of directions, visibility, established businesses, available developable land, and sufficient infrastructure planned or in place to support a more concentrated form of activity.
- **Objective LUO-10**: Consider the construction and installation of a formal sewer system to service the commercial and industrial areas in the Town within the 15-year planning period.
- **Goal LUG-13**: Designate appropriate areas for high density residential use and for institutional and public uses in centralized and convenient locations.
- **Policy LUP-16**: The Town will attempt to implement all feasible steps to assure that sewer service is made available to the commercial area of the Town as expeditiously as possible.
- **Goal LUG-32**: Assure that all land uses in the Town conform to the goals and policies of the *General Plan*.
- **Policy LUP-45**: New higher density land use development should only be permitted in areas compatible with surrounding land uses, infrastructure capabilities and established service levels.

Town of Paradise 2022–2030 Housing Element Update

The *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) includes the following goals related to land use and planning that are relevant to the Proposed Project:

- HI-1: *Reduce Infrastructure Constraints to Development* – Continue to reduce infrastructure constraints to new development, particularly those constraints associated with wastewater disposal. The *General Plan* authorizes an ongoing identification of infrastructure and service limitations including those related to sanitary waste disposal which inhibit housing development.
- HI-4: *Density Bonus, SSA Overlay, and Other Opportunities for Increased Density* - Revise the density bonus ordinance (Chapter 17.44) to be consistent with State law, including AB 2345 and Government Code Sections 65915 and 65917 and identify incentives for affordable housing development. Perform the re-zonings described in Chapter 4 (of the *2022-2030 Housing*

Element of the Town of Paradise General Plan), for key parcels in the (sewer service area) and establish a Sewer Service Overlay Zone to allow increased densities up to 30 dwelling units/acre in the (sewer service area) to accommodate affordable housing.

- HI-7: *Small Lot Consolidation and Development* - Continue to encourage consolidation of small multi-family parcels as well as small, commercially designated parcels appropriate for residential use. This program can facilitate the development of affordable housing by creating lots large enough to accommodate denser multi-family residential projects. The planned sewer system is anticipated to also be an impetus for lot consolidation.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following goals related to land use and planning that are relevant to the Proposed Project:

- **Goal LU-1**: Continue to uphold and respect the planning principles on which the County's land use map is based.
- **Goal LU-3**: Create communities where there is a sense of well-being where families and neighbors can socialize, interact, and play.
- **Goal LU-5**: Provide adequate land for and promote the development of attractive commercial and industrial areas and uses that provide goods, services, and jobs.
- **Goal LU-9**: Coordinate land development with provision of new services and infrastructure.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following goals related to land use and planning that are relevant to the Proposed Project:

- **Goal LU-1**: Reinforce the City's compact urban form, establish urban growth limits, and manage where and how growth and conservation will occur.
- **Goal LU-2**: Maintain a land use plan that provides a mix and distribution of uses that meet the identified needs of the community.

3.11.3 Method of Analysis

This section describes the methods used to analyze land use and planning characteristics within the study area.

3.11.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on land use if it would:

- **Impact LU-1:** Physically divide an established community
- **Impact LU-2:** Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

3.11.3.2 Approach to Analysis

Construction, Operation and Maintenance

A desktop analysis was completed to collect and analyze data related to land use and planning characteristics in the study area. Information was collected on land use designation and zoning within the study area. GIS data and aerial imagery were used to identify the land uses that encompass the study area. Additionally, the following resources were used for data collection:

- Butte County Development Services Information interactive GIS map (Butte County 2021b)
- Butte County Public Works Information interactive GIS map (Butte County 2021d)
- *Butte County General Plan 2030* land use designations map (Butte County 2012)
- Butte County Zoning Map (Butte County 2019a)
- Town of Paradise interactive viewer map (Town of Paradise 2021a)
- City of Chico General Plan Diagram land use designation map (City of Chico 2013)
- City of Chico Planning Division interactive GIS map (City of Chico 2021c)

The following methods were used to evaluate the potential impacts from construction, operation and maintenance of the Proposed Project on land use designations:

- The GIS data, aerial imagery, static and interactive maps were used to pinpoint the land use designations and zoning within the study area.
- Analysis of construction methods, ROW, and staging areas.
- Analysis of the Project's consistency with the requirements of all plans, policies, and regulations listed in the regulatory setting of the chapter.

The analysis of environmental effects focuses on foreseeable changes to the existing land use and planning characteristics resulting from the Proposed Project in the context of effects listed in Section 3.11.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, off-site staging areas, post-construction operation, and maintenance.

3.11.4 Impact Analysis

This section describes the direct and indirect environmental impacts on land use that could result from implementation of the Proposed Project. The analysis considers land use consistency with existing policies and regulations, as well as the potential for changes to land use designations or zoning.

3.11.4.1 Impact LU-1: Physically divide an established community (No Impact)

Construction

The Proposed Project would primarily be constructed below the surface within the public ROW and would only rise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP connection. Within the Town, construction of the Core and Extended Collection Systems would use in-street pipe trenching, which after construction would be backfilled and restored to existing or better conditions.

The Export Pipeline System would also be constructed underground, primarily within existing ROW. Approximately 1.1 miles of the pipeline would traverse private property and require a permanent easement from the private property owners (Section 2.5.2.4 Easement or Encroachment Requirements). Above ground structures including pump stations, the transition chamber and the flow control and metering structure would be part of the system (Section 2.5.2 Export Pipeline System); however, these would be in the public ROW and would not segment or divide an established community. Based on these factors, there would be no impact from physically dividing an established community during construction.

Mitigation. No mitigation required.

Operation and Maintenance

According to the *Town of Paradise 2022–2030 Housing Element Update*, an implementation measure to create a Sewer Service Overlay Zone was established to allow increased densities up to 30 dwelling units per acre in the sewer service area (Town of Paradise 2022a). As discussed in Section 2.5.1 Core Collection System, this Proposed Project component aligns geographically with what is defined as the Sewer Service Area (SSA) in the *Town of Paradise 2022 Housing Element* (Town of Paradise 2022a). The Proposed Project is consistent with the goals and policies in the Housing Element as it would serve most businesses in the Town of Paradise and provide for future development of more multi-family residences, which is currently limited because of septic system constraints. Further, the Proposed Project assists the Town in meeting the goals presented in the *Town of Paradise 2022–2030 Housing Element Update* as it provides the sewage capacity for the increase in densities per acre to occur.

Operation and maintenance of the Proposed Project will involve periodic inspection of the Core Collection System, Extended Collection System, Export Pipeline System and associated instrumentation, and flow data sampling (2.8 Proposed Operation and Maintenance). These activities will be required periodically throughout the year and will not involve activities or permanent structures that would divide established communities.

In summary, because most of the Proposed Project components would be below the surface and all exposed ground would be restored back to existing conditions post construction, any above-ground components would be within existing ROW and would be relatively small structures, and rezoning would be consistent with the *Town of Paradise 2022–2030 Housing Element Update*, the Proposed Project would not physically divide an established community and no impact would occur during operation and maintenance.

Mitigation. No mitigation required.

3.11.4.2 Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (No Impact)

The objective of the Proposed Project is to provide a sewer system to serve the Town in compliance with the *Town of Paradise General Plan* policies LUG-2, LUO-2, LUO-4, ESP-6, LUI-7, LUO-10, LUG-13,LUP-16, LUP-27, LUG-32, and LUP-45 (Town of Paradise and Quad Consultants 2008), as well as the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) goals: HI-1, HI-5,

and HI-8. The Proposed Project is consistent with these aforementioned policies and all other applicable land use and planning goals and policies identified in the *General Plan*. The Town of Paradise will be updating its General Plan in response to the 2018 Camp Fire, and will include updates to its land use, circulation, conservation, noise, open space, and air quality elements. This is anticipated to be a minimum 3-year process (S. Hartman, personal communication, November 19, 2021). The Proposed Project is also consistent with the goals and policies planned to be included in the *Town of Paradise General Plan* updates (S. Hartman, personal communication, November 19, 2021).

Table 3.11-1 provides a consistency analysis of applicable land use goals, policies, and regulations adopted for the purpose of avoiding or mitigating environmental effects.

Table 3.11-1. Consistency with State and Local Land Use Plans, Policies, and Regulations

Goals and Policies	Project Consistency
Land Use and Planning	
California State Planning and Zoning Law	**Consistent.** The Proposed Project will follow all Butte County, Town of Paradise, and City of Chico laws and regulations as it relates to land use. These include *Butte County General Plan 2030* (Butte County 2012), *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008), and *Chico 2030 General Plan* (City of Chico 2017).
Butte County General Plan 2030 Goal LU-1: Continue to uphold and respect the planning principles on which Butte County's land use map is based.	**Consistent**. The Proposed Project would not impact any existing land use designation and will follow all Butte County planning principles.
Butte County General Plan 2030 Goal LU-3: Create communities where there is a sense of well-being where families and neighbors can socialize, interact, and play.	**Consistent**. The Proposed Project's objective is to encourage economic vitality and improve the overall Paradise community by reducing the potential for public health concerns.
Butte County General Plan 2030 Goal LU-5: Provide adequate land for and promote the development of attractive commercial and industrial areas and uses that provide goods, services, and jobs.	**Consistent**. The Proposed Project's objective is to improve the local economy by stimulating existing businesses and encouraging new businesses. This, in effect, would provide more goods, services, and job opportunities for residents.
Butte County General Plan 2030 Goal LU-9: Coordinate land development with provision of new service and infrastructure.	**Consistent**. The Proposed Project would take into consideration of any existing land use designation and land development with the new sewer service and infrastructure.
Town of Paradise General Plan Objective LUO-10: Consider the construction and installation of a formal sewer system to service the commercial and industrial areas in the Town within the 15-year planning period.	**Consistent.** The objective of the Proposed Project is to provide a sewer system to serve the Town in compliance with the *Town of Paradise General Plan* policies LUO-10, ESP-6, LUP-16, and LUI-7 (Town of Paradise and Quad Consultants 2008) and those policies being included by the Town in their current process to update the *General Plan*.

Goals and Policies	Project Consistency
Town of Paradise General Plan Policy ESP-6: School sites should have on a timely basis access to all utilities and services, including sewer, water, gas, electricity, and drainage.	**Consistent.** The objective of the Proposed Project is to provide a sewer system to serve the Town in compliance with the *Town of Paradise General Plan* policies LUO-10, ESP-6, LUP-16, and LUI-7 (Town of Paradise and Quad Consultants 2008) and those policies being included by the Town in their current process to update the *General Plan*.
Town of Paradise General Plan Goal LUG-2: Accommodate a rate of growth consistent with the physical and infrastructural limitations in Paradise.	**Consistent**. The Proposed Project will provide sewer service to approximately 1,500 parcels that would serve most businesses in the Town and future multi-family residential developments. Additional parcels could be added through considerations of the Extended Collection System.
Town of Paradise General Plan Objective LUO-2: Stimulate and accommodate commercial/industrial growth while maintaining the current quality of life.	**Consistent**. The Proposed Project's objective is to encourage economic vitality and improve the overall Paradise community by reducing the potential for public health concerns.
Town of Paradise General Plan Objective LUO-4: Carefully manage and control population growth, while stimulating local economic growth.	**Consistent**. The Proposed Project's objective is to improve the local economy by stimulating existing businesses and encouraging new businesses. This, in effect, would provide more goods, services, and job opportunities for residents.
Town of Paradise General Plan Policy LUP-45: New higher density land use development should only be permitted in areas compatible with surrounding land uses, infrastructure capabilities and established service levels.	**Consistent**. The sewer service area would be compatible with surrounding land uses, infrastructure capabilities and established service levels.
Town of Paradise 2022-2030 Housing Element Update Goal HG-1: Encourage and facilitate the production of all housing types, from affordable workforce housing to executive homes, to meet the town's share of regional housing needs consistent with the overall goal, objectives and policies of the Paradise General Plan.	**Consistent.** The sewer service area would provide for future development of more multi-family residences, which is currently limited because of septic system constraints.
Town of Paradise 2022-2030 Housing Element Update Incentive HI-4: Density bonus, SSA overlay, and other opportunities for increased density	**Consistent.** The sewer service area would provide for future development of more multi-family residences, which is currently limited because of septic system constraints. The Proposed Project assists the Town in meeting the goals presented in the *Town of Paradise Housing Element* as it provides the sewage capacity for the increase in densities per acre to occur.
Chico 2030 General Plan Goal LU-1: Reinforce the City of Chico's compact urban form, establish urban growth limits, and manage where and how growth and conservation will occur.	**Consistent**. The Proposed Project's objectives would not affect Chico's compact urban form or create any substantial population growth in Chico, as discussed in Section 0, Population and Housing.
Chico 2030 General Plan Goal LU-2: Maintain a land use plan that provides a mix and distribution of uses that meet the identified needs of the community	**Consistent**. The Proposed Project would provide efficient regional wastewater treatment for Chico and would not impact existing land use.

Goals and Policies	Project Consistency
Air Quality	
SB 32	**Consistent.** The Proposed Project would not generate GHG emissions during construction that would exceed SMAQMD's significance thresholds, which are based on SB 32 GHG emissions reduction goals. Because of this, it would not conflict with SB 32 GHG emissions reduction goals. (Note: the Proposed Project is in the BCAQMD, but since no GHG thresholds have been set for this District, SMAQMD's significance thresholds were used in impact analysis (Section 3.8 Greenhouse Gas Emissions).
Northern Sacramento Valley Planning Area 2018 Triennial Air Quality Attainment Plan	**Consistent.** The Proposed Project could foster re-population and economic re-growth indirectly recovering from the 2018 Camp Fire; however, that growth would be contained within the Town and as a result, the Proposed Project would be consistent with BCAG's growth projections. Thus, it would not conflict with the Attainment Plan.
Hydrology and Water Quality	
Clean Water Act (Section 401 and 404)	**Consistent.** The Proposed Project will comply with applicable permitting requirements during construction.
California Department of Fish and Wildlife Lake and Streambed Alteration Program	**Consistent.** The Proposed Project will comply with applicable permitting requirements during construction.
California Water Board's *Strategic Plan Summary 2008-2012*	**Consistent.** The Proposed Project intends to improve groundwater quality and increase water supplies, which are the two key objectives in the strategic plan.
Butte County Groundwater Conservation Ordinance	**Consistent.** The Proposed Project would not include the use of groundwater. The Proposed Project would not introduce impervious surfaces that would have the potential to impede groundwater recharge, and no impact on a sustainable groundwater management plan or ordinance would occur.
Hazards and Hazardous Materials	
2017 Butte County Airport Land Use Compatibility Plan	**Consistent.** The Proposed Project would not include tall structures that have the potential to intrude upon protected airspace and would not include land use features that have the potential to attract birds and certain other potentially hazardous wildlife to the Airport area. Visual hazards, including certain types of lights, sources of glare, and sources of dust, steam or smoke would be minimized during construction through project controls.
Biological Resources	
Butte Regional Conservation Plan	**Consistent.** The Proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. A portion of the study area overlaps with the Butte Regional Conservation Plan (BRCP), which as of summer 2021 had not been formally adopted, though it was in the final phase of development. However, Project construction activities will not conflict with the Plan.

Construction

As shown in Table 3.11-1, the Proposed Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect during construction. No impact would occur.

Mitigation. No mitigation required.

Operation and Maintenance

As shown in Table 3.11-1, the Proposed Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect during operation and maintenance and there would be no impact.

Mitigation. No mitigation required.

3.11.5 Impacts Summary

Table 3.11-2 summarizes the land use and planning impacts of the Proposed Project.

Table 3.11-2. Land Use and Planning Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact LU-1: Physically divide an established community	NI	N/A	NI
Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	NI	N/A	NI

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.11.6 References

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3.12 Noise and Groundborne Vibration

This section describes the environmental setting and regulatory framework for noise and groundborne vibration, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. The section discusses whether the Proposed Project would generate temporary or permanent increases in ambient noise levels in the vicinity of the Proposed Project such that the noise level would exceed standards set in the local general plan or noise ordinance, or applicable noise standards set by other agencies. This section also focuses on the possible generation of excessive noise and groundborne vibration in the study area where sensitive receptors are most susceptible to impacts as a result of the Proposed Project's construction, operation, and maintenance. The study area for noise and groundborne vibration refers to the areas within and directly adjacent to the Town of Paradise and areas of unincorporated Butte County and Chico where the proposed pipeline alignment runs, as well as a 1,000-foot buffer radius surrounding the Proposed Project, as prescribed in Policy HS-P1.7 in the *Butte County 2030 General Plan*.

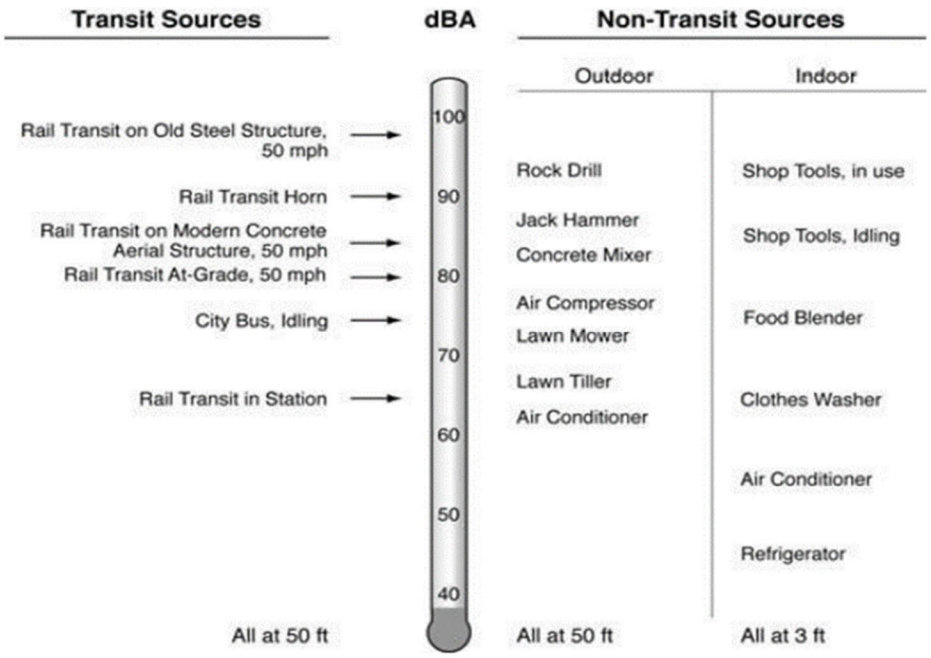
3.12.1 Environmental Setting

3.12.1.1 Overview of Noise and Sound

Noise levels are presented on a logarithmic scale to account for the large pressure response range of the human ear and are expressed in units of decibels (dB). A decibel is defined as the ratio between a measured value and a reference value usually corresponding to the lower threshold of human hearing defined as 20 micropascals. Because the human ear does not perceive every frequency with equal loudness, sounds are often adjusted with a weighting filter. The A-weighted filter is applied to compensate for the frequency response of the human auditory system and is known as an A-weighted decibel (dBA). Figure 3.12-1 shows typical A-weighted sound levels for transit and non-transit sources.

With respect to how the human ear perceives changes in sound pressure level relative to changes in "loudness," scientific research demonstrates the following general relationships between sound level and human perception for two sound levels with the same or very similar frequency characteristics:

- One dBA is the practical limit of accuracy for sound measurement systems and corresponds to an approximate 10 percent variation in the sound pressure level. A 1 dBA increase or decrease is an imperceptible change in sound.
- A 3 dBA increase or decrease is a doubling (or halving) of acoustic pressure level, and it corresponds to the threshold of change in loudness perceptible in a laboratory environment. In practice, the average person is not able to distinguish a 3 dBA difference in environmental sound outdoors.
- A 5 dBA increase or decrease is described as a perceptible change in sound level and is a discernible change in an outdoor environment.
- A 10 dBA increase or decrease is a tenfold increase or decrease in acoustic pressure level but is perceived as a doubling or halving in loudness (that is, the average person would judge a 10 dBA change in sound level to be twice or half as loud).



Source: Federal Transit Administration (FTA) 2018

Figure 3.12-1. Typical A-weighted Sound Levels

Noise levels can be measured, modeled, and presented in various formats. The noise descriptors used in this analysis have the following definitions:

- **Equivalent Sound Level (L_{eq}):** Conventionally expressed in dBA, the L_{eq} is the energy averaged, A weighted sound level over a specified period. It is defined as the steady, continuous sound level over a specified period that has the same acoustic energy as the actual varying sound levels over the specified period. It is a mean average sound level.
- **Maximum Sound Level (L_{max}):** The L_{max} is the maximum A-weighted sound level as determined during a specified measurement period. It can also be described as the maximum instantaneous sound pressure level generated by a piece of equipment or during a construction activity.
- **Day-Night Average Sound Level (L_{dn}):** The L_{dn} is the average hourly A-weighted L_{eq} for a 24hour period with a 10 dB penalty added to sound levels occurring during the evening hours (7 p.m. to 10 p.m.) to account for people's increased sensitivity to noise levels during nighttime hours.
- **Community Noise Equivalent Level:** The community noise equivalent level is another average A-weighted L_{eq} sound level measured over a 24-hour period; however, this noise scale is adjusted to account for some people's increased sensitivity to noise levels during the evening and nighttime hours. A community noise equivalent level noise measurement is obtained after adding 5 dB to sound levels occurring during evening hours (7 p.m. to 10 p.m.) and 10 dB to noise levels occurring during nighttime hours (10 p.m. to 7 a.m.).

3.12.1.2 Overview of Groundborne Vibration

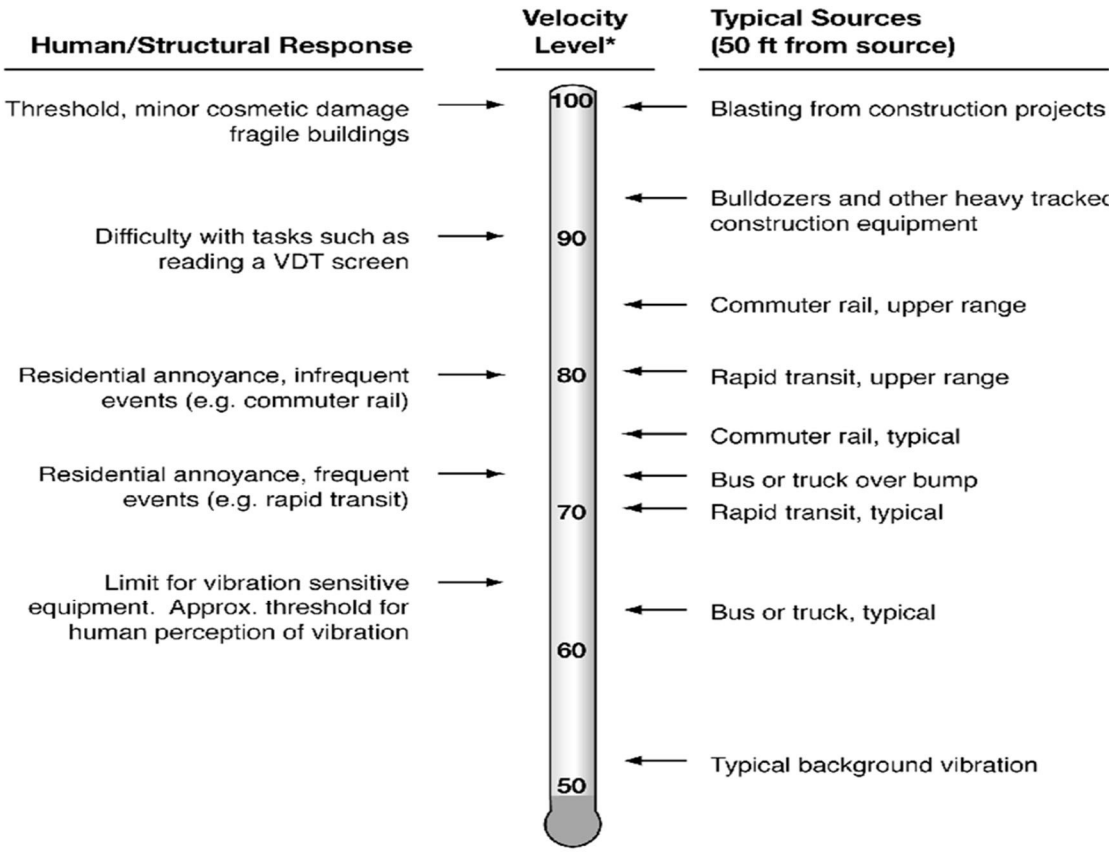
Activities such as pile-driving and operation of heavy equipment may cause groundborne vibration during construction of the Proposed Project. Vibration is an oscillatory motion that can be described in terms of the displacement, velocity, or acceleration (Federal Transit Administration [FTA] 2018). Velocity or acceleration is typically used to describe vibration. The vibration descriptors used in this analysis have the following definitions:

- **Peak Particle Velocity (PPV):** The maximum instantaneous positive or negative peak of the vibration signal. The potential for damage to buildings as a result of construction related vibration is evaluated using PPV. PPV is expressed in inch per second (in/sec).
- **Root Mean Square (RMS):** The square root of the average of the squared amplitude of the vibration signal, typically calculated over a 1 second period. The potential to annoy humans as a result of construction-related vibration is evaluated using RMS. RMS is expressed in in/sec.
- **Vibration Velocity Level (L_V):** Ten times the common logarithm of the ratio of the square of the amplitude of the RMS vibration velocity to the square of the amplitude of the reference RMS vibration velocity. The reference velocity in the United States is 1 micro-inch per second. L_V is expressed in vibration decibel (VdB).

Groundborne vibrations are generally reduced with distance depending on the local geological conditions. A receiver is a vibration-sensitive building (for example, residence, hospital, or school) where the vibrations may cause perceptible shaking of the floors, walls, and ceilings and a rumbling sound inside rooms. Not all receivers have the same vibration sensitivity. Consequently, vibration criteria are established for the various types of receivers. Groundborne noise occurs as a perceptible rumble and is caused by the noise radiated from the vibration of room surfaces.

Vibration above certain levels can damage buildings, disrupt sensitive operations, and cause annoyance to humans within buildings. The response of humans, buildings, and equipment to vibration is most accurately described using velocity or acceleration. In this analysis, vibration velocity (VdB) is the primary measure to evaluate the effects of vibration.

Figure 3.12-2 illustrates typical groundborne vibration velocity levels for common sources and thresholds for human and structural response to groundborne vibration. As shown, the range of interest is from approximately 50 to 100 VdB in terms of vibration velocity level (that is, from imperceptible background vibration to the threshold of damage). Although the threshold of human perception to vibration is approximately 65 VdB, annoyance does not usually occur unless the vibration exceeds 70 VdB.



Source: FTA 2018

Figure 3.12-2. Typical Groundborne Vibration Levels

3.12.1.3 Noise Sensitive Land Uses

Certain land uses are considered more sensitive to noise than others. Examples of these types of land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. Several sensitive receptors including residential dwelling units, schools, nursing homes, hospitals, and day care centers are found within the study area. The closest sensitive receptors to the Proposed Project are the residential dwelling units along Entler Avenue, which are located within 50 feet of the proposed pipeline alignment (Google Earth 2022). See Figure 3.3-1 for the location of sensitive receptors within a 1,000-foot buffer radius surrounding the Project.

3.12.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on noise and groundborne vibration. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.12.2.1 Federal

Noise Control Act of 1972

The Noise Control Act of 1972 (42 USC 4901 to 4918) was the first comprehensive statement of national noise policy. The Noise Control Act declared "it is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare." Although the Noise Control Act, as a funded program, was ultimately abandoned at the federal level, it served as the catalyst for comprehensive noise studies and the generation of noise assessment and mitigation policies, regulations, ordinances, standards, and guidance for many states, counties, and municipal governments.

The Proposed Project will be held to the principles set forth by this act.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration established standards for occupational noise exposure under 29 CFR 1910.95. These regulations protect employees from excessive noise exposure and require a Hearing Conservation Program when routine exposure to high noise levels would occur. The regulations identify permissible daily noise exposures and stipulate that personal protection against the effects of noise exposure must be provided if those levels are exceeded.

The Proposed Project will be held to the standards set forth by the Occupational Safety and Health Administration.

Federal Transit Administration

The FTA developed the *Transit Noise and Vibration Impact Assessment Manual* (Noise Manual) in September 2018. The Noise Manual provides technical guidance for conducting noise and vibration analyses for transit projects. While these standards and impact assessment methodologies are not directly applicable to the Proposed Project, they are routinely used as guidelines for projects in state and local jurisdictions. The Noise Manual provides vibration criteria for structural damage by building/structural category as shown in Table 3.12-1.

Table 3.12-1. Groundborne Vibration Structural Damage Criteria

Building Category	PPV (in/sec)	L_V (VdB)
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018

Notes: PPV = peak particle velocity, in/sec = inch per second, L_V = vibration velocity level, VdB = vibration decibel

The Noise Manual also includes criteria for acceptable levels of groundborne vibration by vibration-sensitive land uses as shown in Table 3.12-2.

Table 3.12-2. Groundborne Vibration Human Annoyance Criteria

Land Use Category	Maximum L_V (VdB)	Description
Workshop	90	Vibration is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration can be felt. Appropriate for offices and similar areas not as sensitive to vibration
Residential – daytime	78	Vibration is barely felt. Adequate for land uses that are sensitive to vibration.
Residential – nighttime	72	Vibration is not felt, but groundborne noise may be audible inside quiet rooms.

Source: FTA 2018

Notes: L_V = vibration velocity level, VdB = vibration decibel

The Proposed Project will be held to the criteria established by FTA.

3.12.2.2 State

California Noise Control Act

The California Noise Control Act, enacted in 1973, finds that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act requires the Office of Noise Control in the Department of Health Services to provide assistance to local communities in developing local noise control programs. The Office of Noise Control also works with the Governor's Office of Planning and Research to provide guidance for preparing required noise elements in city and county general plans, pursuant to Government Code Section 65302(f).

The Proposed Project will be held to the principles set forth by this act.

Governor's Office of Planning and Research

The *State of California General Plan 2017 Guidelines* published by the Governor's Office of Planning and Research provides a basis for local programs to control and abate environmental noise and to protect residents from excessive exposure (Governor's Office of Planning and Research 2017). These guidelines include a noise level/land use compatibility chart that categorizes various outdoor L_{dn} ranges into up to four compatibility categories: normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable, depending on land use. These guidelines are used by many agencies, environmental planners, and acoustical specialists as a starting point to evaluate the potential for noise impacts on and by a project. The guidelines are also used to evaluate methods for achieving noise compatibility with respect to nearby existing uses.

The Proposed Project will be held to the State of California General Plan 2017 Guidelines.

3.12.2.3 Regional and Local

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to noise and groundborne vibration that are relevant to the Proposed Project:

- **Policy NP-1**: Where proposed nonresidential land uses are likely to produce noise levels exceeding the performance standards of Table 6.4-1 at existing or planned noise-sensitive uses, an acoustical analysis will be required as part NP-7 of the environmental review process so that noise mitigation may be included in the project design.
- **Policy NP-4**: Where noise mitigation measures are required to achieve the standards of Tables 6.4-1 and 6.4-2, the emphasis of such measures will be placed upon site planning and project design. The use of noise barriers should be considered a supplemental means of achieving the noise standards after all practical design-related noise mitigation measures have been integrated into the project.
- **Policy NP-5**: Acoustical analyses should be prepared in accordance with the requirements of Table 6.4-3.
- **Policy NP-10**: The Town will ensure that new development situated near existing residential care and retirement facilities is consistent with the goals, objectives and policies of the Noise Element.

The Proposed Project will be held to the policies in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to noise and groundborne vibration that are relevant to the Proposed Project:

- **Policy HS-P1.6**: Applicants proposing a new noise-producing development project near existing or planned noise-sensitive uses will provide a noise analysis prepared by an acoustical specialist with recommendations for design mitigation.
- **Policy HS-P1.7**: Applicants for discretionary permits will be required to limit noise-generating construction activities located within 1,000 feet of residential uses to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays and non-holidays.
- **Policy HS-P1.8**: Noise from generators will be regulated near existing and future residential uses.
- **Policy HS-P1.9**: The following standard construction noise control measures will be required at construction sites in order to minimize construction noise impacts:

    - Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
    - Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
    - Utilize quiet air compressors and other stationary noise-generating equipment where appropriate technology exists and is feasible.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to noise and groundborne vibration that are relevant to the Proposed Project:

- **Policy N-1.3, Acoustical Analysis**: Where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards, require an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-3.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

Noise Ordinances

The Town of Paradise, Butte County, and City of Chico each have established policies and standards that aim to minimize the effects of noise on people through prescriptive construction standards, zoning restrictions, hours of operation, and suppression techniques. Table 3.12-3 summarizes the applicable noise standards and policies.

Table 3.12-3. Noise Ordinance Specifications

Jurisdiction	Noise Criteria
Town of Paradise	The operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work is prohibited between the hours of 7 p.m. and 6 a.m. on weekdays or at any time on Sundays or holidays.
Butte County	Noise sources associated with construction activities occurring within 1,000 feet of residential uses is prohibited between the following hours: • Sunset to sunrise on weekdays and non-holidays; • Friday commencing at 6 p.m. through and including 8 a.m. on Saturday, as well as not before 8 a.m. on holidays; • Saturday commencing at 6 p.m. through and including 10 a.m. on Sunday; and • Sunday after the hour of 6 p.m.
City of Chico	Construction activities occurring between the hours of 10 a.m. and 6 p.m. on Sundays and holidays, and 7 a.m. and 9 p.m. on other days will be subject to one of the following limits: • No individual device or piece of equipment may produce a noise level exceeding 83 dBA at a distance of 25 feet from the source. • The noise level at any point outside of the property plane of the project may not exceed 86 dBA. The generation of noise in exceedance of 70 dBA at the property line of residential or commercial property is prohibited.

Source: Town of Paradise 2022d, Butte County 2021e, and City of Chico 2021d

Notes: dBA = A-weighted decibel

The Proposed Project will be held to these noise ordinances.

3.12.3 Method of Analysis

This section describes the methods used to analyze ambient noise and groundborne vibration impacts within the study area.

3.12.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on noise and groundborne vibration if it would:

- **Impact NSE-1**: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies
- **Impact NSE-2**: Generate excessive groundborne vibration or groundborne noise levels
- **Impact NSE-3**: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels

3.12.3.2 Approach to Analysis

Impacts on ambient noise and groundborne vibration were identified qualitatively and quantitively. The analysis of environmental effects focuses on foreseeable changes to noise and groundborne vibration in the context of effects listed in Section3.12.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

Construction

Impact on noise and groundborne vibration during construction of the Proposed Project were analyzed quantitatively. The anticipated increase in noise during construction of the Core Collection System and Export Pipeline System and the effect on noise-sensitive receptors was estimated using typical noise levels associated with construction equipment, derived from representative data presented in the Noise Manual (FTA 2018). Reference noise levels were used to estimate noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). The increase in noise levels during construction of the Extended Collection System were estimated using comparable measures and assumptions to the Core Collection System. Noise impacts were determined by comparing the noise levels associated with construction of the Proposed Project against the noise limits adopted by Paradise, Butte County, and Chico.

Groundborne vibration levels associated with construction of the Core Collection System and Export Pipeline System were estimated using typical groundborne vibration levels associated with construction equipment obtained from Noise Manual (FTA 2018). Groundborne vibration levels associated with construction of the Extended Collection System were estimated using comparable measures and assumptions to the Core Collection System. Groundborne vibration impacts were determined by comparing the groundborne vibration levels associated with construction of the Proposed Project against FTA's groundborne vibration criteria for structural damage and human annoyance.

Operation and Maintenance

Impacts on noise and groundborne vibration during operation and maintenance were assessed qualitatively based on the information in Section 2.8 Proposed Operation and Maintenance.

3.12.4 Impact Analysis

This section includes an analysis of the Proposed Project's potential to generate an increase in ambient noise levels in excess of applicable noise standards, result in excessive groundborne vibration, and expose people residing or working in the study area to excessive noise levels as a result of being

located in the vicinity of an airport. The noise and groundborne vibration impact analysis focuses on impacts from construction, operation, and maintenance of the Core Collection system, the Export Pipeline System, and the Extended Collection System.

3.12.4.1 Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies (Less than Significant Impact with Mitigation Incorporated)

Construction

Construction activities associated with the Proposed Project would introduce new sources of noise in the study area in the form of construction traffic and construction equipment on a temporary basis. Construction activities, although temporary, could affect nearby noise-sensitive receptors. Several sensitive receptors including residential dwelling units, schools, nursing homes, hospitals, and day care centers are found in the study area. The closest sensitive receptors to the Proposed Project are the residential dwelling units along Entler Avenue, which are located within 50 feet of the proposed pipeline alignment (Google Earth 2022). See Figure 3.3-1 for the location of sensitive receptors within a 1,000-foot buffer surrounding the Proposed Project.

The traffic noise on roadways in the vicinity of the study area would increase due to commute of construction crews and the transport of equipment and materials on a short-term basis. Although construction traffic would temporarily increase noise along local roadways, the effect of construction traffic on long-term (i.e., hourly or daily) ambient noise levels would be minimal.

Construction of the Core Collection System and Export Pipeline System would require the use of heavy equipment that could be periodically audible at offsite locations. Anticipated construction equipment for the Core Collection System and Export Pipeline System are presented in Chapter 2 Project Description, Tables 2-2 and 2-5. Construction noise levels would fluctuate depending on the construction activity, equipment type, and distance between noise source and receiver. Additionally, noise from construction equipment would vary depending on the construction phase and the number and type of equipment at a location at any given time. Construction equipment noise levels are usually measured 50 feet from the source.

Table 3.12-4 lists typical noise levels for construction equipment associated with the Core Collection System and Export Pipeline System.

Table 3.12-4. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Generator	82
Loader	80
Paver	85

Equipment	Typical Noise Level (dBA) 50 feet from Source
Pump	77
Roller	85
Saw	76
Truck	84

Source: FTA 2018

As shown in Table 3.12-4, typical construction equipment would generate noise levels of up to 85 dBA at a distance of 50 feet. Therefore, at 50 feet, the nearest sensitive receptor would be exposed to noise levels of up to 85 dBA from construction equipment.

As presented earlier, the Paradise, Butte County, and Chico, have established noise standards and ordinances for construction activities. Construction activities associated with the Core Collection System and Export Pipeline System would exceed the daytime noise limits within these jurisdictions.

The construction methodology for the Extended Collection System would be similar to the Core Collection System. Crews and equipment used for the Extended Collection System would be similar to the Core Collection System, except that the duration would be shorter. The noise levels generated during construction of the Extended Collection System would be similar to those generated during construction of the Core Collection System. As presented earlier, noise levels associated with construction of the Core Collection System would exceed the noise limits within the applicable jurisdictions. Similar to the Core Collection System, construction of the Extended Collection System would generate noise levels that exceed the Town's daytime noise limits.

Based on the factors above, noise levels during construction of the Proposed Project would exceed the established noise standards, resulting in a potentially significant impact.

Mitigation. To minimize potentially significant noise impacts during construction of the Proposed Project to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise. Prior to construction, the Town will incorporate the following measures into all construction plans and agreements to reduce noise levels during construction:

- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from noise-sensitive receptors.
- Use quiet air compressors and other stationary noise-generating equipment where appropriate technology exists and is feasible.
- Maintain and tune all equipment in accordance with the manufacturer's recommendations to minimize noise emission.
- Install temporary construction-site sound barriers near noise sources.
- Prohibit unnecessary idling of internal combustion engines.
- Limit use of public address systems.

- Post the days and hours of construction as well as the name and phone number of a designated representative to be contacted for noise-related concerns at the perimeter of the construction site.
- Comply with county, city and/or town noise policies applicable to the location's jurisdiction.

Significance after Mitigation. With the implementation of mitigation measure **MM-NSE-1**, noise impacts during construction would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would result in an increase in noise levels in the study area. Relative to existing noise levels on roadways in the study area, the addition of traffic associated with operation and maintenance of the Proposed Project would not affect ambient noise levels in the study area. As a result, noise levels would remain similar to existing conditions during operations and maintenance. Therefore, noise levels during operation and maintenance of the Proposed Project would not exceed the established standards, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

3.12.4.2 Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels (Less than Significant Impact with Mitigation Incorporated)

Construction

Increases in groundborne vibration levels attributable to the Proposed Project would be primarily associated with construction-related activities from the Core Collection System, the Export Pipeline System, and the Extended Collection System.

Construction of the Core Collection System and the Export Pipeline System has the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used. Construction activities are anticipated to use equipment such as backhoes, roller compactors, vibratory plate compactors, excavators, drilling rigs, and trucks that have the potential to result in groundborne vibrations.

Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The types of construction vibration impacts include building damage and human annoyance. Table 3.12-1 and Table 3.12-2 present the groundborne vibration criteria for structural damage and human annoyance criteria respectively, based on the Noise Manual (FTA 2018).

Table 3.12-5 lists typical vibration levels for construction equipment associated with the Core Collection System and the Export Pipeline System.

Table 3.12-5. Typical Construction Equipment Vibration Levels

Equipment	PPV at 25 feet (in/sec)	L_V at 25 feet (VdB)
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86

Source: FTA 2018

Notes: PPV = peak particle velocity, in/sec = inch per second, L_V = vibration velocity level, VdB = vibration decibel

As shown in Table 3.12-5, the highest reference PPV at 25 feet from the construction equipment would be 0.21 inch per second (in/sec). As noted earlier, the closest sensitive receptors to the Proposed Project are the residential dwelling units along Entler Avenue, which are located within 50 feet of the proposed pipeline alignment (Google Earth 2022). The Noise Manual (FTA 2018) provides the following equation to assess construction vibration related to building damage for each piece of equipment:

$$PPV_{Equipment} = PPV_{Ref} (25/D)^{1.5}$$

Where:
$PPV_{Equipment}$ = PPV of equipment adjusted for distance (in/sec),
PPV_{Ref} = source reference PPV at 25 feet (in/sec), and
D = distance from equipment to the receiver (feet).

Using this equation, the construction vibration levels from the construction equipment at 50 feet would be 0.07 in/sec. This level is much lower than the 0.12 in/sec threshold in Table 3.12-1 for buildings extremely susceptible to vibration damage.

As shown in Table 3.12-5, the highest reference L_V at 25 feet from the construction equipment would be 94 VdB. As noted earlier, the closest sensitive receptors to the Proposed Project are the residential dwelling units along Entler Avenue, which are located within 50 feet of the proposed pipeline alignment (Google Earth 2022). For consideration of annoyance or interference with vibration-sensitive activities, the vibration level at any distance is calculated using the following formula from the Noise Manual (FTA 2018):

$$L_{V,distance} = L_{V,reference} - 30 \log (D/25)$$

Where:
$L_{V,distance}$ = the RMS velocity level adjusted for distance (VdB),
$L_{V,reference}$ = the source reference vibration level at 25 feet (VdB), and
D = distance from the equipment to the receiver (feet).

Using this equation, the groundborne vibration level at 50 feet from the construction equipment would be 85 VdB. This level would exceed the daytime annoyance threshold of 78 VdB for residential uses as listed in Table 3.12-2.

The construction methodology for the Extended Collection System would be similar to the Core Collection System. Crews and equipment used for the Extended Collection System would be similar to the Core Collection System, except that the duration would be shorter. The groundborne vibration levels generated during construction of the Extended Collection System would be similar to those generated during construction of the Core Collection System. As presented earlier, construction of the Core Collection System would generate groundborne vibration that exceeds the threshold for human annoyance. Similar to the Core Collection System, the Extended Collection System would generate groundborne vibration that exceeds the threshold for human annoyance.

Based on the discussion above, groundborne vibration levels during construction of the Proposed Project would exceed the threshold for human annoyance, resulting in a potentially significant impact.

Mitigation. To minimize potentially significant groundborne vibration impacts during construction of the Proposed Project to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise (see Impact NSE-1 for description) ***Significance after Mitigation***. With the implementation of mitigation measure **MM-NSE-1**, groundborne vibration impacts during construction of the Proposed Project would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities or the use of vibration-generating equipment except if there were a pipe break and a section of pipeline needed to be replaced. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would not generate excessive groundborne vibration, resulting in no impact.

Mitigation. No mitigation required.

3.12.4.3 Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels (Less than Significant Impact)

Construction, Operation, and Maintenance

The Proposed Project is not located within 2 miles of any public or public-use airport. A portion of the Proposed Project along Chico River Road is located approximately 1.5 mile from the privately owned Ranchaero Airport, which is west of Chico. A review of the *Butte County Airport Land Use Compatibility Plan* (Butte County Airport Land Use Commission 2017) shows that the portion of the Proposed Project

along Chico River Road is located within the low noise impact zone for Ranchaero Airport. Therefore, the Proposed Project would not expose people residing or working in the area to excessive noise levels, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

3.12.5 Impacts Summary

Table 3.12-6 summarizes the noise and groundborne vibration impacts of the Proposed Project.

Table 3.12-6. Noise and Groundborne Vibration Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	SI	MM-NSE-1	S/M
Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels	SI	MM-NSE-1	S/M
Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels	LTS	N/A	LTS

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.12.6 References

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3.13 Population and Housing

This section describes the environmental setting and regulatory framework for population and housing, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance on population and housing in the study area. In particular, the population and housing analysis focuses on population and housing characteristics for Butte County, Paradise, and Chico in the study area. For the purposes of this PEIR, the population and housing study area refers to the areas within and directly adjacent to Paradise and areas of unincorporated Butte County and Chico where the proposed pipeline alignment runs.

3.13.1 Environmental Setting

This section begins by discussing the population and housing effects caused by the 2018 Camp Fire from each respective jurisdiction. It then discusses historical population and housing trends over the course of the past 20 years and also discusses current population and housing trends as it relates to future development.

3.13.1.1 Population and Housing Effects of the 2018 Camp Fire

On November 8, 2018, the Paradise was hit by the Camp Fire, the deadliest wildfire in California's history. Prior to the Camp Fire, Paradise was the second most populated city in Butte County. However, because of the fire, the population and housing in Paradise was significantly reduced. Almost 14,000 residential homes were lost and about 30,000 residents lost their homes (Boghani 2019). Because of the fire, most Paradise residents relocated to neighboring cities, in particular Chico. According to data provided by researchers at California State University, Chico, 28 percent of Paradise residents who relocated moved to Chico (Finch 2019).

Paradise saw a substantial decrease in population of over 83 percent from 26,581 to 4,474 (Table 3.13-1). Butte County also saw a slight decrease in population, most likely due to Paradise and neighboring residents relocating away from areas of Camp Fire damages. Chico, however, has experienced an increase in population since 2018. The population of Chico in 2018 was 92,040 (DOF 2021a). The population of Chico in 2019 was 110,126, an increase of over 19 percent (DOF 2021a). As of 2021, the population of Chico has steadily increased, with population estimates at 111,490 (DOF 2021b). As discussed, this population increase is likely due to Paradise residents relocating to Chico because of the Camp Fire.

Table 3.13-1. Population Before and After the Paradise Camp Fire

Geography	2017	2018	2019	Percentage Change 2018–2019
Butte County	225,468	226,098	220,855	-2.3
Town of Paradise	26,424	26,581	4,474	-83.2
City of Chico	91,166	92,040	110,126	19.7

Source: DOF 2021a

As shown in Table 3.13-2, Paradise also saw a substantial decrease in housing units of over 86 percent from 13,091 to 1,720. Butte County also saw a decrease in housing units, most likely due to the

housing units lost in the Camp Fire. Chico saw a slight increase in housing units of over 1 percent from 39,810 to 40,378 (DOF 2021b).

Table 3.13-2. Housing Units Before and After the Paradise Camp Fire

Geography	2017	2018	2019	Percentage Change 2018–2019
Butte County	98,871	99,353	85,447	-14
Town of Paradise	13,064	13,091	1,720	-86.9
City of Chico	39,341	39,810	40,378	1.4

Source: DOF 2021b

Finally, as shown in Table 3.13-3, Paradise saw a substantial decrease in households of over 82 percent from 26,173 to 4,474. Butte County also saw a slight decrease in households. Chico saw an increase in households of over 20 percent from 88,315 to 106,496 (DOF 2021b).

Table 3.13-3. Households Before and After the Paradise Camp Fire

Geography	2017	2018	2019	Percentage Change 2018–2019
Butte County	291,979	220,580	215,885	-2.1
Town of Paradise	26,016	26,173	4,474	-82.9
City of Chico	87,470	88,315	106,496	20.6

Source: DOF 2021b

3.13.1.2 Population

Table 3.13-4 and Table 3.13-5 present the historical and current population trends for Butte County, Paradise, and Chico for the past 20 years.

Table 3.13-4. Historic Population Trend

Geography	2000	2010	2020	Percentage Change 2000–2020
Butte County	203,171	220,000	208,951	2.8
Town of Paradise	26,408	26,218	4,608	-82.6
City of Chico	60,516	86,187	110,364	82.4

Source: DOF 2012, 2021a

As shown in Table 3.13-4, Butte County's total population increased from 203,171 in 2000 to 208,951 in 2020. Paradise saw a significant decrease in population from 26,408 in 2000 to 4,608 in 2020. Conversely, Chico saw an increase in population from 60,516 in 2000 to 110,364 in 2020 (DOF 2012, 2021a). As mentioned above, the Camp Fire drastically decreased the population of Paradise by over 82 percent. Damages caused by the fire moved existing Paradise residents into Chico, which inadvertently increased Chico's population.

Table 3.13-5. Current Population Trend Since Paradise Camp Fire

Geography	2019	2020	2021	Percentage Change 2019–2021
Butte County	220,855	208,951	202,669	-8.2
Town of Paradise	4,474	4,608	6,046	35.1
City of Chico	110,126	110,364	111,490	1.2

Source: DOF 2021a

As shown in Table 3.13-5, since 2018 Paradise has seen an increase in population between 2019 and 2021, with population estimates in 2021 at 6,046. Because the Camp Fire occurred toward the end of 2018 in November, the 2019 data is used for comparison. This immediate growth likely results from the return of residents to Town areas where damage was less. Chico's population also increased, but at a much slower rate of 1.2 percent (DOF 2021a). In contrast, Butte County's overall population decreased since the Camp Fire.

3.13.1.3 Housing and Households

Table 3.13-6 presents the historical housing trends for Butte County, Paradise, and Chico for the past 10 years.

Table 3.13-6. Historic Housing Trend

Geography	2010	2020	Occupied Housing Units (2020)	Vacancy Rate (2020)	Persons per Household (2020)
Butte County	95,835	86,122	79,220	5.4%	2.57
Town of Paradise	12,981	1,766	1,663	5.8%	2.77
City of Chico	37,050	41,738	39,490	8.0%	2.70

Source: DOF 2021b

As shown in Table 3.13-6, the total number of housing units in Butte County decreased from 95,835 in 2010 to 86,122 in 2020. Paradise saw a significant decrease in housing units from 12,981 in 2010 to 1,766 in 2020 (DOF 2021b). Conversely, Chico saw an increase in housing units from 37,050 in 2010 to 41,738 in 2020 (DOF 2021b).

Table 3.13-7 presents the historical and current household trends for Butte County, Paradise, and Chico for the past 10 years.

Table 3.13-7. Historic Household Trends

Geography	2010	2020	Percentage Change 2019–2020
Butte County	215,058	203,865	-5.2
Town of Paradise	25,810	4,608	-82.2
City of Chico	83,009	106,643	28.5

Source: DOF 2021b

As shown in Table 3.13-7, the total households for Butte County decreased from 215,058 in 2010 to 203,865 in 2020. Paradise saw a significant decrease in households from 25,810 in 2010 to 4,608 in

2020 (DOF 2021b). Conversely, Chico saw an increase in households from 83,009 in 2010 to 106,643 in 2020 (DOF 2021b).

In terms of forecasting future growth in housing, the *Provisional Long-Term Regional Growth Forecasts 2018-2040* (BCAG 2019b) forecasted a Low, Medium, and High Scenario for total housing growth for Paradise that reflects -31 percent, -13 percent, or 6 percent growth, respectively, between pre-fire conditions in 2018 and 2040. The assumptions for these forecasts did not include construction of the sewer system. Further, in the *Post Camp Fire Regional Population and Transportation Study* (Fehr and Peers 2021) prepared for BCAG in 2021, key findings in the housing and employment forecast included that there would be a reduction in total county housing count for each forecast year as compared to findings in a previous study in 2020, partially because the DOF lowered their population projections for all of Butte County (Fehr and Peers 2021). Further, specific to the Town, the report states “In addition to the countywide reduction, Paradise is expected to have slower growth (as compared to their 2020 study) in both near and long-term forecasts, with Chico’s growth making up the difference” (Fehr and Peers 2021). BCAG will be finalizing their regional growth forecasts through 2040 using the findings of the *Post Camp Fire Regional Population and Transportation Study* (Fehr and Peers 2021) and incorporating that information in BCAG’s 2024 Regional Transportation Plan/Sustainable Communities Strategy (BCAG 2019b).

In comparison to the regional forecast prepared by BCAG in 2014, the 2019 forecast presents a significantly slower growth trend. Compound annual growth rates presented in the 2019 forecasts (2018-2040) range from 0.48 to 0.88 percent for housing, compared to the 1.17 to 1.57 percent compound annual growth rates prepared in 2014 (2014-2040). This represents a 50 percent decrease for the medium scenario (BCAG 2019b).

3.13.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project’s impacts on population and housing. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.13.2.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding population and housing are relevant to the Proposed Project.

3.13.2.2 State

California Relocation Act

The California Relocation Act requires state and local governments to provide relocation assistance and benefits to persons displaced as a result of projects undertaken by state or local governments that do not involve federal funds.

California Department of Housing and Community Development Home Investment Partnerships Program

The California Department of Housing and Community Development Home Investment Partnerships Program (HOME) was created to assist cities, counties, developers, and nonprofit Community Housing

Development Organizations to create and retain affordable housing. It provides grants to cities and counties and low-interest loans to developers. Eligible activities to receive the grant must benefit low-income renters and owners.

3.13.2.3 Regional and Local

Town of Paradise General Plan

As discussed in the regulatory section of Land Use and Planning, *The Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) was adopted by the Paradise Town Council on October 4, 1994. A discussion of amendments and can be found in Section 3.11.2.3 and supporting materials are in Appendix B Town of Paradise 1994 General Plan Resolution and Amendments. As previously noted, all amendments are assumed incorporated when referencing the *Town of Paradise General Plan* in this document. The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following goals related to population and housing that are relevant to the Proposed Project:

- **Goal HG-1**: Encourage and facilitate the production of all housing types, from affordable workhorse housing to executive homes, to meet the Town's share of regional housing needs consistent with the overall goals, objectives, and policies of the Paradise General Plan.
- **Goal HG-2**: Improve and preserve safe, decent housing and neighborhoods for all Paradise residents.
- **Goal LUG-2**: Accommodate a rate of growth consistent with the physical and infrastructural limitations in Paradise.
- **Objective LUO-2**: Stimulate and accommodate commercial/industrial growth while maintaining the current quality of life.
- **Objective LUO-4**: Carefully manage and control population growth, while stimulating local economic growth.
- **Goal LUG-13**: Designate appropriate areas for high density residential use and for institutional and public uses in centralized and convenient locations.
- **Goal LUG-20**: Develop a strong local economy, recognizing that this is a key element in solving service providers' financial difficulties.
- **Goal LUG-24**: Encourage a sense of community in Paradise.

The Proposed Project will be held to the goals and policies in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to population and housing that are relevant to the Proposed Project:

- **Policy H-P1.2**: Focus development in the unincorporated areas of the spheres of influence of the cities to accommodate the County's housing allocation.
- **Policy H-P5.1**: Continue to promote housing opportunities for all persons regardless of age, race, religion, gender, marital status, national origin, disability, or other barriers that prevent choice in housing.
- **Policy ED-P1.1**: The County's priority for future growth is creating sustainable jobs and providing a living wage to families to reduce poverty.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following pertinent goals related to population and housing that are relevant to the Proposed Project:

- **Goal ED-1**: Maintain and implement an Economic Development Strategy to enhance Chico's long-term prosperity.
- **Goal SUS-1**: Balance the environment, economy and social equity, as defined in the General Plan, to create a sustainable Chico.
- **Goal H1**: Increase equal housing opportunities.
- **Goal H2**: Provide housing that is affordable to low incomes.

The Proposed Project will be held to the goals in the *Chico 2030 General Plan*.

3.13.3 Method of Analysis

This section describes the methods used to analyze population and housing characteristics within the study area.

3.13.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on population and housing if it would:

- **Impact POP-1:** Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)
- **Impact POP-2:** Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere

3.13.3.2 Approach to Analysis

Construction, Operation and Maintenance

Impacts on population and housing were identified qualitatively and quantitively based on the Proposed Project's potential to induce substantial unplanned population growth or displace existing people or housing. Data was found via the DOF population and housing estimates report. The following tables were used:

- E-4 Population Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark (DOF 2021a).
- E-5 Population and Housing Estimates for Cities, Counties, and the State – January 1, 2011-2021 (DOF 2021b).
- E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010 – Organized by Year (DOF 2012).

The DOF data was used over US Census Bureau American Community Survey estimates. According to the DOF (2021c), it conducted an annual housing survey that used several metrics to help determine

various housing characteristics, such as vacancy rate. These housing data were factored into the population estimates provided in each report above. This annual housing survey is conducted every year. Additionally, the DOF data was preferred because the DOF receives periodic population data updates from agencies such as CALFIRE and FEMA. American Community Survey methodology was not preferred because the American Community Survey uses estimates sampling, and it is assumed that American Community Survey data could not account for the 2018 Camp Fire, which is pertinent to the population and housing analysis.

Data found in BCAG's *Provisional Long-Term Regional Growth Forecasts 2018-2040* (BCAG 2019b) and the *Post Camp Fire Regional Population and Transportation Study* which was prepared for BCAG by Fehr and Peers (2021) were used for Town population and housing forecasts.

The analysis of environmental effects focuses on foreseeable changes to population and housing in the context of effects listed in Section 3.13.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

3.13.4 Impact Analysis

This section describes the potential environmental impacts on population and housing as a result of implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to induce population growth directly or indirectly, such as through the creation of jobs, or permanently displace housing and/or people.

3.13.4.1 Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) (Less than Significant Impact)

Construction

Construction of the Core Collection System, Export Pipeline System, and Extended Collection System would generate new jobs within the study area. Section 2.5.1.3.1 Construction Crews and Equipment provides a table estimating crews for the Core Collection System and, given that the schedule is expedited, estimates how many of each crew type would be working at the same time, Section 2.5.2.3.1 provides similar estimates for the Export Pipeline System. Section 2.6 Proposed Schedule also shows construction for both components occurring at the same time. In total, more than 200 construction jobs could be generated, However, all construction jobs associated with the Proposed Project would be temporary, lasting for an estimated 2-year construction schedule (Section 2.6 Proposed Schedule). Construction workers could be drawn from the existing workforce within Butte County; however, it is likely that some would be migrant workers from outside of the County that follow construction jobs from location to location, and there may be others that relocate to the Town for the work and decide to stay. Workers that become permanent residents would be part of the Town's population recovery. Consequently, construction of the Proposed Project would not result in substantial or unplanned population growth and would not necessitate the construction of new roads, additional housing or business services that would be inconsistent with regrowth planned and presented in the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) and *Town of Paradise General Plan* (Town of Paradise and

Quad Consultants 2008). Therefore, construction of the Proposed Project would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact.

Mitigation. No mitigation required.

Operation and Maintenance

The Proposed Project includes a Core Collection System, Export Pipeline System, and Extended Collection System to address the need for a municipal wastewater management solution. While the Proposed Project would not be the direct reason for any substantial housing unit development or population increases in Paradise, the Proposed Project would accommodate population increases within the Town limits in alignment with the objectives and policies set forth in the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) and *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008). In fact, the intent of the Proposed Project is to induce population *regrowth* and *repopulation* toward pre-fire levels (Section 2.3 Project Need and Objectives). However, as discussed further in Section 4.4 Growth Inducing Impacts, this population growth would still be limited, as it would be contained within the existing Town boundaries and would be controlled by the permits issued by the Town.

About 5–10 permanent employees would be required to serve the Proposed Project during operations and maintenance (Section 2.8 Proposed Operation and Maintenance). The permanent employees may be re-assigned from existing staff within the Town or may be additional new staff. The minimal increase in permanent jobs would not result in substantial or unplanned population growth and would not necessitate the construction of additional housing or business services beyond planned regrowth discussed above.

Although implementation of the Proposed Project would foster population growth, it is primarily regrowth that would be expected as part of the historic population levels in the Paradise area. Therefore, operation and maintenance of the Proposed Project would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact.

Mitigation. *No mitigation required.*

3.13.4.2 Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (No Impact)

Construction, Operation, and Maintenance

The Proposed Project would not acquire or take any residential-zoned land in the area. Most of the work associated with the construction of the Core and Extended Collection Systems and the Export Pipeline System would be done within public ROW and would not cause displacement of existing residents or housing. Work that would occur on private parcels, including connecting properties to the new sewer system or installing the Export Pipeline System would be completed under easements and would not displace existing housing. Therefore, the Proposed Project would not displace substantial numbers of existing people or housing which would necessitate the construction of replacement housing. There would be no impact.

Mitigation. No mitigation required.

3.13.5 Impacts Summary

Table 3.13-8 summarizes the population and housing impacts of the Proposed Project.

Table 3.13-8. Population and Housing Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	LTS	N/A	LTS
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	NI	N/A	NI

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.13.6 References

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3.14 Public Services

This section describes the environmental setting and regulatory framework for public services, and it identifies direct and indirect impacts of the Proposed Project during construction, and operation, and maintenance on public services. In particular, the public services analysis focuses on fire protection services, police protection services, schools, and libraries within the study area. For the purposes of this PEIR, the study area for public services refers to the areas within and directly adjacent to Paradise and areas of unincorporated Butte County and Chico where the proposed pipeline alignment runs. Refer to Section 0, Recreation, for an analysis of the Proposed Project's impacts on parks and recreation facilities.

3.14.1 Environmental Setting

This section describes the fire protection services, police protection services, schools, and libraries within the study area.

3.14.1.1 Fire Protection

Fire protection services in the study area are provided by the Butte County Fire Department (BCFD), Paradise Fire Department (PFD), and Chico Fire Department (CFD). The BCFD and PFD contract with the CALFIRE to provide fire protection services. Figure 3.14-1 provides an overview of the location of fire protection facilities within the study area.

Butte County Fire Department//California Department of Forestry and Fire Protection

Since 1931, Butte County has contracted with CALFIRE to provide staffing to the BCFD through cooperative fire protection agreements (Butte County 2010). Under the terms of this agreement, Butte County funds CALFIRE professional command, firefighting, and administrative staff to operate the BCFD. Through this arrangement, CALFIRE and the BCFD function together as a fully consolidated fire protection agency and provide fire protection service to unincorporated Butte County.

BCFD/CALFIRE services include fire control for structural, vegetation, vehicular, and other unwanted fires; emergency medical services; technical rescue response; hazardous materials response; flood control assistance; fire prevention and public safety education; fire law enforcement/arson investigation; and vegetation management. In addition, BCFD/CALFIRE operates countywide dispatch services, coordinates major emergency response within the county, and provides training for career and volunteer fire fighters (Butte County 2010).

The BCFD/CALFIRE operates 20 fire stations throughout the entire Butte County (Butte County 2022a). The closest BCFD/CALFIRE station to the Proposed Project is Station 44, which is located at 2334 Fair Street in Chico. Station 44 is located approximately 0.6 miles from the proposed pipeline alignment (Google Earth 2022). Station 44 houses one fire engine, which responded to 983 emergency incidents in 2019 (Butte County 2022b).

Paradise Fire Department/California Department of Forestry and Fire Protection

The Town has contracted with CALFIRE to provide firefighting personnel to the PFD through a cooperative agreement (Town of Paradise 2022e). The PFD/CALFIRE responds to all emergencies including fires, emergency medical services, hazardous materials, and public assists within the

Paradise Town limits. The average response time within the Town is less than four minutes (Rick Manson, email communication, 2022)

The current minimum staffing for the PFD/CALFIRE is three personnel assigned to each engine (Town of Paradise 2022e). Typical engine staffing includes a captain, an engineer, and a firefighter. The PFD/CALFIRE is currently staffed with 19 employees, with four of those positions being grant funded through March 2023 (Rick Manson, email communication, 2022).

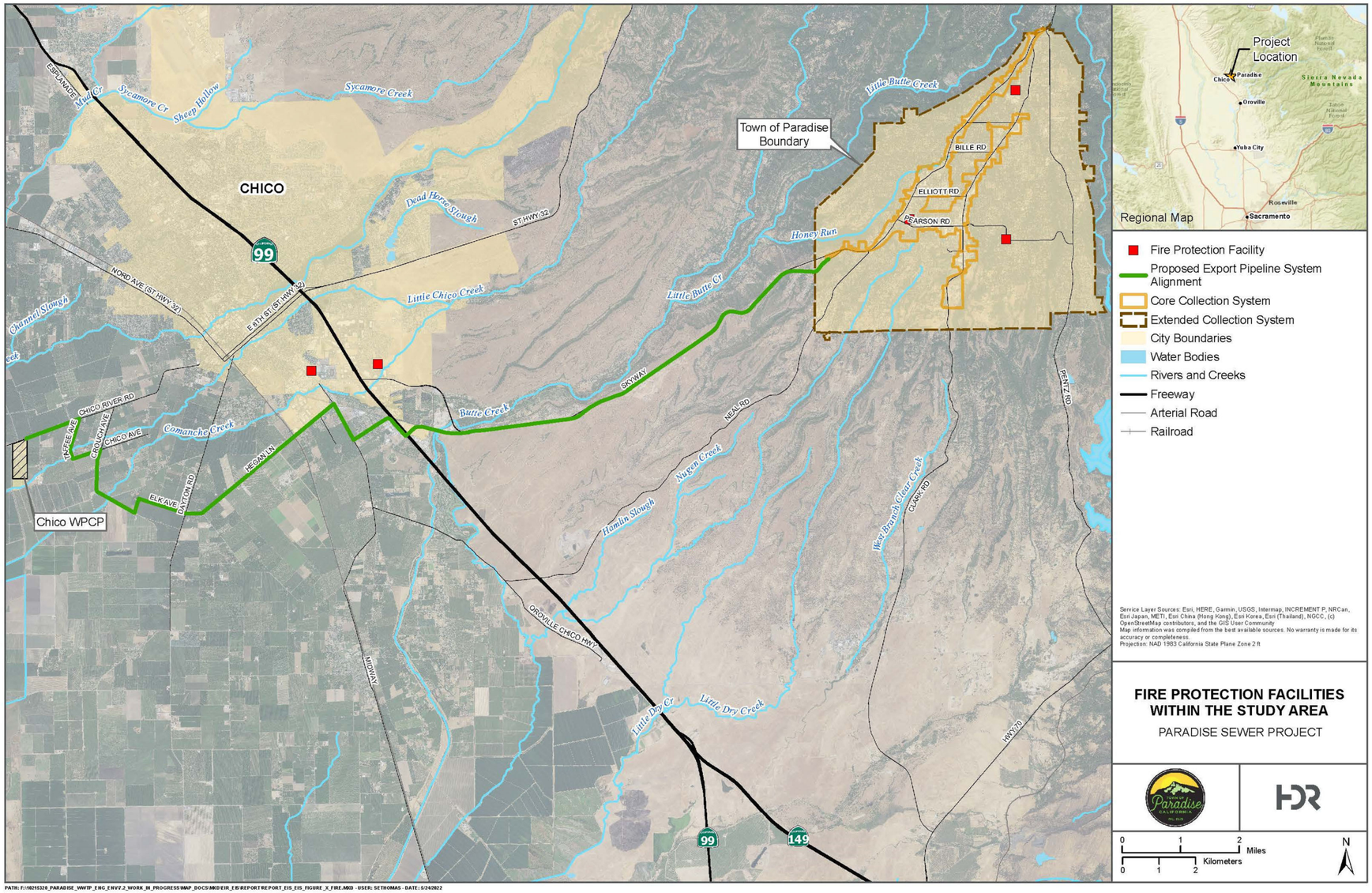

Figure 3.14-1. Fire Protection Facilities within the Study Area

The PFD/CALFIRE operates two fire stations (Town of Paradise 2022e). The closest PFD/CALFIRE station to the Proposed Project is Station 81, which is located at 767 Birch Street in Paradise. Station 81 is located within the boundaries of the Core Collection System (Google Earth 2022). Station 81 houses the administrative offices of the Fire Chief, Battalion Chief, Fire Prevention Inspector, and Administrative Assistant (Town of Paradise 2022e).

Chico Fire Department

The CFD, as known as the City of Chico Fire-Rescue, provides fire protection and emergency medical services in Chico. The CFD also provides first response to emergencies in the surrounding unincorporated Butte County through the Chico Urban Area Fire and Rescue Agreement. The CFD operates under the command of the Fire Chief and staffs 60 full-time personnel, 57 of which are uniformed positions (City of Chico 2022a). There are currently eight active volunteer firefighters in the CFD (City of Chico 2022a). In 2018, CFD units arrived on scene within 8 minutes and 20 seconds 90 percent of the time and met its benchmark response time of 6 minutes and 30 seconds 68.7 percent of the time (CFD 2018).

The Chico FD currently operates out of four stations (City of Chico 2022b). The closest CFD fire station to the Proposed Project is Station 4, which is located at 2405 Notre Dame Boulevard in Chico. Station 4 is located approximately 0.9 miles from the proposed pipeline alignment (Google Earth 2022). Station 4 houses a type 3 engine that is specifically designed to fight fires in the urban wildland interface (City of Chico 2022b).

3.14.1.2 Police Protection

Police protection and law enforcement services in the study area are provided by the Butte County Sheriff's Office (BCSO), CHP, Paradise Police Department (PPD), and Chico Police Department (CPD). Figure 3.14-2 provides an overview of the location of police protection facilities within the study area.

Butte County Sheriff's Office

The BSCO serves all citizens of Butte County by providing a mix of public safety and public service functions, including coroner services, civil services, court security, and corrections. The BCSO maintains mutual aid agreements with the CHP and the municipal police departments of Oroville, Chico, Gridley, Biggs, and Paradise (Butte County 2010). The BSCO is responsible for operating the Butte County Jail, which is utilized by all law enforcement agencies within the county (Butte County 2010).

The BSCO has its main office in Oroville, with substations in Chico and Magalia (Butte County 2022c). The closest BSCO station to the Proposed Project is the Chico substation, which is located at 479 East Park Avenue. The Chico substation is located approximately 0.4 miles from the proposed pipeline alignment (Google Earth 2022).

California Highway Patrol

The CHP provides law enforcement services, primarily traffic control, for State roads and roads in the unincorporated portions of the county. These services include traffic control, accident investigation, and licensing of vehicles. The CHP has a mutual aid agreement with the BCSO and will respond when requested by the Sheriff.

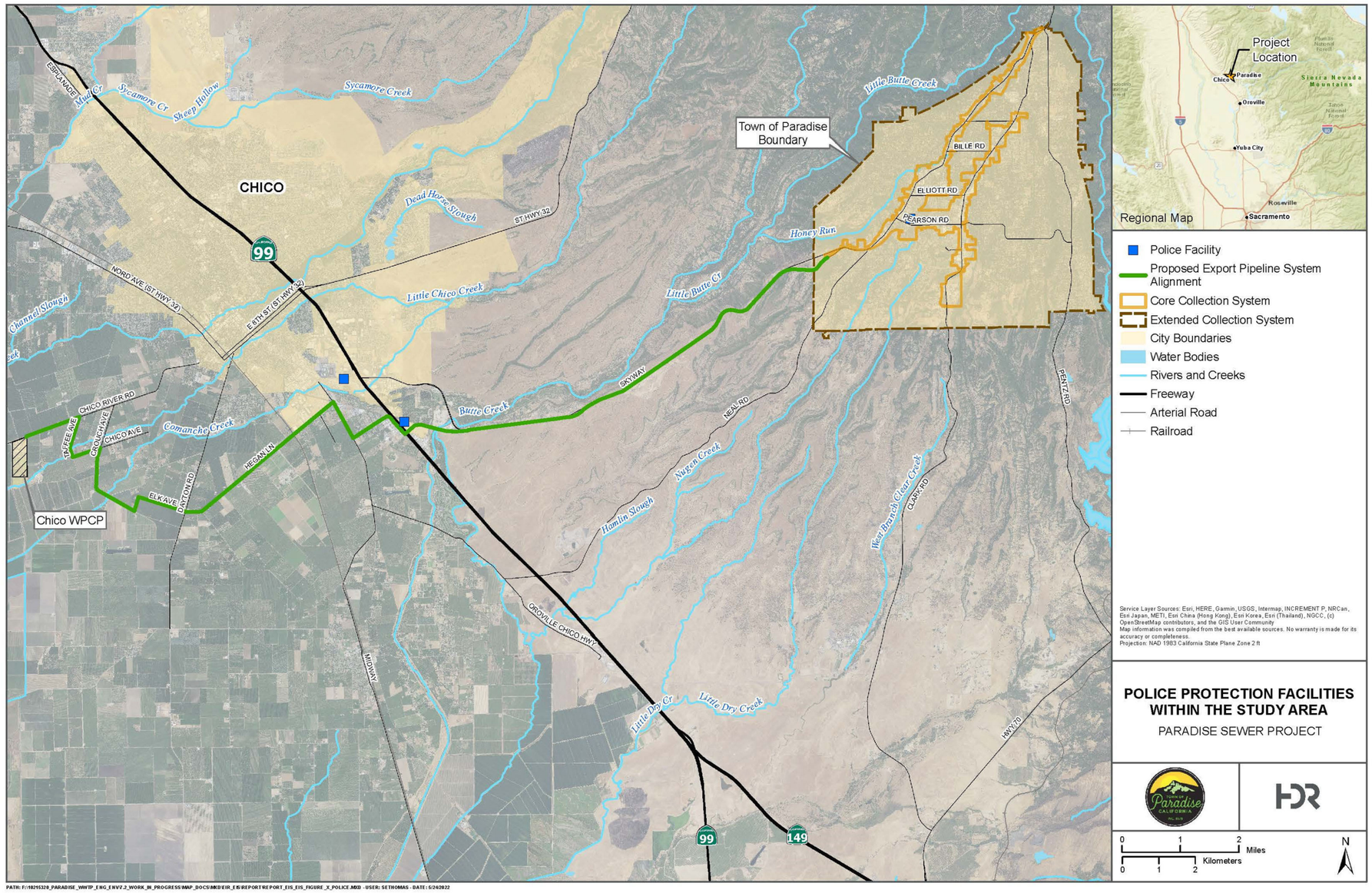

Figure 3.14-2. Police Protection Facilities within the Study Area

The CHP has two offices that serve Butte County: one in Chico and one in Oroville. The closest CHP office to the Proposed Project is the Chico office, which is located at 413 Southgate Avenue. The Chico office is located approximately 1 mile from the proposed pipeline alignment (Google Earth 2022). The Chico office is comprised of 29 sworn officers, 23 public safety dispatchers, and five civilian members (CHP 2022).

Paradise Police Department

The PPD has provided law enforcement services to the Town of Paradise since 1980, when it took law enforcement responsibility for the area from BCSO (Town of Paradise and Quad Consultants 2008). The PPD includes five units: Administration, Patrol, Investigations, Communication/Records, and Animal Control. The PPD currently has 23 employees (Town of Paradise 2022f). The PPD's station is located at 5595 Black Olive Drive in Paradise, which is located within the boundaries of the Core Collection System (Google Earth 2022).

Chico Police Department

The CPD provides law enforcement services to the City of Chico. If requested by the BCSO or the CHP, the CPD may provide assistance in the surrounding unincorporated areas on a case-by-case basis. The CPD is comprised of 168 employees, 108 of which are sworn officers (CPD 2021). Additionally, the CPD is served by 100 police volunteers (CPD 2021). CPD personnel are organized into two divisions: Operations and Support. The Operation Division comprises of the Patrol Section and Animal Shelter/Control Section. The Support Division comprises of the Criminal Investigations Section, Communications and Support Operations Section, and Administration Section.

The CPD headquarters are located at 1460 Humboldt Road in Chico, which is located approximately 1.9 miles from the proposed pipeline alignment (Google Earth 2022).

3.14.1.3 Schools

Within Butte County, 14 local school districts provide elementary and secondary education (Butte County 2010). The study area is served by the Paradise Unified School District (PUSD) and Chico Unified School District (CUSD). Figure 3.14-3 provides an overview of the location of schools within the study area.

Paradise Unified School District

PUSD serves students in Paradise and Magalia. PUSD operates seven schools: three elementary schools (transitional kindergarten through grade six), one junior high school (grades seven and eight), two high schools (grades nine through 12), and one online learning academy (grades nine through 12) (PUSD 2022). PUSD enrollment in 2018-19 was 3,401 (PUSD 2021). Enrollment at PUSD has declined since then due to the 2018 Camp Fire. As of November 2021, enrollment at PUSD is 1,484 (PUSD 2021).

The closest PUSD schools to the Proposed Project are Paradise Junior High School, which is located at 5657 Recreation Drive, and Paradise High School, which is located at 5911 Maxwell Drive. The Paradise Junior High School and Paradise High School are located within the boundaries of the Core Collection System (Google Earth 2022).

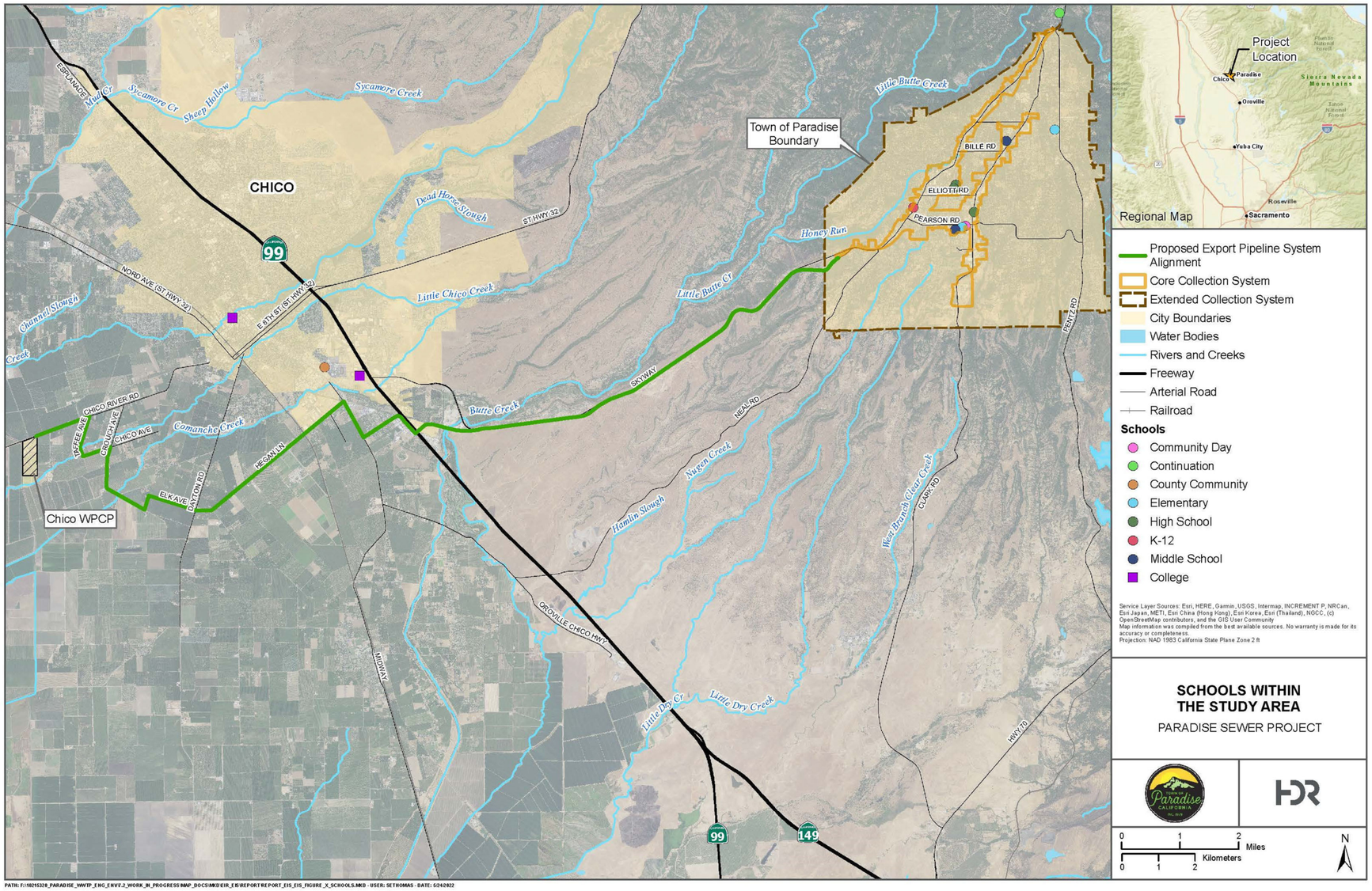

Figure 3.14-3. Schools within the Study Area

Chico Unified School District

The City of Chico is served by the CUSD, which serves students from preschool through grade 12. CUSD encompasses 23 schools: 12 elementary schools, three junior high schools, two high schools, one continuation school, one community day school, one opportunity school one independent study school one special services school, one online learning academy, and four preschool programs (CUSD 2022). Total enrollment across CUSD schools in 2018-19 was 11,854 (CUSD 2019). After the 2018 Camp Fire, CUSD absorbed 229 additional students displaced from Paradise (CUSD 2019).

The closest CUSD school to the Proposed Project is the Chapman Elementary School, which is located at 1071 East 16th Street in Chico. The Chapman Elementary School is located approximately 1.2 miles from the proposed pipeline alignment (Google Earth 2022).

3.14.1.4 Libraries

The study area is served by the Butte County Library.

Butte County Library

The Butte County Library provides public library services in the county. The Butte County Library provides library services to all county residents through a consolidated operation from its headquarters in Oroville and branches in Biggs, Chico, Durham, Gridley and Paradise (Butte County 2022d). The closest Butte County Library branch to the Proposed Project is the Paradise branch, which is located at 5922 Clark Road. The Paradise branch is located within the boundaries of the Core Collection System (Google Earth 2022).

3.14.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on public services. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.14.2.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding public services are relevant to the Proposed Project.

3.14.2.2 State

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Fighting Equipment," the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

The Proposed Project will be held to the standards established by the California Occupational Safety and Health Administration.

Uniform Fire Code

The Uniform Fire Code (California Code of Regulations, Title 24, Part 9) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Uniform Fire Code also contains specialized technical regulations related to fire and life safety.

The Proposed Project will be held to the regulations set forth in the Uniform Fire Code.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. Regulations address building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise buildings, childcare facility standards, and fire suppression training, among other topics.

The Proposed Project will be held to the regulations set forth in the Health and Safety Code.

3.14.2.3 Regional and Local

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to public services that are relevant to the Proposed Project:

- **Policy LUP-12**: The character of future development should be compatible with the Town's service delivery abilities and will not result in service level declines.
- **Policy LUP-13**: The Town will attempt to assure that the rate and character of growth is commensurate with, or does not exceed the current levels of public services, and will attempt to assure that municipal services can be provided to areas planned for annexation and development.
- **Policy LUP-14**: Growth and land use development should be linked to the availability of public services and facilities, and to the degree of overall infrastructure and environmental constraints affecting property in the Town.
- **Policy LUP-20**: New land use development will not cause the levels of police and fire protection to fall below the service levels established by this plan.

The Proposed Project will be held to the policies in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to public services that are relevant to the Proposed Project:

- **Policy PUB-P4.1**: Review of development proposals will be coordinated with school districts to determine and plan for capacity issues over time.
- **Policy PUB-P4.2**: Review of development proposals will be coordinated with school districts regarding the location and design of new schools.

- **Policy PUB-P4.4**: Infrastructure development projects will be coordinated to minimize the cost to the public of building needed schools.
- **Policy PUB-P4.5**: Information on projected population growth and development patterns will be provided to school districts to facilitate adequate school facilities.
- **Policy PUB-P4.7**: New development projects will be approved only if the County and the applicable School District finds that existing or planned schools will be adequate to serve it.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to public services that are relevant to the Proposed Project.

- **Policy S-4.1, Fire Safety Staffing**: Maintain adequate fire suppression and prevention staffing levels.
- **Policy S-4.2, Interagency Coordination**: Continue to maintain interagency relationships to maximize fire protection services and support programs that reduce fire hazards.
- **Policy S-5.1, Police Services**: Continue to provide fundamental police services based upon rapid response to emergencies and response, control and intervention in conduct that threatens life and property.
- **Policy S-5.4, Collaboration and Coordination**: Maintain strong relationships with local and state law enforcement agencies and participate in joint disaster preparedness planning.
- **Policy PPFS-3.1, CUSD Coordination**: Support Chico Unified School District's efforts to provide school sites and facilities that meet the educational needs of the community.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

3.14.3 Method of Analysis

This section describes the methods used to analyze impact on public services within the study area.

3.14.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on public services if it would:

- **Impact PS-1:** Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

  (a) Fire Protection
  (b) Police Protection
  (c) Schools
  (d) Other Public Facilities

3.14.3.2 Approach to Analysis

Construction, Operation, and Maintenance

Impacts on public services were identified qualitatively based on the Proposed Project's potential to cause increased use or expansion of available public facilities, such as fire protection facilities, police protection facilities, schools, and libraries. For the purposes of this analysis, information was collected on public services using the following sources:

- *Butte County General Plan 2030 EIR* (Butte County 2010)
- Town of Paradise website (Town of Paradise 2022e, 2022f)
- Butte County website (Butte County 2022a, 2022b, 2022c, 2022d)
- City of Chico website (City of Chico 2022a, 2022b)
- *CFD Bi-Annual Report* (CFD 2018)
- CHP website (CHP 2022)
- *CPD Policy Manual* (CPD 2021)
- PUSD website and fiscal year 2021-22 budget (PUSD 2021, 2022)
- CUSD website and facilities master plan (CUSD 2019, 2022)

The analysis of environmental effects focuses on foreseeable changes to public services in the context of effects listed in Section 3.14.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

The following methods were used to evaluate the potential impacts from construction, operation, and maintenance of the Proposed Project on public services:

- Use of GIS data to locate the existing public facilities (i.e., fire protection facilities, police protection facilities, schools, and libraries) within the study area.
- Use of Google Earth and GIS data to measure the distance of public facilities from the Proposed Project.
- Analysis of construction methods, ROW, and staging areas.
- Analysis of the Project's consistency with the requirements of all plans, policies, and regulations listed in Section 0, Regulatory Framework.

3.14.4 Impact Analysis

This section includes an analysis of the Proposed Project's potential to result in adverse physical impacts associated with the provision of new or physically altered governmental facilities; or result in the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives.

3.14.4.1 Impact PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios,

response times or other performance objectives for any of the following public services:

(a) Fire Protection (Less than Significant Impact with Mitigation Incorporated)

As presented in Section 3.14.1, Environmental Setting, fire protection services in the study area are provided by the BCFD/CALFIRE, PFD/CALFIRE, and CFD. The nearest fire station to the Proposed Project is PFD/CALFIRE's Station 8, which is located at 767 Birch Street in Paradise, within the boundaries of the Core Collection System.

Construction

As described in Section 0, Population and Housing, construction workers would likely be drawn from the existing workforce within Butte County but would also likely draw from outside of the Town and County. It is anticipated that some of the construction workers might choose to permanently relocate to the Town, which would be in support of the Town's planned regrowth. Fire protection services within the Town were sized to meet the demand for services by the Town pre-fire and would be anticipated to rebuild to previous conditions on par with the returning population. Growth beyond pre-fire conditions would be consistent with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008).

Although PFD/CALFIRE's Station 8 would not be directly impacted during construction, impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of mitigation measure **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

Operation and Maintenance

The Proposed Project would be designed and constructed in compliance with all applicable fire codes and public safety standards. During operation and maintenance, the Proposed Project would not result in any permanent impacts to the fire stations within the study area. Increases in housing and businesses that would be supported by operation of the Proposed Project would primarily consist of *regrowth* and *repopulation* toward pre-fire levels. As mentioned above, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, operation and maintenance of the Proposed Project would have a less-than-significant impact on fire protection services.

Mitigation. No mitigation required.

(b) Police Protection (Less than Significant Impact with Mitigation Incorporated)

As presented in Section 3.14.1, Environmental Setting, police protection services in the study area are provided by the BCSO, CHP, PPD, and CPD. The nearest police station to the Proposed Project is PPD's station, which is located at 5595 Black Olive Drive in Paradise, within the boundaries of the Core Collection System.

Construction

As described in Section 0, Population and Housing, construction workers would likely be drawn from the existing workforce within Butte County but would also likely draw from outside of the Town and County. It is anticipated that some of the construction workers might choose to permanently relocate to the Town, which would be in support of the Town's planned regrowth. Police protection services within the Town were sized to meet the demand for services by the Town pre-fire and would be anticipated to rebuild to previous conditions on par with the returning population. Growth beyond pre-fire conditions would be consistent with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008).

Although PPD's station would not be directly impacted during construction, impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 0, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of mitigation measure **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

Operation and Maintenance

The Proposed Project would be designed and constructed in compliance with all applicable public safety standards. During operation and maintenance, the Proposed Project would not result in any permanent impacts to the police stations within the study area. Increases in housing and businesses that would be supported by operation of the Proposed Project would primarily consist of *regrowth* and *repopulation* toward pre-fire levels. As mentioned above, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, operation and maintenance of the Proposed Project would have a less-than-significant impact on police protection services.

Mitigation. No mitigation required.

(c) Schools (Less than Significant Impact with Mitigation Incorporated)

As presented in Section 3.14.1, Environmental Setting, the study area is served by the PUSD and CUSD. The nearest schools to the Proposed Project are PUSD's schools: Paradise Junior High School (located at 5657 Recreation Drive) and Paradise High School (located at 5911 Maxwell Drive). Both schools are located within the boundaries of the Core Collection System.

Construction

As described in Section 0, Population and Housing, construction workers would likely be drawn from the existing workforce within Butte County but would also likely draw from outside of the Town and County. It is anticipated that some of the construction workers might choose to permanently relocate to the Town, which would be in support of the Town's planned regrowth. The school district within the Town was sized to meet the demand for services by the Town pre-fire and would be anticipated to rebuild to previous conditions on par with the returning population. Growth beyond pre-fire conditions would be consistent with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008).

Although the Paradise Junior High School and Paradise High School would not be directly impacted during construction, impacts may occur related to emergency vehicle access to the schools due to temporary lane closures and movement of construction equipment on local roads. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 0, Hazards and Hazardous Materials for description)

Significance after Mitigation. With the implementation of mitigation measure **MM-HAZ-6**, impacts related to emergency vehicle access to schools during construction would be less than significant.

Operation and Maintenance

During operation and maintenance, the Proposed Project would not result in any permanent impacts to the schools within the study area. Increases in population that would be supported by operation of the Proposed Project would primarily consist of *regrowth* and *repopulation* toward pre-fire levels. As mentioned above, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, operation and maintenance of the Proposed Project would have a less-than-significant impact on schools.

Mitigation. No mitigation required.

(d) Other Public Facilities (Less than Significant Impact with Mitigation Incorporated)

As presented in Section 3.14.1, Environmental Setting, library services in the study area are provided by the Butte County Library. The nearest Butte County Library branch to the Proposed Project is the Paradise branch, which is located at 5922 Clark Road, within the boundaries of the Core Collection System.

Construction

As described in Section 0, Population and Housing, construction workers would likely be drawn from the existing workforce within Butte County but would also likely draw from outside of the Town and County. It is anticipated that some of the construction workers might choose to permanently relocate to the Town, which would be in support of the Town's planned regrowth. Other public facilities within the Town were able to meet the demand for services by the Town pre-fire and would be anticipated to rebuild to previous conditions on par with the returning population. Growth beyond pre-fire conditions would be consistent with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008).

Although the Butte County Library's Paradise Branch would not be directly impacted during construction, impacts may occur related to emergency vehicle access to the library due to temporary lane closures and movement of construction equipment on local roads. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 0, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of mitigation measure **MM-HAZ-6**, impacts related to emergency vehicle access to other public facilities, such as libraries, during construction would be less than significant.

Operation and Maintenance

During operation and maintenance, the Proposed Project would not result in any permanent impacts to other public facilities, such as libraries, within the study area. Increases in population that would be supported by operation of the Proposed Project would primarily consist of *regrowth* and *repopulation* toward pre-fire levels. As mentioned above, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, operation and maintenance of the Proposed Project would have a less-than-significant impact on other public facilities.

Mitigation. No mitigation required.

3.14.5 Impacts Summary

Table 3.14-1 summarizes the public services impacts of the Proposed Project.

Table 3.14-1. Public Services Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	SI	MM-HAZ-6	S/M
Impact PS-1(b): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection	SI	MM-HAZ-6	S/M
Impact PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	SI	MM-HAZ-6	S/M
Impact PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	SI	MM-HAZ-6	S/M

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.14.6 References

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3.15 Recreation

This section describes the environmental setting and regulatory framework for recreational activities in the study area, including land and water based recreational activities such as hiking, camping, picnicking, fishing, wildlife viewing, bicycling, and powered and non-powered boating. This section also identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance on recreational facilities. The study area for recreation includes parks, trails, and other recreational facilities in Butte County because recreation is managed on a regional level; however, particular focus was given to those recreational facilities within a 2-mile radius of the Proposed Project. A 2-mile radius was chosen to consider other recreational facilities available for use in the event of disturbance to recreation from the Proposed Project and was determined to be a reasonable distance to travel for alternative recreation options considering travel time and convenience for the local public.

3.15.1 Environmental Setting

Recreational facilities within a 2-mile radius of the study area are presented in Table 3.15-1 and shown in Figure 3.15-1. As shown in Figure 3.15-1, recreational zonings are adjacent to the ROW where the Core Collection System, Extended Collection System, and Export Pipeline System would be constructed. Within the Town, The Terry Ashe Recreation Center and Paradise Community Park (also referred to as Paradise Park) adjoin the Core Collection System construction footprint. The Tuscan Ridge Club adjoins the Export Pipeline System along Skyway.

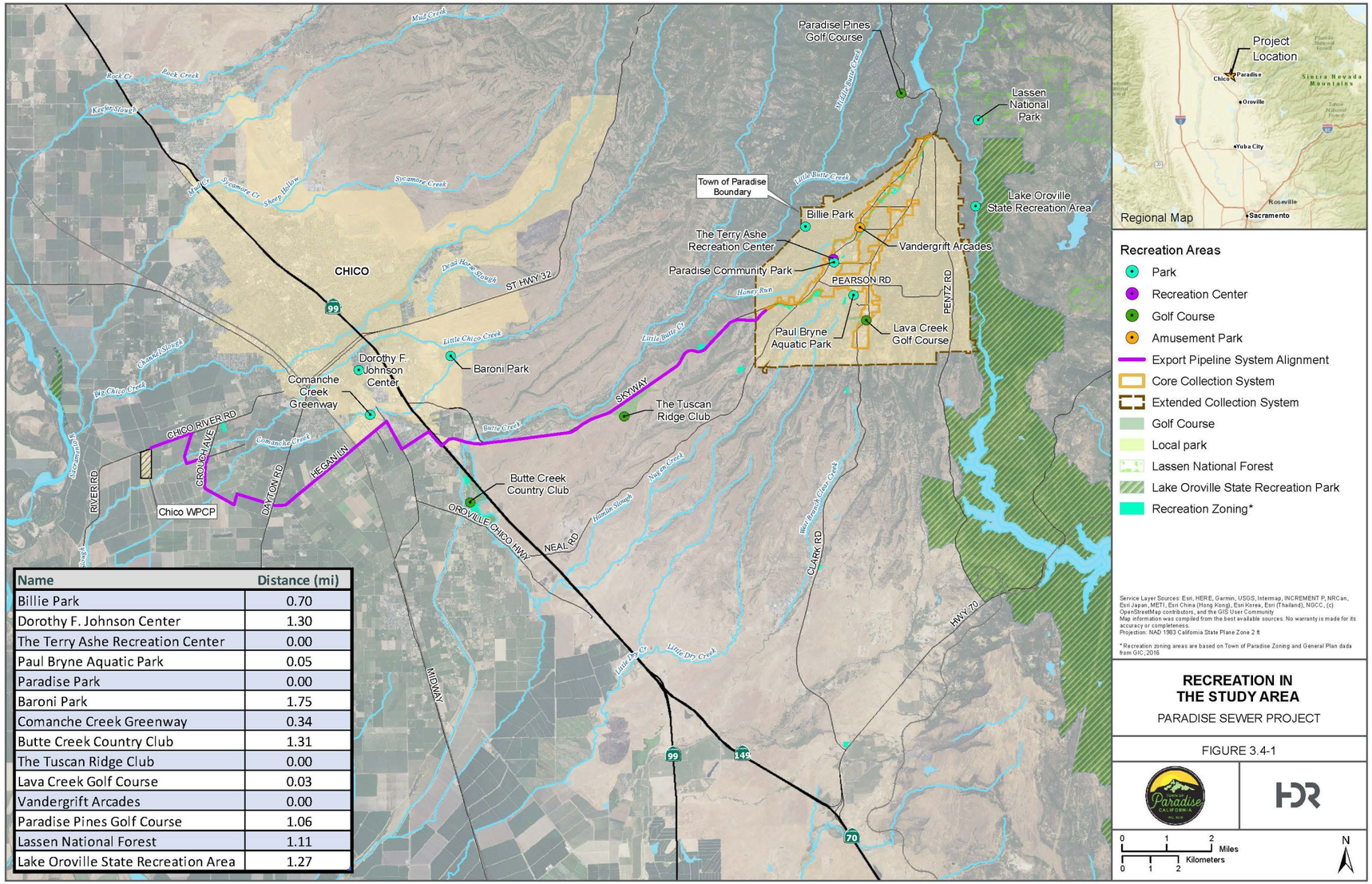
3.15.1.1 Recreation and Park Districts

There are 618 acres of parkland in unincorporated Butte County, which serves a population of approximately 83,900 people. The five Butte County municipalities (Chico, Paradise, Oroville, Briggs, and Gridley) and five recreation and park districts maintain many of the parks in Butte County. The five recreation and park districts include Chico Area Recreation and Park District (CARD), Durham Recreation and Park District, Feather River Recreation and Park District, Paradise Recreation and Park District (PRPD), and Richvale Recreation and Park District. These recreation and park districts encompass most of Butte County's land area and operate as independent districts, which means that the districts are governed by a board of directors elected by voters in that district (Butte County 2012). Other agencies and municipalities with jurisdiction over the parks and recreational facilities within 10 miles of the study area include California Department of Parks and Recreation, City of Sacramento, and Glenn County.

Table 3.15-1. Parks and Recreation Centers within 2 miles of the Study Area

Facility Name	Distance and Direction to Study Area	Jurisdiction or Owner	Features	Activities/Uses
Baroni Park	1.75 miles northeast	CARD	7.3-acre neighborhood park including a multi-use open turf play field, playground, basketball court, walking path, picnic tables, and practice disc golf baskets.	Playground, sports and recreation, walking, jogging, picnicking
Dorothy F. Johnson Center	1.30 miles northwest	CARD	6,375-square foot facility including an indoor gym, computer center, meeting rooms, toddler classrooms, office space, and kitchen.	Recreational programming and facility rentals
Billie Park	0.70 miles northeast	PRPD	Redwood grove, the Counselor's Circle, and group barbeque area.	Park and outdoor event space
The Terry Ashe Recreation Center	Adjoining	PRPD	Recreation center including a gazebo, large room, kitchen, dance floor, sound system, and lighting.	Recreation and events center
Paradise Park	Adjoining	Town of Paradise	Accessible playground, splash pad, beach volleyball courts, community stage, and dog parks.	Accessible playground, volleyball, dog park, community stage
Paradise Aquatic Park (Paul Bryne Aquatic Park)	0.05 mile southeast	PRPD	Kid's fishing pond, playground, family picnic area, arbor, public pool, rotary grove picnic area for up to 150 people, and sand volleyball court.	General recreation, swimming and barbeque area
Butte Creek Country Club	1.31 mile south	Private owner	18-hole golf course, driving range, putting green, and restaurant.	Golf course
Tuscan Ridge Club	Adjoining	Semi-private owner	18-hole golf course	Golf course
Lava Creek Golf Course	0.03 mile southeast	Public (Paradise)	9-hole and 18-basket disc golf course.	Golf course
Lassen National Forest	1.11 mile northeast	USDA Forest Service	Campgrounds, RV dump stations, day use areas, trails, picnic areas, and lookout areas.	Camping, picnicking, hiking, kayaking, fishing, RVing

Source: Butte County 2022e; Butte Creek Country Club 2022; USDA Forest Service 2022; CARD 2022; PRPD 2021; Golf Pass 2022



Name	Distance (mi)
Billie Park	0.70
Dorothy F. Johnson Center	1.30
The Terry Ashe Recreation Center	0.00
Paul Bryne Aquatic Park	0.05
Paradise Park	0.00
Baroni Park	1.75
Comanche Creek Greenway	0.34
Butte Creek Country Club	1.31
The Tuscan Ridge Club	0.00
Lava Creek Golf Course	0.03
Vandergrift Arcades	0.00
Paradise Pines Golf Course	1.06
Lassen National Forest	1.11
Lake Oroville State Recreation Area	1.27

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Figure 3.15-1. Recreation in the Study Area

The majority of recreational resources within a 2-mile radius of the study area are managed by private owners, CARD and PRPD. CARD provides recreation opportunities to the greater Chico community and maintains several parks. CARD is in the northern portion of the Sacramento River Valley, approximately 15 miles east of the Sacramento River and 90 miles north of Sacramento. The boundaries of CARD encompass approximately 225 square miles and extend from the Butte-Tehama County line on the north to the intersection of Dayton Road and Chico Street on the south; and from Muir Avenue on the west to approximately the east side of Upper Bidwell Park. Parks maintained by CARD include facilities such as playgrounds, softball fields, baseball fields, soccer fields, basketball and tennis courts, and gentle walking trails (CARD 2021).

PRPD is an independent special district that serves more than 50,000 people in Northern California's Sierra Nevada foothills. PRPD covers approximately 165 square miles and encompasses the Paradise, Paradise Pines, Butte Creek Canyon, and Concow areas. PRPD maintains approximately 358 acres of natural open space and 73 acres of developed park land. Park facilities maintained by PRPD include swimming pools, a fishing pond, play fields, horse arena, archery range, walking trails, ropes course, tennis courts, playgrounds, picnic areas, open use areas, and a recreation center (PRPD 2021).

3.15.1.2 Water-Based Recreation

The study area is located within the California Department of Parks and Recreation Northern Buttes District. The west branch of the Feather River, located east of the study area, is connected to Lake Oroville State Recreation Area, which is approximately 1.27 miles southeast of the Proposed Project(see Figure 3.15-1). Recreational facilities in the west branch of the Feather River include Nelson Bar, Lime Saddle Campground, and Lake Oroville Lime Saddle Marina. Lime Saddle Campground consists of 44 car/tent campsites and 16 RV campsites with hook-ups. The campground also features showers, several gray water sumps, and an RV dump station. The Lime Saddle Day Use Area and Boat Ramp features a picnic area and boat ramp with approximately 367 parking spaces. The Lake Oroville Lime Saddle Marina offers houseboat rentals, watercraft rentals, and camping (DWR 2021). The features, activities and uses of Lake Oroville State Recreation Area are summarized in **Error! Not a valid bookmark self-reference.**.

Table 3.15-2. Water-Based Recreation within 2 miles of the Study Area

Facility Name	Distance and Direction to Study Area	Jurisdiction or Owner	Features	Activities/Uses
Lake Oroville State Recreation Area	1.27 miles southeast	California Department of Parks and Recreation	Bidwell Marina, Bidwell Canyon Campground, Lime Saddle Campground, Lime Saddle Marina, Lime Saddle Day Use/Lake Oroville Marina, Loafer Creek Campground, boating ramps and rentals, overnight facilities, bike trails, hiking trails, horseback riding trails, picnic areas, learning/visitor center, beach area, restrooms, showers, campsites, RV sites and hookups, museums.	Sail and power boating, water skiing, camping, boat-in camping, floating campsites, horse camping, fishing, biking, hiking, horseback riding, picnicking, scuba diving, snorkeling, swimming, nature and wildlife viewing, museums, family programs

Source: California Department of Parks and Recreation 2022; DWR 2021

3.15.1.3 Bike and Recreational Trails in Butte County

Butte County does not have a formal or organized system of trails; however, federal and state agencies and park and recreation districts maintain a number of developed recreational trails in the county. Recreational trails in Butte County are provided in Table 3.15-3. Butte County also operates a system of multi-use trails and Class I, II, and III bike routes. Within the study area there is a bike trail along Midway. Hegan Lane is also considered a bicycle-friendly road.

Table 3.15-3. Recreational Trails within 2 miles of the Study Area

Trail	Description
Comanche Creek Greenway	The greenway is located approximately 0.34 mile west of the study area. The greenway is owned by the City of Chico and is located at the intersection of Hegan Lane and Midway. Comanche Creek Greenway consists of 20 acres along Comanche Creek between Midway and the Union Pacific Railroad line. Currently, the land is undeveloped and public access to the site is restricted.
Chico Recreation and Park District Trail System	The CRPD manages a system of trails that serve the Chico area.
Yellowstone Kelly Heritage Trailway	The Town of Paradise owns and maintains a five-mile Class I pathway which primarily parallels Skyway between Neal Road and Pentz Road. This trailway is open to pedestrians and bicyclists alike.

Source: Butte County 2012

3.15.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on recreation. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.15.2.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding recreation are relevant to the Proposed Project.

3.15.2.2 State

California Department of Parks and Recreation Rules and Regulations

The California Department of Parks and Recreation has established rules and regulations to protect park areas for the enjoyment of future generations and to keep park visitors safe. Topics covered in the rules and regulations include protection of natural scenery, plants and animal life; loaded firearms and hunting; dead and down wood; fires; animals; noise (engine driven electric generators); all vehicle travel; campsite use; refuse; smoking; drones; and cleanup responsibilities. Recreation within the study area is under the jurisdiction of the California Department of Parks and Recreation and is therefore subject to these regulations.

3.15.2.3 Regional and Local

Vegetative Fuels Management Plan

The *Final Vegetative Fuels Management Plan for Parks, Greenways, Preserves, and Open Spaces* (City of Chico Parks Department 2021) is intended to protect lives and property and enhance the

natural resources in Chico and covers all land owned and managed by the City of Chico, including parks, greenways, and open spaces. A key component of the plan is the identification of high fire hazard areas in greatest need of treatment, description of how fires can be managed, and development of policies and actions focused on reducing harmful impacts of wildfire in the community (City of Chico Parks Department 2021).

The Proposed Project will be subject to compliance with the Vegetative Fuels Management Plan for any work within applicable recreational areas of Chico.

Butte County Bikeway Master Plan

The *2011 Butte County Bikeway Master Plan* (Butte County 2011) updates the Countywide Bikeway Master Plan originally adopted in 1998. The plan is intended to address safety and connectivity between the local communities and within rural areas of Butte County. The plan will also assist Butte County in its efforts to safely and equitably provide contiguous bicycle facilities in the future and implement roadway projects that are bicycle friendly throughout the unincorporated areas. The Bikeway Master Plan encompasses bikeways that are within the study area.

The Proposed Project will be held to the standards in this plan.

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) does not include any recreational goals or policies that are relevant to the Proposed Project.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to recreation that are relevant to the Proposed Project:

- **Policy PUB-P6.1**: Review of development proposals shall be coordinated with public agencies in order to designate sites for new parks and recreation facilities.
- **Policy PUB-P8.7**: New development projects should incorporate multi-use trails and connections to existing trail networks.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) does not include any recreational goals or policies that are relevant to the Proposed Project.

3.15.3 Method of Analysis

This section describes the methods used to analyze recreation within the study area.

3.15.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on recreation if it would:

- **Impact REC-1:** Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- **Impact REC-2:** Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment

3.15.3.2 Approach to Analysis

Construction, Operation and Maintenance

Impacts on recreation were identified qualitatively based on the Proposed Project's potential to cause increased use or expansion of available recreation facilities to the extent at which substantial physical deterioration could occur.

For the purposes of this analysis, information was collected on recreation facilities using the following sources:

- CARD website (CARD 2021)
- PRPD website (PRPD 2021)
- California Department of Parks and Recreation website (California Department of Parks and Recreation 2022)
- City of Chico website (City of Chico 2022c)
- Butte County General Plan 2030 (Butte County 2012)

The analysis of environmental effects focuses on foreseeable changes to recreation facilities in the context of effects listed in Section 3.15.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

The following methods were used to evaluate the potential impacts from construction, operation, and maintenance of the Proposed Project on recreation:

- Use of GIS data to locate the existing parks, recreational facilities, trails, and streams within the study area.
- Use of Google Earth and GIS data to measure the distance of parks and recreational facilities from the Proposed Project.
- Analysis of construction methods, ROW, and staging areas.
- Analysis of the Project's consistency with the requirements of all plans, policies, and regulations listed in Section 3.15.2, Regulatory Framework.
- Analysis of operations and maintenance methods including periodic inspection of the Core Collection System, Extended Collection System, Export Pipeline System and associated instrumentation, and flow data sampling.

3.15.4 Impact Analysis

This section describes the potential environmental impacts on recreation facilities that could result from implementing the Proposed Project. Because construction of the Proposed Project will primarily occur

within the ROW, the impact analysis for recreation focuses on the potential for temporarily impeding access to recreational facilities or trails in the study area during construction.

Disturbed areas would be restored to their original conditions and operations and maintenance efforts would be limited to proposed above-ground features which would not be located within a recreational facility. As discussed in Section 2.8 Proposed Operation and Maintenance, while the Core Collection System, Extended Collection System, and Export Pipeline System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break. Procedures to address a pipeline break are addressed in Section 2.8 and these activities could temporarily impede access to recreational facilities.

3.15.4.1 Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (Less than Significant Impact)

Construction

As shown in Figure 3.15-1, recreational zonings are adjacent to the Core Collection System, Extended Collection System, and Export Pipeline System. The Terry Ashe Recreation Center and Paradise Community Park are also adjacent to the Core Collection System construction footprint. The Tuscan Ridge Club is adjacent to the Export Pipeline System along Skyway. Within the study area there is a bike trail along Midway, and Hegan Lane is also considered a bicycle friendly road. Recreational activities and facilities are not present at Comanche Creek, Butte Creek, or Little Chico Creek. Therefore, no water-based recreation would be affected by the Proposed Project.

Construction work would be short-term in any one location and construction would occur primarily within the existing ROW on previously disturbed land. Further, as shown in Figure 2-19, Potential Project Staging Areas, staging areas would be in various locations along the Export Pipeline System alignment, but would not be within a 2-mile radius of recreational areas.

Given that most work would occur in the public ROW, there is potential for bike paths or access to recreation to be temporarily closed or impeded during construction. Full road closures would not occur except during movement of large equipment (Section 2.7.2, Traffic Management and Temporary Construction Road Closures); single lane, temporary closures are proposed during construction. Any road and bike path closures would also be temporary.

Minor increases in recreational use at other available facilities may occur on a short-term basis, but substantial physical deterioration of these facilities is not expected to occur or to be accelerated. Therefore, construction of the Proposed Project would have no impact on other recreational facilities.

Mitigation. No mitigation required.

Operation and Maintenance

Section 2.8, Proposed Operation and Maintenance, describes activities, such as periodic inspections, that would occur during operation and maintenance. These activities would have no influence on the use of parks and recreational facilities in the study area.

Recreational facilities within the Town were sized to meet the pre-fire demand for services by the Town and would be anticipated to rebuild to previous conditions on par with the returning population. Increases in population that would be supported by operation of the Proposed Project would primarily consist of *regrowth* and *repopulation* toward pre-fire levels. Growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Impacts would, therefore, be less than significant.

Mitigation. No mitigation required.

3.15.4.2 Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment (Less than Significant Impact)

Construction

New recreational facilities are not proposed as part of the Project, nor would construction of the Proposed Project cause construction or expansion of existing recreational facilities where it might have an adverse physical effect on the environment. Therefore, there would be no impact to recreational facilities during construction.

Mitigation. No mitigation required.

Operation and Maintenance

Section 2.8, Proposed Operation and Maintenance, describes activities, such as periodic inspections, that would occur during operation and maintenance. These activities would have no influence on the use of parks and recreational facilities in the study area.

Recreational facilities within the Town were sized to meet the demand for services by the Town pre-fire and would be anticipated to rebuild to previous conditions on par with the returning population. Increases in population that would be supported by operation of the Proposed Project would primarily consist of *regrowth* and *repopulation* toward pre-fire levels. Growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, recreational impacts during operations and maintenance would be less than significant.

Mitigation. No mitigation required.

3.15.5 Impacts Summary

Table 3.15-4 summarizes the recreation impacts of the Proposed Project.

Table 3.15-4. Recreation Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LTS	N/A	LTS
Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	LTS	N/A	LTS

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.15.6 References

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3.16 Transportation

This section describes the environmental setting and regulatory framework for transportation in the study area, and includes a discussion of the circulation system, including transit, roadway, bicycle, and pedestrian facilities; VMT; and emergency access. This section also identifies the direct and indirect impacts of the Proposed Project on transportation during construction, operation, and maintenance. For the purposes of this PEIR, the study area for transportation refers to the areas within and directly adjacent to Paradise and areas of unincorporated Butte County and Chico where the proposed pipeline alignment runs.

3.16.1 Environmental Setting

3.16.1.1 Roadway System

A network of local roadways and highways form the roadway system within the study area. The primary entrances to Paradise are Skyway and SR 191 (Clark Road). Paradise is connected to Chico via Skyway and to Oroville via SR 191, which is known as Clark Road upon entering Paradise.

The proposed pipeline route to connect the collection system in Paradise to the Chico WPCP follows Skyway (between Neal Road and Butte Creek), a road that runs southwest from Paradise toward the southern end of Chico. The pipeline leaves Skyway to cross Butte Creek, SR 99, and the Union Pacific Railroad. The pipeline would then follow Midway (between Marybill Ranch Road to Hegan Lane), Hegan Lane (between Midway to Dayton Road), Elk Avenue (between Dayton Road to Lone Pine Avenue), Lone Pine Avenue (between Elk Avenue to Crouch Avenue), Crouch Avenue (between Lone Pine Avenue to Chico Avenue), Chico Avenue (between Crouch Avenue to Taffee Avenue), Taffee Avenue (between Chico Avenue to Chico River Road) and Chico River Road (between Taffee Avenue to the Chico WPCP). Figure 3.16-1 shows the proposed Export Pipeline System routes.

Based on the *Chico 2030 General Plan* (City of Chico 2017), Skyway (between Neal Road and Bute Creek) is a four-lane divided freeway/expressway. Midway (between Marybill Ranch Road to Hegan Lane) is a two-lane arterial. Hegan Lane (between Midway to Dayton Road) is a two-lane minor collector. Chico River Road (between Taffee Avenue to the Chico WPCP) is a two-lane arterial. Elk Avenue (between Dayton Road to Lone Pine Avenue), Lone Pine Avenue (between Elk Avenue to Crouch Avenue), Crouch Avenue (between Lone Pine Avenue to Chico Avenue), Chico Avenue (between Crouch Avenue to Taffee Avenue) and Taffee Avenue (between Chico Avenue to Chico River Road) are all classified as two-lane local roads.

3.16.1.2 Bicycle Facilities

The following types of bicycle facilities exist within the study area:

- **Class I:** A Class I facility, commonly referred to as a bikeway or bike path, is a facility separated from automobile traffic for the exclusive use of bicyclists. Class I facilities can be designed to accommodate pedestrians, in which case they are referred to as shared or multi-use paths.
- **Class III:** Class III facilities, commonly referred to as bike routes, are on-street routes where bicyclists and automobiles share the road. They are identified with pavement markings and signage, and are typically assigned to low-volume and/or low-speed streets.

Skyway is a Class III bike route between Potter Road and Spanish Garden Drive. Midway and Park Avenue in Chico are classified as Class I bike paths.

3.16.1.3 Pedestrian System

Within Paradise, there are discontinuous sidewalks along Skyway between Neal Road and Wagstaff Road. Discontinuous sidewalks also exist along Clark Road between Pearson Road and Wagstaff Road. There are no sidewalks south of the Clark Road and Pearson Road intersection.

Within Chico, there are discontinuous sidewalks along Entler Avenue.

3.16.1.4 Transit Service

Although the automobile is the primary mode of travel within Butte County, there are other modes of travel available, such as mass transit, paratransit, and private bus operators (Butte County 2010). Butte Regional Transit (or B-Line) is Butte County's regional public transit system. B-Line provides fixed route transit services to Biggs, Chico, Gridley, Oroville, Paradise, and communities within unincorporated Butte County (Butte County 2010).

Prior to the 2018 Camp Fire, B-Line service to and from Paradise included three fixed routes: Route 41 (between Magalia and Chico via Paradise), Route 40 (between Paradise and Chico), and Route 31 (between Paradise and Oroville) (Butte Regional Transit 2019). The 2018 Camp Fire caused several changes to the B-Line service in Paradise, including a reduction in the number of trips on Routes 40 and 41 and suspension of Route 31 until further notice (Butte Regional Transit 2019). Several bus stops served by Routes 40 and 41 are located along Skyway within the boundaries of the Core Collection System (Google Earth 2022).

3.16.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on transportation. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

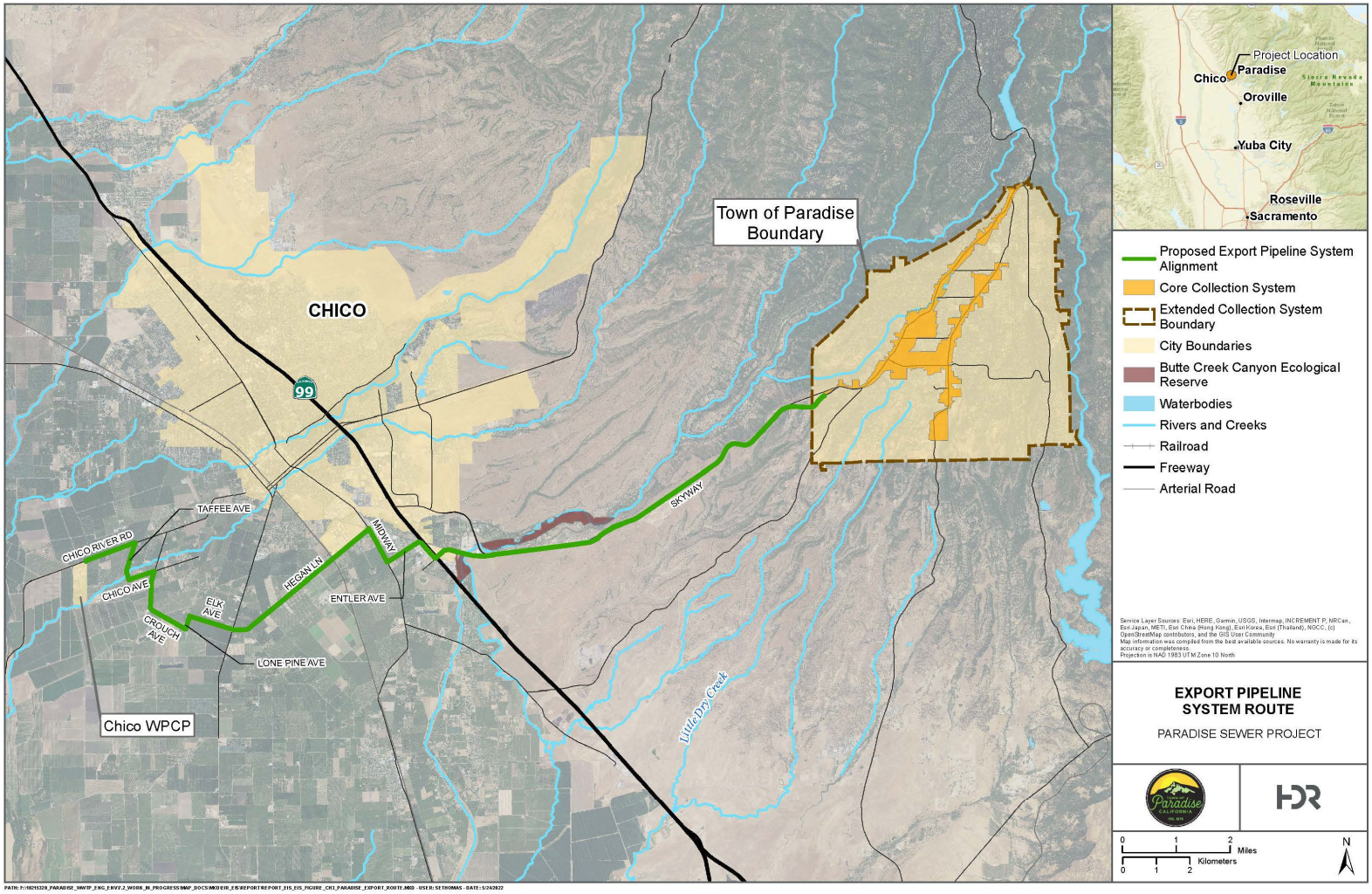

Figure 3.16-1. Paradise Export Pipeline System Routes

3.16.2.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding land use and planning are relevant to the Proposed Project.

3.16.2.2 State

Senate Bill 743

SB 743 was signed into law in September 2013. SB 743, which added PRC Section 21099 to CEQA, proposed a change in how transportation impacts are analyzed in transit priority areas to better align local environmental review with statewide objectives. These alignment considerations include reductions to GHG emissions, encouragement of infill mixed-use development in designated priority development areas, reductions of regional sprawl land development, and reductions in mobile source VMT.

In November 2017, the Governor's Office of Planning and Research released the final proposed update to CEQA Guidelines consistent with SB 743, recommending VMT, both within and outside of transit priority areas, as the most appropriate metric of transportation impact. This metric will align with local environmental review under CEQA and with California's long-term GHG emissions reduction goals.

The Proposed Project will be held to the principles set forth by SB 743.

3.16.2.3 Regional and Local

Butte County 2020 Regional Transportation Plan/Sustainable Communities Strategy

The *Butte County 2020 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) (BCAG 2020b) specifies the policies, projects, and programs necessary over a 20-year period between 2020 and 2040 to maintain, manage, and improve the region's transportation system. BCAG is the federally designated Metropolitan Planning Organization and the state-designated Regional Transportation Planning Agency for Butte County. The RTP/SCS provides a foundation for transportation decisions by local, regional, and state officials. This foundation is based on a vision of an efficient and environmentally sound multi-modal system.

The RTP/SCS is the region's long-range plan to meet the requirements of California's Sustainable Communities and Climate Change Act of 2008 (SB 375), which calls on regions throughout California to develop a Sustainable Communities Strategy that demonstrates the integration of land use, housing, and transportation for the purpose of reducing GHG emissions from passenger vehicles. The RTP/SCS is intended to be consistent with the California Transportation Plan developed by Caltrans.

The Proposed Project will be held to the policies and programs of the RTP/SCS.

2011 Butte County Bicycle Plan

The *2011 Butte County Bicycle Plan* (Butte County 2011) provides Butte County's vision for making bicycling an integral part of the transportation system with its unincorporated limits. The plan includes emphasis on regional connectivity between the local cities of Biggs, Chico, Gridley, Oroville and the Town of Paradise, in addition to the various rural communities and recreational opportunities that exist within Butte County. The plan will also assist Butte County in its efforts to safely and equitably provide

contiguous bicycle facilities in the future as well as implement roadway projects that are bicycle friendly throughout the unincorporated areas.

The Proposed Project will be held to the policies of this plan.

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to transportation that are relevant to the Proposed Project:

- **Goal CG-2**: Provide safe, efficient and effective traffic flow, both within Paradise and between Paradise and its environs.
- **Goal CG-4**: Provide adequate access, including access for emergency vehicles and evacuation, to all new parcels and to existing parcels when feasible.
- **Policy CP-1**: The Town will strive to maintain a level of service (LOS) "D" or better as the standard for new and existing roadways in the Paradise Planning Area. LOS "D" or better will be maintained on all local streets within the Town limits, and LOS "C" or better will be maintained whenever feasible.
- **Policy CP-8**: The Town should continue to designate and regulate truck routes in order to protect residential areas from unwanted noise and traffic.
- **Policy CP-13**: Automobile dependency within Paradise should be reduced for local residents and visitors by implementing congestion management and trip reduction plan programs that decrease the number of vehicle miles travelled which, in tum, reduces air pollution and congestion and saves energy.
- **Policy CP-15**: Expand public transportation services within Paradise and between Paradise and major employment centers as feasible, based on service demand and financial constraints.

The Proposed Project will be held to the policies in the *Town of Paradise General Plan*.

Town of Paradise VMT Policies

The Town adopted VMT Policies on April 12, 2022. The policies will be implemented, as applicable, in public and private projects in order to try to reach compliance with BCAG goals and with statewide VMT requirements. The City Council Agenda, which includes more detail on each policy, is included in Appendix B. The Town also adopted *The Town of Paradise Transportation Management Plan* in April 2022 that plans for increasing the active transportation network (that is bicycle and pedestrian pathways) to 39.3 miles of paths of which 88 percent would be along of the Towns' major roadways (Town of Paradise 2022g). In addition to growth of the pathways, other improvements in the pedestrian network include making all intersections ADA compliant, closing gaps in the existing sidewalk network, and improving sidewalk visibility; improvements beyond growth recommended for the bicycle network include new bicycle parking, as well as a rest areas and signage (Town of Paradise 2022g). As possible, based on schedule and availability of funding, the Town will implement the improvements outlined in *The Town of Paradise Transportation Management Plan* (Town of Paradise 2022g) in coordination with implementation of Proposed Project where locations overlap. This would maximize cost efficiencies and minimize disturbances from roadway construction.

Policies include:

- Increase diversity of land uses
- Provide pedestrian network improvements
- Provide traffic calming measures and low-stress bicycle network improvements
- Implement car-sharing program
- Increase transit service frequency and speed
- Implement subsidized or discounted transit program
- Encourage telecommuting and alternative work schedules
- Provide ride-sharing programs

The Proposed Project will be held to the policies in the *Town of Paradise VMT Policies*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to transportation that are relevant to the Proposed Project:

- **Policy CIR-P1.3**: Transportation planning within the municipalities' spheres of influence will consider the municipalities' land use and circulation plans, as appropriate, and will be consistent with Policy CIR-P6.1 pertaining to County Levels of Service.
- **Policy CIR-P2.1**: Carpooling will be encouraged by providing additional carpool pickup and park-and-ride locations near transit centers and at freeway interchanges.
- **Policy CIR-P2.2**: Trip reduction among County employees will be encouraged. Specific measures to encourage trip reduction could include providing subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.
- **Policy CIR-P2.4**: Employers will be encouraged to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.
- **Policy CIR-P3.10**: Trees located along urban streets will be protected. If maintenance or upgrading requires tree removal, the trees will be replaced.
- **Policy CIR-P6.1**: The level of service for County-maintained roads within the unincorporated areas of the county but outside municipalities' sphere of influences (SOIs) will be LOS C or better during the PM peak hour. Within a municipality's SOI, the level of service will meet the municipality's level of service policy.
- **Policy CIR-P6.3**: Project approval will be conditioned on the provision of roadway improvements to meet the level of service standards in policies CIR-P6.1 and CIR-P6.2. Exceptions to satisfying the level of service standards and/or constructing transportation facilities to the County's design standards may be allowed on a case-by-case basis, where reducing level of service or not constructing a transportation facility to County standards would result in a clear public benefit. Such circumstances may include, but are not limited to the following:
    - Conserving agricultural or open space land.
    - Enhancing the agricultural economy.

- Protecting scenic roadways or highways.
- Preserving downtown community environments.

- **Policy CIR-P6.5**: Street improvements within the sphere of influence of an incorporated municipality will conform to the street standards of that municipality.
- **Policy CIR-P7.2**: Existing road capacity available within the County road system will be used to serve future development unless construction of a new road will enhance circulation opportunities.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to transportation that are relevant to the Proposed Project:

- **Policy CIRC-1.4, Level of Service Standards**: Maintain LOS D or better for roadways and intersections at the peak PM period, except as specified below:
  - LOS E is acceptable for City streets and intersections under the following circumstances: Downtown streets, arterials served by scheduled transit, and arterials not served by scheduled transit, if bicycle and pedestrian facilities are provided within or adjacent to the roadway.
  - Utilize Caltrans LOS standards for Caltrans' facilities.
  - There are no LOS standards for private roads.
  - If improvements necessary to achieve the LOS standard results in impacts to a unique historical resource, a highly sensitive environmental area, requires infeasible right-of-way acquisition, or some other unusual physical constraint exists.
  - If the intersection is located within a corridor that utilizes coordinated signal timing, in which case, the operation of the corridor as a whole should be considered.

- **Policy CIRC-1.5, Vehicle Miles Travelled Analysis**: Consistent with State law, implement VMT assessments as part of the environmental review process under CEQA.
- **Policy CIRC-1.7, Goods Movement**: Provide clear routes for goods delivery
- **Policy CIRC-2.2, Circulation Connectivity and Efficiency**: Provide greater street connectivity and efficiency for all transportation modes.
- **Policy CIRC-9.1, Reduce Peak-Hour Trips**: Strive to reduce single occupant vehicle trips through the use of travel demand management strategies.
- **Policy CIRC-9.3, Emphasize Trip Reduction**: Emphasize automotive trip reduction in the design, review, and approval of public and private development.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

3.16.3 Method of Analysis

This section describes the methods used to analyze transportation impacts within the study area.

3.16.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on transportation if it would:

- **Impact TRA-1:** Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
- **Impact TRA-2:** Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- **Impact TRA-3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- **Impact TRA-4:** Result in inadequate emergency access

3.16.3.2 Approach to Analysis

Qualitative and quantitative analyses were performed to evaluate potential impacts on transportation using publicly available traffic data.

The analysis of environmental effects focuses on foreseeable changes to transportation in the context of effects listed in Section 3.16.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

The analysis year for transportation was considered 2026 because that is the expected year the Proposed Project would be in operation and would be the last year of construction. The *Butte County General Plan 2030* presents peak hour service volumes as acceptable measures of roadway segment operations (Butte County 2012). The *Butte County General Plan 2030* classified the study area roadways as the same as the *Chico 2030 General Plan* (City of Chico 2017). Table 3.16-1 summarizes the peak hour service volume thresholds of Level of Service (LOS) C, D, and E for expressway, arterial, and collector. The *Butte County General Plan 2030* does not provide peak hour service volume thresholds of LOS for local roads, and therefore, will not be included in this analysis. The *Butte County General Plan 2030* specifies LOS D or better as an acceptable LOS (Butte County 2012).

Table 3.16-1. Butte County Peak Hour LOS Thresholds by Facility Type

Traffic Volume Type	4-Lane Freeway/Expressway			2-Lane Arterial			2-Lane Collector		
	LOS C	LOS D	LOS E	LOS C	LOS D	LOS E	LOS C	LOS D	LOS E
Peak Hour Service Volume	2,530	3,280	3,650	970	1,760	1,870	550	1,180	1,520

Source: Butte County 2012
Note: All threshold volumes as specified in *Butte County General Plan 2030*

While the construction activity would only be temporary, an analysis was conducted to evaluate the magnitude of temporary traffic impacts. The three specific roadways that will be used to provide key access are the following:

- Skyway

- Midway
- Hegan Lane

The above roadways were used as there was recent enough traffic data that could be used in the analysis. In order to evaluate using a conservative approach, traffic operations during the last year of construction was analyzed (which was 2026) with the peak construction activity. The BCAG traffic counts webpage provides 2014 and 2018 roadway volumes for Skyway and Midway (BCAG 2018b, 2018c). The *Chico 2030 General Plan*, Appendix B, Traffic Model Data, provides 2010 roadway volumes for Hegan Lane (City of Chico 2017). Based on these available historic roadway volume data provided by BCAG, Skyway and Midway both have negative growth rates. However, based on BCAG's *Provisional Long-Term Regional Growth Forecasts 2018-2040* (BCAG 2019b), the forecasts show a compound annual growth rate of 0.88 percent. The 2018 roadway volumes were grown using a growth rate of 0.88 percent to get the volumes to 2021 for existing and 2026 for the future year analysis. Table 3.16-2 summarizes the 2021 existing afternoon (PM) peak hour and 2026 future PM peak hour traffic volumes.

Table 3.16-2. Existing and Future PM Peak Hour Traffic Volume

Roadway Segment	Existing (2021)	No Construction (2026)
Skyway	2,018	2,109
Midway	749	783
Hegan Lane	617	644

Source: BCAG 2018c

The *BCAG 2020 RTP Travel Demand Model: Model Development Report* has VMT for 2020 and projection growth rates for the future year (BCAG 2020a). A 1.2 percent annual growth rate was used to grow the VMT to the construction year. Table 3.16-3 presents the BCAG VMT projections from 2020 to 2026 and the increase due to the construction trips.

Table 3.16-3. Butte County VMT

	Existing (2020)	No Construction (2026)
VMT	4,343,919	4,660,038

Source: BCAG 2020a

3.16.4 Impact Analysis

This section describes the potential environmental effects on transportation as a result of implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to conflict with a program, ordinance, or policy addressing the circulation system; conflict with CEQA Guidelines section 15064.3, subdivision (b); increase hazards due to a geometric design feature or incompatible uses; and result in inadequate emergency access.

3.16.4.1 Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (Less than Significant with Mitigation Incorporated)

Construction

It is estimated that approximately 121 worker trips per day and 1,500 truck trips per day would be used for the construction work related to the Core Collection System (HDR 2022). It is estimated that approximately 81 worker trips per day and 639 trucks trips per day would be used for the construction work related to the Export Pipeline System (HDR 2022). Both the Core Collection System and the Export Pipeline System construction work will occur simultaneously. Therefore, it is estimated that a total of 202 worker trips per day and 2,139 truck trips per day would be needed for the construction of the Core Collection System and the Export Pipeline System. The Proposed Project is anticipated to be constructed during typical construction work hours—8 hours per day, Monday through Friday. The activity is expected to last approximately 18 months.

It is assumed that 80 percent of the workers will be commuting during the PM peak hour due to the construction activity ending before the typical PM peak hour of 5 p.m. Therefore, the construction related trips generated by workers during PM peak hour is estimated to be 162 trips per peak hour. The 2,139 daily truck trips were divided by 8 (construction hours per day) to estimate 268 truck trips per peak hour. The total construction trips per peak hour (workers + trucks) was estimated to be 430 per peak hour.

Table 3.16-4 summarizes the no construction and construction conditions PM peak hour volume results on the study road segments in 2026.

Table 3.16-4. 2026 No Construction and Construction Traffic Volumes

Roadway Segment	PM Peak Hour Volume			
	LOS D Threshold	No Construction (2026)	Construction Trips	Construction (2026)
Skyway	3,280	2,109	430	2,539
Midway	1,760	783	430	1,213
Hegan Lane	1,180	644	430	1,074

Source: Butte County 2012, BCAG 2018c

As shown in Table 3.16-4, the Skyway and Midway segments operate below the LOS D threshold under future 2026 conditions and the Project construction trips are not expected to cause LOS degradation or lead to larger delays. As shown in Table 3.16-4, Hegan Lane operates at LOS D under future 2026 conditions, which shows that the roadway segment is near capacity. The additional construction trips are minimal compared to the typical volume and does not cause a degradation of LOS.

Similar to the Core Collection System, construction of the Extended Collection System would add trips to the roadways segments. The Extended Collection System is expected to generate similar vehicle trip volumes as estimated for the Core Collection System, though likely for a shorter timeframe. Similar to the Core Collection System, the additional construction trips would be minimal compared to the typical volume and would not cause a degradation of LOS.

As presented in Section 3.16.2, Regulatory Framework, LOS D or better is an acceptable LOS in Paradise, Butte County, and Chico. Therefore, the roadway segments would operate at an acceptable LOS with the addition of construction traffic associated with the Proposed Project.

Installation of the pipeline within the ROW would temporarily affect traffic flow. Pipeline installation within the ROW would require temporary lane closures. Construction of the Export Pipeline System within or across streets could obstruct access and cause delays for pedestrians, bicyclists, and transit buses. Therefore, the impact related to potential conflicts with a program, plan, ordinance, or policy addressing the circulation system would be significant.

Mitigation. To minimize potentially significant impacts on pedestrian, bicycle, and transit facilities during construction of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 0, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of mitigation measure **MM-HAZ-6**, impacts on pedestrian, bicycle, and transit facilities during construction would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would result in minimal increased traffic volumes on the roadways in the study area. Relative to existing traffic volumes on roadways in the study area, the addition of traffic associated with operation and maintenance of the Proposed Project would not affect roadway operations. Therefore, impacts related to conflict with a program, plan, ordinance, or policy addressing the circulation system during operation and maintenance of the Proposed Project would be less than significant.

Mitigation. No mitigation required.

3.16.4.2 Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? (Less than Significant Impact)

CEQA Guidelines Section 15064.3, subdivision (b) provides the following criteria for analyzing transportation impacts, although only criteria 3 and 4 apply to this Project:

1. **Land Use Projects.** VMT exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than

significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

2. **Transportation Projects.** Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. **Qualitative Analysis.** If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's VMT and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate VMT and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

Construction

Construction of the Proposed Project would cause a temporary increase in VMT due to the worker and truck trips. As described under Impact TRA-1, a total of 202 workers per day and 2,139 truck trips per day would be needed for the construction of the proposed Core Collection System and the Export Pipeline System. The worker trips are assumed to have a 15-mile average trip length, while the trucks trips are assumed to have a 50-mile average trip length. The *BCAG 2020 RTP Travel Demand Model: Model Development Report* has VMT for 2020 and projection growth rates for the future year (BCAG 2020a). A 1.2 percent annual growth rate was used to grow the VMT to the construction year. Table 3.16-5 presents the BCAG VMT projections from 2020 to 2026 and the increase due to the construction trips. The 2020 VMT projections represent the existing conditions while the 2026 VMT projections represent the opening year and final year of construction.

Table 3.16-5. Butte County VMT

	2020	2026 No Construction	2026 Construction	Percent Increase
VMT	4,343,919	4,660,038	4,770,018	2.3

Source: BCAG 2020a

As shown in Table 3.16-5, the percentage increase due to the construction trips associated with the Core Collection System and Export Pipeline System is 2.3 percent of Butte County's VMT. While the construction traffic would cause an increase in VMT, the increase would be temporary and short-term. Likewise, while construction of the Extended Collection System would continue in future years after the Core Collection System and Export Pipeline System is installed, similar traffic volumes and approaches

would be assumed resulting in comparable if not fewer intensive impacts on VMT. Therefore, impacts related to conflict with or inconsistency with CEQA Guidelines Section 15064.3(b) during construction of the Proposed Project would be less than significant.

Mitigation. No mitigation required.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not cause an increase in VMT in the study area due to the infrequency of these activities. Therefore, operation and maintenance of the Proposed Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b), resulting in no impact.

Mitigation. No mitigation required.

3.16.4.3 Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (No Impact)

Construction, Operation, and Maintenance

The Proposed Project elements would not change geometric design features or require incompatible uses. Neither permanent nor temporary geometric design changes are anticipated as all street legal trucks and vehicles would use the existing roadways to enter and exit the Project site. Additionally, construction of the Core Collection System, the Export Pipeline System, and the Extended Collection System would largely occur within the existing ROW and conditions would be restored once construction is complete. Therefore, the Proposed Project would have no impact on hazards due to a geometric design feature or incompatible uses.

Mitigation. No mitigation required.

3.16.4.4 Impact TRA-4: Result in inadequate emergency access (Less than Significant with Mitigation Incorporated)

Construction

Construction activities associated with the Proposed Project would require the temporary closure of traffic lanes on public roadways. Construction of the Proposed Project would add truck and vehicle traffic to roadways in the study area. Construction-related trucks and vehicles could interfere with emergency response to the Project site or evacuation procedures in the event of an emergency. Therefore, construction of the Proposed Project could result in inadequate emergency access, resulting in a potentially significant impact.

Mitigation. To minimize potentially significant impacts related to emergency access during construction of the Proposed Project to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

***MM*-HAZ-6: Traffic Management Plan** (see Section 0, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of mitigation measure **MM-HAZ-6**, impacts related to emergency access during construction would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would result in increased traffic volumes on the roadways in the study area. Relative to existing traffic volumes on roadways in the study area, the addition of traffic associated with operation and maintenance of the Proposed Project would not affect roadway operations in the study area. As a result, emergency access would remain similar to existing conditions during operations and maintenance. Therefore, impacts on emergency access during operation and maintenance of the Proposed Project would be less than significant.

Mitigation. No mitigation required.

3.16.5 Impacts Summary

Table 3.16-6 summarizes the transportation impacts of the Proposed Project.

Table 3.16-6. Transportation Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	SI	MM-HAZ-6	S/M
Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	LTS	N/A	LTS
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	NI	N/A	NI
Impact TRA-4: Result in inadequate emergency access	SI	MM-HAZ-6	S/M

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.16.6 References

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3.17 Tribal Cultural Resources

This section describes the environmental setting and regulatory framework for TCR in the study area and includes a summary and discussion of the consultation held with Native American tribes, which is a necessary step to identifying TCRs that may be affected by the Proposed Project. This section also identifies the direct and indirect impacts of the Proposed Project on TCRs during construction, operation, and maintenance. The study area to identify TCRs is defined as the geographical extent of the proposed project, inclusive of the Export Pipeline System, Core Collection System, and Extended Collection System.

3.17.1 Environmental Setting

Knowledge of current environmental conditions is critical to the assessment of potential environmental impacts on TCR because TCRs may include components of the environment that comprise sites, features, places, cultural landscapes, or sacred places with cultural importance to California Native American tribes. Knowledge of current environmental conditions with regard to TCRs is reliant on the values of Indigenous groups and individuals for whom such resources embody and reflect culturally defined perspectives, values, traditions, and relationships with the environment.

The study area is situated within the ancestral territory of the Konkow people that have lived—and continue to live—in the region since 3,000-2,000 B.P. The historical homeland of the foothill Konkow are the foothills region of the northern Sierra, centered on the river drainages of the North Fork of the Feather River, and roughly encompasses the present political boundaries of Butte County. Archaeological, ethnographic, and historic-era context presented in Section 0, Cultural Resources, provides relevant information to the understanding of TCRs as cultural resources; this section provides additional information within the framework of tribal cultural values held by California Native American tribes that define the significance of TCRs within the Proposed Project area. The records search and pedestrian survey discussed in Section 0 identified several cultural resources that may also hold significance to California Native American tribes outside of the archaeological significance discussed above as the tribes are cultural stewards in the study area, and which are currently unevaluated for such significance in relation to their eligibility for listing in the CRHR.

As summarized and discussed above in Section 0, Indigenous people have undergone centuries of racial, ethnic, and cultural adversity in their homelands, and still maintain traditional, religious, and cultural connections with the environment. Today, many Konkow tribal organizations and culturally affiliated groups maintain connections with the surrounding area of the study area including Berry Creek Rancheria of Maidu Indians (Tyme Maidu Tribe), Enterprise Rancheria of Maidu Indians of California (Enterprise Rancheria Estom Yumeka Maidu), Konkow Valley Band of Maidu, Mechoopda Indian Tribe of Chico Rancheria, Mooretown Rancheria of Maidu Indians, and Round Valley Indian Tribes of the Round Valley Reservation. These Indigenous organizations and others maintain stewardship of their culture—inclusive of its language, epistemologies, histories, and traditions—in the vicinity of the study area through cultural educational programs, public education programs, cultural ceremonies, religious practices, ecological heritage, consultation with local, state, and federal agencies, among other actions.

The Konkow Valley Band of Maidu is actively engaged in cultural endurance and stewardship in their ancestral lands which includes a majority of the proposed project area. TCRs with significance to the Konkow Valley Band of Maidu include components of the environment that comprise sites, features, places, cultural landscapes, or sacred places with cultural importance. As part of ongoing stewardship, Konkow Valley Band of Maidu maintains a monitoring program through Konkow Valley Cultural Preservation to protect and prevent disturbances to resources of importance. The Mechoopda Indian Tribe of Chico Rancheria has successfully reestablished residency in Chico through many efforts, including development of the Chico Rancheria Housing Corporation; land purchases and construction of a tribal office complex and community building; development of the Mechoopda Economic Development Corporation, acquisition of 650 acres of “restored lands” south of Chico; among other successful efforts in the political, economic, and social rebuilding and restoration of the Mechoopda people (Mechoopda Indian Tribe of Chico Rancheria 2021). Resources of cultural importance are likely to include those that provide the Mechoopda people with a connection to their heritage within the vicinity of the Proposed Project area in various ways, including sites, features, places, cultural landscapes, or sacred places with cultural importance connected to previous ancestral habitation, burial sites, ritual performance sites, and places and spaces that support traditional and cultural activities.

Through consultation with Konkow Valley Band of Maidu and Mechoopda Indian Tribe of Chico Rancheria, further discussed below, the Town has been made aware that the study area is near several areas that are culturally sensitive for these tribes. Appropriate mitigation measures have been established for the Proposed Project in coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe of Chico Rancheria to appropriately avoid significant impacts on culturally sensitive areas (see Section 3.17.4).

3.17.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project’s impacts on tribal cultural resources. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.17.2.1 Federal

Indian Trust Assets

Indian Trust Assets are legal interests in property held in trust by the United States for Native American tribes or individuals. Examples of potential Indian Trust Assets are lands, minerals, fishing rights, and water rights. Management of Indian Trust Assets is based on the following orders, agreements, and regulations: EO 13175, Memorandum on Government-to-Government Relations with Native American Tribal Governments, Secretarial Order No. 3175, Secretarial Order No. 3206, Secretarial Order No. 3215, Secretarial Order No. 3342, and Secretarial Order No. 3335.

The Proposed Project will be held to the management principles of Indian Trust Assets.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act of 1978 (42 USC Section 1996) protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

The Proposed Project will be held to the principles set forth by this act.

Historic Sites Act

The Historic Sites Act of 1935 (54 USC Sections 320101–320106, formerly 16 USC 461–467) declares "…that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance…," asserting historic preservation as a government duty under jurisdiction of the United States Secretary of the Interior.

The Proposed Project will be held to the requirements of this act.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. It is important to note that historic properties include properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 CFR Section 800.16[l]).

The Proposed Project will be held to the requirements of the National Historic Preservation Act.

Traditional Cultural Properties and Traditional Cultural Landscapes

Traditional cultural properties are properties associated with cultural practices or beliefs of a living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity of a community. Traditional cultural properties can refer to properties of importance to any community, including indigenous communities.

Traditional cultural landscapes encompass the same meaning and utility, as well as inclusivity of indigenous communities. The Secretary of the Interior's Guidelines for the treatment of cultural landscapes define a cultural landscape as "a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (Birnbaum and Peters 1996).

If a property is determined to be a traditional cultural property, it becomes the responsibility of the lead agency to assess whether the proposed project would have an effect on the property, and should the effect be adverse, would it alter or destroy the elements that make the property significant and eligible. If a proposed project is determined to have an adverse effect, the lead agency is responsible for seeking measures that would mitigate the adverse effects to traditional cultural properties.

The Proposed Project will be held to the principles of traditional cultural properties and traditional cultural landscapes.

3.17.2.2 State

Tribal Cultural Resources

As defined at PRC Section 21074, a TCR is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe and is either: (1) on or eligible for the CRHR or a local historic register; or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR. TCRs are similar to traditional cultural properties in terms of their characteristics, identification, and treatment, and may include a cultural landscape to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Additionally, as defined at PRC

Section 21074, a historical resource, a unique archaeological resource, or a non-unique archaeological resource may also be a TCR if it conforms to the criteria of a TCR in PRC Section 21074(a). CEQA mandates that lead agencies determine whether a project will have a significant impact on TCRs that are eligible for listing on the CRHR (i.e., a historical resource), or are determined to be significant by the lead agency in order to appropriately mitigate any such impacts.

In accordance with CEQA guidelines, cultural resources investigations are necessary to identify TCRs that may have significant impacts as a result of a project (14 CCR Section 15064.5). The following steps are routinely implemented in a cultural resources investigation for CEQA compliance:

5. Identify cultural resources in the proposed project area
6. Evaluate against the CRHR criteria of significance (listed below)
7. Evaluate the impacts of the proposed project on all cultural/tribal resources
8. Develop and implement measures to mitigate proposed project impacts on historical resources or resources deemed significant by the lead agency

As TCRs hold cultural value to a California Native American tribe, consultation with local Native American tribes is an integral component of each of the cultural resources investigation steps described above.

The Proposed Project will be held to the regulatory requirements imposed by CEQA Statutes and further explained in CEQA Guidelines.

Assembly Bill 52 and Consultation

The lead agency for CEQA is responsible for consultation with Native American tribes regarding the potential for a project to impact TCRs, pursuant to AB 52 and PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m). AB 52 recognizes that "…tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated…" and that consultation will occur between a lead agency and Native American tribes for covered projects.

As described in Section 0, Cultural Resources, a proposed project may induce a significant impact to a historical resource, unique archaeological resource, or a TCR if it causes a substantial adverse change (i.e., physical demolition, destruction, relocation, or alteration) to the resource or immediate surroundings (14 CCR Section 15064.5[b]), thereby demolishing or significantly altering the physical characteristics that qualify it for listing on the CRHR or local registers (PRC Sections 5020.01[k] and 5024.1[g]). A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC Section 21084.2). A lead agency will establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC Section 21084.3).

As such, the Town is committed to working together with tribes and consultation efforts with California Native American tribes are described below.

The Proposed Project will be held to the requirements set forth by AB 52.

Native American Historical, Cultural, and Sacred Sites

Pursuant to PRC Section 5097.94 the NAHC has authority and duty to "identify and catalog places of special religious or social significance to Native Americans and known graves and cemeteries of Native Americans on private lands" and has the power and duty to make recommendations for acquisition by the state or other public agencies regarding Native American sacred places that are located on private lands, are inaccessible to Native Americans, and have cultural significance to Native Americans.

The Proposed Project will be held to the requirements set forth by PRC Section 5097.94.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act of 2001 requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items to provide a process for the identification and repatriation of these items to the appropriate tribes.

The Proposed Project will be held to the requirements set forth by this act.

Senate Bill 18

SB 18 provides California Native American tribes an opportunity to participate in local land use decisions at an early planning stage for the purpose of protecting or mitigating impacts to cultural places. SB 18 requires local governments to consult with tribes prior to making certain planning decisions, including the adoption and amendment of general plans.

The Proposed Project will be held to the requirements set forth by SB 18.

3.17.2.3 Regional and Local

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following goals and policies related to TCRs that are relevant to the Proposed Project:

- **Goal OCEG-9**: Identify, record, preserve, and protect historical and archaeological resources.
- **Policy OCEP-36**: The *Land Use Constraints Diagram* identifies areas of potential archaeological sensitivity. Proposed development or public works projects within this area will be required to undertake an archaeological survey prior to project approval. Proposed projects outside this area, in locations that have not been significantly disturbed, will be referred to the California Archaeological Inventory, Northeast Information Center, California State University, Chico to undertake an archaeological survey prior to project approval upon recommendation by the Center.
- **Implementation Measure OCEI-18**: Require compliance of all development projects with Appendix K (archeological impacts) of the *Guidelines for Implementation of the California Environmental Quality Act*.
- **Implementation Measure OCEI-19**: When an archaeological survey is required by the Town or recommended by the California Archaeological Inventory, Northeast Information Center, the survey will be undertaken by a qualified professional archaeologist who is certified by the Society of Professional Archaeologists or has equivalent qualifications.

- **Implementation Measure OCEI-20**: Should any historic or pre-historic artifacts be discovered during construction, all work will cease until a qualified professional archaeologist views the site, provides recommendations and gives clearance to continue.

The Proposed Project will be held to the goals, policies, and implementation measures in the *Town of Paradise General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following policies related to TCRs that are relevant to the Proposed Project:

- **Policy COS-P14.1**: Historic and cultural resources management will be coordinated with nearby jurisdictions, including the five incorporated municipalities, the Lassen and Plumas National Forests, other planning and regulatory agencies, and local tribes.
- **Policy COS-P14.2**: As part of CEQA and NEPA projects, evaluations of surface and subsurface cultural resources in the county will be conducted. Such evaluations should involve consultation with the Northeast Information Center.
- **Policy COS-P14.3**: The Northeast Information Center and appropriate historic and preservation professionals will be consulted when considering reuse of historic sites.
- **Policy COS-P15.1**: Areas found during construction to contain significant historic or prehistoric archaeological artifacts will be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation. Historic or prehistoric artifacts found during construction will be examined by a qualified consulting archaeologist or historian to determine their significance and develop appropriate protection and preservation measures.
- **Policy COS-P15.2**: Any archaeological or paleontological resources on a development project site will be either preserved in their sites or adequately documented as a condition of removal. When a development project has sufficient flexibility, avoidance and preservation of the resource will be the primary mitigation measure.
- **Policy COS-P15.3**: Demolition permit application on potentially important historic sites will be subject to discretionary review.
- **Policy COS-P16.2**: Impacts to the traditional Native American landscape will be considered during California Environmental Quality Act or National Environmental Protection Act review of development proposals.
- **Policy COS-P16.3**: Human remains discovered during implementation of public and private development projects will be treated with dignity and respect. Such treatment will fully comply with the federal Native American Graves Protection and Repatriation Act and other appropriate laws.
- **Policy COS-P16.4**: If human remains are located during any ground disturbing activity, work will stop until the County Coroner has been contacted, and, if the human remains are determined to be of Native American origin, the NAHC and most likely descendant have been consulted.
- **Policy COS-P16.5**: Consistent with State local and tribal intergovernmental consultation requirements such as SB18, the County will consult with Native American tribes that may be interested in proposed new development projects and land use policy changes.

The Proposed Project will be held to the policies in the *Butte County General Plan 2030*.

Memorandum of Understanding between the City of Chico and Mechoopda Indian Tribe

A Memorandum of Understanding has been established between the City of Chico and Mechoopda Indian Tribe of Chico Rancheria, describing the original relationship to the land. The Memorandum of Understanding establishes framework for consultation between the City of Chico and Mechoopda Indian Tribe prior to development of new open space or land use plans, per SB 18, to best protect cultural resources in the City of Chico and all of its open spaces through government-to-government communication.

The Proposed Project will be held to the principles set forth by this memorandum of understanding.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to cultural resources that are relevant to the Proposed Project:

- **Policy CRHP-1.1, Historic Preservation Program**: Maintain a comprehensive Historic Preservation Program that includes policies and regulations which protect and preserve the archeological, historical, and cultural resources of Chico.
- **Policy CRHP-2.3, Demolition as Last Resort**: Limit the demolition of historic resources to an act of last resort, to be permitted only if: 1) rehabilitation of the resource is not feasible; 2) demolition is necessary to protect the health, safety, and welfare of its residents; or 3) the public benefits outweigh the loss of the historic resource.
- **Policy CRHP-3.1, Partnerships to Preserve Heritage Resources**: Foster partnerships with interested parties to preserve heritage resources.

The Proposed Project will be held to the policies in the *Chico 2030 General Plan*.

City of Chico Historic Preservation Ordinance

The Historic Preservation Ordinance of the City of Chico's Municipal Code (Chapter 19.37) specifically affords protection for properties listed on the City of Chico's Historic Resources Inventory and provides a mechanism to add historic properties to the Inventory through Landmark Overlay zoning districts. The ordinance also provides development incentives to owners of designated historic property and establishes a number of exempt activities such as ordinary maintenance and repair.

The Proposed Project will be held to the requirements of the City of Chico's Historic Preservation Ordinance.

California State University, Chico Research Foundation Ecological Reserves Management Plan, Memorandums of Understanding and Agreement

California State University, Chico has implemented a management plan for the Butte Creek Canyon Ecological Reserve, which consists of a 287-acre property comprising two units, the Virgin Valley and Canyon Units, located along Butte Creek. According to the management plan, a number of cultural resources indicative of historical and pre-contact occupation are likely to occur on Butte Creek Canyon Ecological Reserve lands based on cultural resource inventories conducted on adjoining lands with similar landscape and habitat.

The Mechoopda Indian Tribe is a partner with California State University, Chico to the Memorandum of Agreement Regarding Guiding Principles for CSU, Chico Consultation with the Mechoopda Indian Tribe of Chico Rancheria (2018) with commitments for consultation and development of a cultural resources plan regarding the recognized ancestral lands of the Mechoopda Indian Tribe that encompass the California State University, Chico campus. The Mechoopda Indian Tribe is also partner with Chico State Enterprises to the Memorandum of Understanding between the Mechoopda Indian Tribe of Chico Rancheria and Chico State Enterprises (2020) for Chico State Enterprises-administered lands, which include the Big Chico Creek Ecological Reserve and the Butte Creek Ecological Preserve. The Proposed Project intersects with the Butte Creek Ecological Preserve.

The Proposed Project will be held to the principles of the management plan and memorandum of agreement implemented by California State University, Chico.

3.17.3 Method of Analysis

This section describes the methods used to analyze impacts on TCRs within the study area.

3.17.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on TCRs if it would:

- **Impact TCR-1:** Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.

3.17.3.2 Approach to Analysis

Identification of Tribal Cultural Resources

As discussed above, a TCR is a site, feature, place, cultural landscape, sacred place, or object that is of cultural value to a California Native American tribe and is either: (1) on or eligible for listing in the CRHR or a local historic register; or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR (PRC Section 21074). Under CEQA Guidelines, even if a resource is not included on any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource (i.e., TCR) for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines Section 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR.

For the Proposed Project, the evaluation of archaeological sites identified in Section 3.5.1.5 has considered the archaeological significance of the resources currently identified, as well as cultural value significance to Native American tribes. Consideration of significance by the communities for which the resources hold value is especially critical when historic properties are evaluated under Criterion D, as mainstream archaeological notions of "information potential" do not account for tribal perspectives, values, and practices associated with traditional knowledge and their indelible connections to historic properties and heritage and cultural resources. National Register Bulletin 38 states that "[p]roperties that have traditional cultural significance often have already yielded, or have the potential to yield, important information through ethnographic, archeological, sociological, folkloric, or other studies" (Parker and King 1998:14). While information potential may align with and/or be supported by Western scientific methods and criteria, such as those applied and pursued by archaeology, ethnography, folk studies, history/ethnohistory, geography, or other cognate disciplines, for Indigenous communities, Criterion D information potential eligibility must include the events, lessons, figures, and processes associated with the cosmology and Tribally defined protocols, standards, and approaches to information and knowledge production.

The *Butte County General Plan 2030* indicates that there "are a number of Native American sacred sites located throughout the county" and also recognizes the importance of viewshed areas with particular importance noted for the Butte Creek Canyon, which is immediately adjacent to the Proposed Project area (Butte County 2012). According to the *Butte County General Plan 2030*, "the Skyway provides views to a dramatic and panoramic display of the topographic and geologic features of Butte Creek Canyon. A portion of this canyon is protected as an ecological reserve by the State Department of Fish and Game" (Butte County 2012). The ecological reserve is the above-mentioned Butte Creek Canyon Ecological Reserve, which consists of a 287-acre property comprising two units, the Virgin Valley and Canyon Units, located along Butte Creek.

Based on background research, archaeological analysis discussed above in Section 0, and consultation efforts discussed below, including a search of the NAHC's Sacred Lands File, there is potential for TCRs to be located within the Proposed Project area. To date, no CRHR-eligible or listed TCRs have been identified within the Proposed Project area; however, it is important to acknowledge that absence of identification in these efforts does not correlate with an absence of TCRs.

Tribal Consultation

To help determine whether a project may have a significant effect on TCRs, PRC Section 21080.3.1 requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. As such, Native American tribes were consulted to determine the presence of TCR in the study area.

Pursuant to PRC Section 21080.3.1 and in support of AB 52, consultation efforts with Native American tribal contacts have been incorporated in the cultural resources' investigation of the study area, as "California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources" (PRC Section 21080.3.1[a]). Pursuant to PRC Section 21080.3.1(b), lead agencies are required to send notifications of proposed projects to California Native American tribes that have requested in writing to be informed of proposed projects for consultation.

To date, no tribes have requested notification of the opportunity to consult with the Town on the Proposed Projects pursuant to the PRC; however, the Town seeks to engage with potentially interested tribal contacts for current consultation efforts and as such contacted the NAHC on June 29, 2020, and April 26, 2021, to request a list of California Native American tribes and organizations that may have an interest in the Proposed Project pursuant to PRC Section 21080.3.1(c), as well as to request a search of the Sacred Lands File. The NAHC responded on July 1, 2020, and April 27, 2021, providing a list of tribes that have cultural and traditional affiliation to the Proposed Project area, shown in Table 3.17-1. The NAHC also reported that their search of the Sacred Lands File yielded negative results, although that does not mean there are not significant resources within the Proposed Project area. The NAHC's letter is provided in Appendix G Tribal Consultation.

The Town subsequently mailed courtesy letters on May 10, 2021, to potentially interested tribes listed in Table 3.17-1 in order to provide an opportunity to request such notification from the Town (Appendix G Tribal Consultation). As a result of these courtesy correspondence efforts, Chairperson Jessica Lopez of the Konkow Valley Band of Maidu responded via phone call on May 14, 2021, indicating that the tribe would like to consult on the Proposed Project pursuant to AB 52. Kyle McHenry, THPO for the Mechoopda Indian Tribe, responded to the letter via phone call and email on May 25, 2021, to initiate consultation regarding the Proposed Project. To date, no response has been received from the Mooretown Rancheria of Maidu Indians regarding consultation for the Proposed Project.

Table 3.17-1. Tribes and Tribal Representatives Identified by the Native American Heritage Commission Who May Have an Interest in the Project

Tribe	Tribal Representative
Konkow Valley Band of Maidu	Jessica Lopez, Chairperson
Mechoopda Indian Tribe of Chico Rancheria	Dennis Ramirez, Chairperson Kyle McHenry, Tribal Historic Preservation Officer (THPO)
Mooretown Rancheria of Maidu Indians	Benjamin Clark, Chairperson Guy Taylor, Representative

The Town and its consultant, HDR, coordinated with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe via emails and phone calls for an initial consultation meeting held on August 10, 2021, via web meeting. Both Konkow Valley Band of Maidu and Mechoopda Indian Tribe agreed to a joint consultation meeting as the Tribes have a collaborative and cooperative relationship for the management of projects that fall within their adjacent and overlapping geographic and cultural areas of interest. During the initial consultation meeting, the Proposed Project overview was discussed, and conversations were held in response to questions from both tribes. The Town and HDR provided confidential meeting notes to all participants of this meeting, as well as materials requested for further review by the Tribes. A subsequent joint-consultation meeting was coordinated via email and phone calls, and held on September 9, 2021, via web meeting. Both tribes indicated that they had each reviewed the materials provided by the Town. Kyle McHenry identified a concern for potential Project-related impacts in sensitive areas and requested incorporation of measures for the Proposed Project to retain Tribal Cultural Monitors during construction activities in sensitive areas designated by the tribes. Chairperson Jessica Lopez stated a concern for sensitive plant species that may be considered TCR and requested relevant biological assessment information for review, in order to provide any necessary

information related to TCR identification or impact avoidance. The Town agreed to provide the biological assessment information, as well as the draft TCR section language to both Tribes for review.

Additional phone calls and emails were exchanged, and as a result, updates were made to the cultural resources report to address concerns regarding the potential for rediscovery of cultural resources that had been previously recorded but not relocated during survey. Matthew Gramps-Williford, Vice Chair and Cultural Resources Director of the Konkow Valley Maidu Band, requested an in-person consultation meeting with the Town and HDR. The meeting was held on December 20, 2021, at the Town's offices. Chairperson Lopez concluded AB 52 consultation on January 13, 2022, and THPO Kyle McHenry concluded AB 52 consultation on January 14, 2022, with the understanding that communication between the Town and the respective Konkow Valley Band of Maidu and Mechoopda Indian Tribe will continue with regard to the commitments made in this report, which include coordination with both Tribes for identifying sensitive areas and Tribal Cultural Monitoring during construction.

As part of continued communication, the Town reached out to the Tribes on April 7, 2022, via email from HDR, to solicit input and hear concerns regarding potential impacts to TCRs caused by a change to the pipeline alignment for the Proposed Project (Appendix G Tribal Consultation).

3.17.4 Impact Analysis

3.17.4.1 Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe (Less than Significant Impact with Mitigation Incorporated)**

Construction

Under CEQA, a project with an impact that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a TCR is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a TCR would be materially impaired. The significance of a TCR would be significantly impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a TCR that convey its significance and that justify its eligibility for inclusion in the NRHP, the CRHR, a local register of historical resources pursuant to PRC Section 5020.1(k), or historical resources surveys meeting the requirements of PRC Section 5024.1(g).

Impacts on a TCR are likely to be associated with construction of the Core Collection System, Export Pipeline System, and the Extended Collection System. Excavation and ground disturbing activities as a result of these construction activities have the potential to impact newly identified and previously unknown TCRs in the study area.

Although no CRHR-eligible TCRs have been identified within the Proposed Project area, it has been made clear by the Tribes that there is the potential for TCRs to exist within the Proposed Project area. This is considered a potentially significant impact.

Mitigation. To minimize potentially significant impacts on TCRs during construction of the Proposed Project to a less than significant level, mitigation measures **MM-TCR-1** and **MM-TCR-2** will be implemented.

***MM*-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe.** During final design, the Town will continue to consult and coordinate with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe to identify sensitive areas to be protected during construction work and appropriate methods to protect those areas.

MM-TRC-2: Tribal Cultural Monitoring. Prior to construction, the Town will coordinate with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe to identify a Tribal Cultural Monitor, as deemed necessary by either/both Tribes, to be present during ground disturbance work within areas designated as sensitive for tribal cultural resources.

Significance after Mitigation. Implementation of **MM-TRC-1** and **MM-TRC-2** would reduce potentially significant impacts on TCRs resulting from inadvertent damage or destruction of unknown TCRs during construction to a less than significant level because appropriate procedures would be followed to ensure that any unanticipated cultural resources discovered during Project-related ground-disturbing activities are appropriately handled and documented in consultation and coordination with the Tribes.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact TCRs. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Proposed Project would result in a less than significant impact on TCRs.

Mitigation. No mitigation required.

3.17.5 Impacts Summary

Table 3.17-2 summarizes the tribal cultural resources impacts of the Proposed Project.

Table 3.17-2. Tribal Cultural Resources Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe	SI	MM-TCR-1 MM-TCR-2	S/M

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less-than-Significant Level

3.17.6 References

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3.18 Utilities and Service Systems

This section describes the environmental setting and regulatory framework for utilities and service systems, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance on utilities and service systems. In particular, the utilities and service systems analysis focuses on energy and electric infrastructure (electric substations and transmission lines), telecommunications (cable, telephone or broadcasting infrastructure), water supply and services, wastewater facilities, and solid waste services (waste facilities and disposal sites) within the study area. For the purposes of this PEIR, the study area for utilities and service systems refers to the areas within and directly adjacent to the Town and areas of unincorporated Butte County and the City where the proposed pipeline alignment runs, and the utility service areas within these jurisdictions.

3.18.1 Environmental Setting

This section describes the utilities in the County as a whole, followed by the existing utilities in the Town and the City. Utilities and service systems within the study area are discussed and organized by jurisdiction (Butte County, Town of Paradise, and City of Chico). Electric infrastructure is discussed regionally, as the transmission lines span these respective jurisdictions. Landfills are also discussed regionally given that many are available for use by multiple jurisdictions. Telecommunication and fiber optic services are provided by private companies in the County. Table 3.18-1 summarizes utility providers in the County, the Town, and the City. These services are described in further detail in the following sections.

Table 3.18-1. Summary of Utility Providers in the Study Area

Utility Service	Butte County	Town of Paradise	City of Chico
Water	___	Paradise Irrigation District	California Water Service
Wastewater	___	Septic Systems	Chico WPCP
Energy	PG&E Western Area Power Administration Western Electricity Coordinating Council	PG&E	PG&E
Solid Waste and Recycling	Neal Road Recycling and Waste Facility	Northern Recycling and Waste Services (residential waste services)	North Valley Waste Management (residential waste services)
Household Hazardous Waste	Butte Regional Household Hazardous Waste Facility Recology	Paradise Household Hazardous Waste Collection Facility	Butte Regional Household Hazardous Waste Facility
Fiber Optic	Private Companies	Private Companies	Private Companies
Telecommunication	Private Companies	Private Companies	Private Companies

3.18.1.1 Butte County Utilities and Service Systems

The proposed Export Pipeline System would follow several Western Electricity Coordinating Council transmission lines, a 60 kilovolt (kV) PG&E transmission line, 115kV PG&E transmission line, 500kV PG&E transmission line, and Western Area Power Administration 203kV transmission line. The

Western Electricity Coordinating Council is a non-profit corporation that exists to assure a reliable Bulk Electric System in the geographic area known as the Western Interconnection, which includes 2 Canadian provinces, 14 western states, and Northern Baja Mexico (Western Electricity Coordinating Council 2015). PG&E is one of the largest combined natural gas and electricity energy companies in the United States. The company provides natural gas and electric service to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California (PG&E 2021). Western Area Power Administration is one of four power marketing administrations within the US Department of Energy. Their role is to market and transmit wholesale electricity from multi-use water projects. Their service area includes a 15-state region of the central and western United States (Western Area Power Administration 2021).

The County and the City have entered into a Joint Powers agreement, which intends to provide residents of the unincorporated area of the County, as well as the City, the ability to choose where they purchase their energy.

The Butte County Department of Public Works provides solid waste disposal services at the Neal Road Recycling and Waste Facility. For household hazardous waste, the County also uses the Butte Regional Household Hazardous Waste Facility in the City, as well as the Recology facility in Oroville (Butte County 2021f). Table 3.18-2 provides the capacity information for the Neal Road Recycling and Waste Facility.

Table 3.18-2. Butte County Solid Waste Landfill and Capacity Information

Landfill	Max. Permitted Throughput	Remaining Capacity	Max. Permit Capacity	Remaining Capacity Date	Unit of Measure
Neal Road Recycling and Waste Facility	1,500	20,847,970	25,271,900	7/1/2009	Tons (per day)

Source: CalRecycle 2022

3.18.1.2 Town of Paradise Utilities and Service Systems

Paradise receives a safe, dependable supply of potable water through PID. Prior to the Camp Fire, PID delivered water to approximately 11,500 municipal and residential/commercial parcels within Paradise.

Paradise's current wastewater system consists of individual, privately owned septic tanks and leach fields, together with several engineered subsurface disposal systems to serve commercial and institutional facilities. There are currently no existing connections to a centralized wastewater management facility. As discussed in Section 0, Hydrology and Water Quality, the Town operates under a NPDES Small MS4 Permit for stormwater discharges.

The Town uses Northern Recycling and Waste Services for weekly residential waste collection services and bi-weekly recycling and yard waste services (Northern Recycling and Waste Services 2010). Northern Recycling and Waste Services provides its services throughout the County, which also includes weekly commercial refuse and recycling services. In addition, the Town has a Household Hazardous Waste Collection Facility to dispose unusable hazardous products as well as a vegetative waste yard. Northern Recycling and Waste Services provides commercial and residential debris box services for recycling, yard waste, construction and demolition and solid waste. However, due to

unforeseen circumstances, the service center and Household Hazardous Waste Facilities operations are closed until further notice.

PG&E is the service provider for natural gas and electricity for the Town. PG&E is currently in the process of relocating their power lines underground in the Town to create an underground utility district.

3.18.1.3 City of Chico Utilities and Service Systems

The City receives its supply of water through California Water Service (Cal Water). For the City, Cal Water uses 68 wells to pump an average of 27 million gallons of groundwater per day. The water is then delivered to residents through 373 miles of pipeline, eight storage tanks, and nine booster pumps (Cal Water 2021).

Wastewater in the City is treated at the Chico WPCP. The Chico WPCP is a 12 mgd capacity, secondary treatment, activated sludge, wastewater plant with future expandability of up to 15 mgd (City of Chico 2021a). The Chico WPCP operates and maintains 15 sewer life pump stations that pump wastewater from areas in the City that do not have the ability to gravity flow through the wastewater collection system. For sewer water maintenance, the City currently uses a three-step program that abides by the City of Chico's Sanitary System Management Plan (City of Chico 2021e). This includes zone maintenance, camera inspection of pipelines, and regular interval maintenance. These steps will be conducted and maintained by the Chico Public Works department.

The City uses the North Valley Waste Management to provide residential solid waste and recycling services within the City limits. Household hazardous waste is accommodated by the Butte Regional Household Hazardous Waste Facility in Chico (City of Chico 2021f).

PG&E is the service provider for natural gas and electricity for the City.

3.18.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on utilities and service systems. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.18.2.1 Federal

Clean Water Act

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The USEPA implemented pollution control programs under the CWA that sets wastewater standards for the industry.

The Proposed Project will be subject to surface water quality and wastewater standards under the CWA.

3.18.2.2 State

California Integrated Waste Management Act

The California Integrated Waste Management Act (AB 939, Sher, Chapter 1095, Statutes of 1989 as amended) made all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by the year 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year. In September 2016, the State Legislature set short-lived climate pollutant reduction targets for California in SB 1383. SB 1383 establishes statewide targets to reduce the amount of organic waste disposal in landfills (that is, 50% reduction by 2020 and 75% reduction by 2025).

Waste generated by the Proposed Project will be subject to the California Integrated Waste Management Act and associated targets.

3.18.2.3 Regional and Local

Town of Paradise General Plan

The Proposed Project is subject to policies, goals and actions outlined in the *Town of Paradise General Plan*. The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to utilities and service systems that are relevant to the Proposed Project:

- **Policy LUP-12:** The character of future development should be compatible with the Town's service delivery abilities and will not result in service level declines.
- **Policy LUP-13:** The Town will attempt to assure that the rate and character of growth is commensurate with, or does not exceed the current levels of public services, and will attempt to assure that municipal services can be provided to areas planned for annexation and development.

Butte County General Plan 2030

The Proposed Project is subject to policies, goals and actions outlined in the *Butte County General Plan 2030*. The *Butte County General Plan 2030* (Butte County 2012) includes the following goals and policies related to utilities and service systems that are relevant to the Proposed Project:

- **Goal PUB-9:** Provide safe, sanitary and environmentally acceptable solid waste management.
- **Goal PUB-11**: Increase recycling among Butte County residents, businesses, and public agencies.
- **Goal PUB-12:** Manage wastewater treatment facilities at every scale to protect the public health and safety of Butte County residents and the natural environment.
- **Policy PUB-P11.2**: Construction sites will provide for the salvage, reuse, or recycling of construction and demolition materials.
- **Policy W-P1.8**: The County supports conversion from septic systems to public sewer service, where feasible.
- **Policy PUB-P12.4**: New sewer collection and transmission systems will be designed and constructed to minimize potential inflow and infiltration.

- **Policy PUB-P13.4**: Installation of sewer lines will occur concurrently with construction of new roadways to maximize efficiency and minimize disturbance from construction activity.
- **Policy HS-P15.2**: Critical emergency response facilities such as fire, police, emergency service facilities and utilities will be sited to minimize their exposure to flooding, seismic effects, fire, or explosion.

Chico 2030 General Plan

The Proposed Project is subject to policies, goals and actions outlined in the *Chico 2030 General Plan*. The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to utilities and service systems that are relevant to the Proposed Project:

- **Goal PPFS-4:** Maintain a sanitary sewer system that meets the City's existing and future needs, complies with all applicable regulations, and protects the underlying aquifer.
- **Goal PPFS-8:** Ensure that solid waste and recyclable collection services are available to City residents.
- **Policy SUS-3.3, Municipal Waste Reduction**: Reduce consumption and increase recycling and reuse of materials in City operations.
- **Policy PPFS-4.1, Sanitary Sewer System**: Improve and expand the sanitary sewer system as necessary to accommodate the needs of existing and future development.
- **Policy PPFS-4.3, Capacity of Water Pollution Control Plant**: Increase system capacity by reducing wet weather infiltration into the sanitary sewer system.
- **Policy PPFS-4.4, Wastewater Flows**: Ensure that total flows are effectively managed within the overall capacity of the Water Pollution Control Plant.

3.18.3 Method of Analysis

This section describes the methods used to analyze utilities and service systems within the study area.

3.18.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on utilities and service systems if it would:

- **Impact UTIL-1:** Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects
- **Impact UTIL-2:** Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years
- Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments
- **Impact UTIL-4:** Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals
- **Impact UTIL-5:** Comply with federal, state, and local management and reduction statutes and regulations related to solid waste

3.18.3.2 Approach to Analysis

Construction, Operation and Maintenance

Impacts on utilities and service systems were identified qualitatively based on the Proposed Project's potential to disturb or stress the capacity of existing utility/service infrastructure such as, water supply, wastewater, storm water, electric power, natural gas, and solid waste. For the purposes of this resource analysis, information was collected on utility providers and service systems and using the following sources:

- Butte County and City of Chico websites (Butte County 2013; City of Chico 2021a, 2021e)
- PID website (PID 2021)
- Northern Recycling Waste Services website (Northern Recycling and Waste Services 2010)
- CEC's California Electric Infrastructure interactive GIS map (CEC 2021c)
- *Butte County General Plan 2030* (Butte County 2012)
- *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008)
- *Chico 2030 General Plan* (City of Chico 2017)

The analysis of environmental effects focuses on foreseeable changes to utilities and service systems in the context of effects listed in Section 3.18.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

The following methods were used to evaluate the potential impacts from construction, operation, and maintenance of the Proposed Project on utilities and service systems:

- Use of GIS data provided by CEC, which shows the location of electric substations, transmission lines, and electric transmission lines, to pinpoint the location of electric infrastructure within the study area.
- Analysis of construction methods, ROW, and staging areas.
- Analysis of the Project's consistency with the requirements of all plans, policies, and regulations listed in Section 3.18.2, Regulatory Framework.

3.18.4 Impact Analysis

This section describes the environmental impacts on utilities and service systems as a result of implementation of the Proposed Project. The impact analysis for utilities and service systems focuses on construction of the Proposed Project because the components have the potential to disturb existing utility infrastructure during ground disturbing activities, require the use of water supplies, and generate solid waste and wastewater.

3.18.4.1 Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause

significant environmental effects (Less than Significant Impact with Mitigation Incorporated)

Construction

The Chico WPCP is an established secondary treatment, activated sludge, wastewater plant that has an existing capacity of 12 mgd with future expandability of up to 15 mgd (Section 2.4.2 Chico Water Pollution Control Plant; City of Chico 2021a). The annual average flow coming into the Chico WPCP currently is 6.3 mgd (Chico WPCP monitoring data, RWQCB 2021). The Proposed Project would add an additional 0.109 mgd of wastewater to the Chico WPCP influent at the time of initial connection (estimated for 2026) and a maximum of 0.464 mgd at full build-out (estimated for 2057) and would not increase or decrease the availability of sewer service within the City or County. The *Regionalization Planning Report for the Paradise Sewer Project* determined that the Chico WPCP has adequate capacity to serve the Proposed Project's projected demand and commitments, in addition to serving the City's service area within its jurisdictional boundaries (Carollo Engineers 2022). This would include the remaining approximately 3,000 parcels that are not currently connected to the City's sewer infrastructure but fall under the *Chico Urban Area Nitrate Compliance Plan* which calls for the termination of all on-site septic systems as a contributor to ground water nitrate contamination (http://www.buttecounty.net/administration/Nitrate-Compliance-ProgramButte County 2000). Based on these factors, the Proposed Project would not stress the capacity of the current system. Therefore, the Proposed Project would not require the construction or relocation of wastewater facilities, nor would it require expansion of the existing Chico WPCP facility.

The proposed Export Pipeline System would follow several Western Electricity Coordinating Council transmission lines, 60kV PG&E transmission line, 115kV PG&E transmission line, 500kV PG&E transmission line, and Western Area Power Administration 203kV transmission line. The proposed pipeline alignment would generally offset powerlines when in parallel to them and when crossing, would cross at a right angle and in between the powerline poles to avoid physical disruptions. Relocation of transmission lines would therefore not be required.

The Proposed Project also involves a fiber-optic conduit as a part of the Export Pipeline System. The Proposed Project would have two below-ground structures along the Export Pipeline System, namely the transition chamber and the flow control and metering structure. These structures would have electrical instruments that will monitor various items, such as water levels, valve positions, and wastewater flow rate. To reliably communicate the signals from those electrical instruments to Paradise and the Chico WPCP, the Proposed Project would install a 2-inch-diameter metal fiber-optic conduit in the same trench as excavated for the Export Pipeline System. The conduit would be placed above the pipelines and would not require additional ground disturbance. The fiber optic cable would be owned and operated by the Town of Paradise and would not interfere with existing fiber optic cables.

There is potential that groundwater would be encountered during construction of the Core Collection System, the Export Pipeline System, and the Extended Collection System. Construction work would also occur around waterbodies. The Proposed Project would involve trenchless crossings underneath Butte Creek, Comanche Creek, and Little Chico Creek via HDD methods. The crossings would be required to have a minimum depth of 20 feet below the waterbody with a launching and receiving pit on either end of the crossing. As discussed in Section 2.5.2 Export Pipeline System, and shown in

Figure 2-12 Typical HDD Installation, there would be an approximate 10- by 5-foot launching and receiving pit and additional protected space on either end of the waterbody. As discussed in Section 0 Hydrology and Water Quality, a SWPPP that includes water quality BMPs will be implemented to prevent water quality degradation and environmental impacts during construction.

Nevertheless, because utilities could be affected during construction of the Proposed Project, with the potential for disruption of utility service, this impact would be significant.

Mitigation. To minimize potentially significant impacts on utility infrastructure during construction of the Proposed Project to a less than significant level, mitigation measure **MM-UTIL-1** will be implemented.

MM-UTIL-1: Minimize Utility and Service System Disruptions. During final design, to minimize disruptions to utility services, the Town will prepare a Utility Conflict and Coordination Plan that identifies outages that could affect residents and businesses, including fiber-optic/communications, water, power, and gas. As part of that plan, the public and stakeholders will be notified by signage and on Town's website of any potential service interruptions at least 2 weeks prior to construction work.

Significance after Mitigation. With implementation of **MM-UTIL-1**, impacts on utility infrastructure during construction would be less than significant.

Operation and Maintenance

Long-term utility usage would be expected to be similar to pre-Camp Fire levels and within the approved capacities for these services. This would not be a displacement or relocation of utilities, but rather part of the Town's recovery efforts.

Operations and maintenance activities such as the inspection of the Core Collection System, Extended Collection System, Export Pipeline System, and associated instrumentation would occur periodically throughout the year and would be minimally invasive. As required, the pipelines would be flushed to push deposited material farther down the pipelines and ultimately into the Chico WPCP, which is within the permitted capacity for the Chico WPCP. As discussed under *Construction*, above, the fiber optic cable would be owned and operated by the Town and would not interfere with existing fiber optic cables during operations and maintenance. Flow measurement data would be transmitted via radio or fiber-optic lines; therefore, visits would not be required to obtain data.

Based on these factors, there would be no relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities during operation and maintenance and thus, no impact.

Mitigation. *No mitigation required.*

3.18.4.2 Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years (No Impact)

Construction, Operation, and Maintenance

Potable water in the Town is provided by PID. Water supply required during construction of the Proposed Project will be the responsibility of the construction contractor and would only be required

temporarily for the duration of the construction period. Water would be required for such activities as dust suppression, equipment washing, or contractor potable and non-potable water needs. Water use during operations and maintenance would periodically involve flushing activities, flow monitoring, and flow data and wastewater sampling, as described in Section 2.8, Proposed Operation and Maintenance. No potable water would be required during operation and maintenance of the Proposed Project. There would be no impact on water supply.

Mitigation. No mitigation required.

3.18.4.3 Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments (No Impact)

Construction

Wastewater would be generated during the construction of the Export Pipeline System, Core Collection System, and Extended Collection System. Water encountered during pit excavation would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Perched water and nuisance water encountered in trenches during construction of the Core Collection System and Extended Collection System would be collected via sump pump to a Baker Tank for settling and reused for truck dust control. As a result, there would be no impact during construction.

Mitigation. No mitigation required.

Operation and Maintenance

Once operational, the Proposed Project would not include changes to the Chico WPCP service area other than the addition of the Core and Extended Collection Systems in the Town. For the purpose of this analysis, both the Core and Extended Collection System would be within the current capacity of the Chico WPCP. The annual average flow coming into the Chico WPCP is 6.3 mgd (Chico WPCP monitoring data, RWQCB 2021); the facility is licensed to treat 12 mgd with future expandability of up to 15 mgd (City of Chico 2021a). The Proposed Project would add an additional 0.464 mgd of wastewater over the 30-year planning horizon to the system during operations; therefore, the Chico WPCP can accommodate current and future estimated growth (Section 2.4.2 Chico Water Pollution Control Plant).

Additionally, during the initial years of the project when fewer connections have been made to the system and wastewater flows are low, the pipelines may be periodically flushed to push deposited material farther down the pipelines and ultimately into the Chico WPCP. The quantity of flushing water would be kept within the allowable discharge to the Chico WPCP (2.8 Proposed Operation and Maintenance). Therefore, the Chico WPCP has adequate capacity to serve the Proposed Project needs and there would be no impact on existing wastewater commitments.

Mitigation. No mitigation required.

3.18.4.4 Impact UTIL-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (No Impact)

Construction

Solid waste including construction debris, soil and asphalt would be generated during construction of the Core Collection system, Extended Collection System, and the Export Pipeline System. About 169,400 cubic yards of soil would be exported during construction of the Core Collection System. The Export Pipeline System would produce an anticipated 60,800 cubic yards of soil to be exported. Solid waste and construction debris would be transported to a local landfill or another approved location. Waste could be accommodated by the Neal Road Recycling and Waste Facility in Section 3.18.1. The Proposed Project will comply with both State and local solid waste standards during construction and there would be no impact from solid waste generation.

Mitigation. No mitigation required.

Operation and Maintenance

Project operation and maintenance would not generate additional solid waste. The Proposed Project has the potential to foster population regrowth as a result of Camp Fire recovery efforts; long-term landfill usage would be similar to pre-Camp Fire levels and within the approved capacities.

Under existing conditions, the majority of the 11,500 parcels in the Town use septic tanks. Individual septic tanks in the Town hold approximately 3,000 gallons of septage, and they are pumped out approximately once every 5 years. Septage from the Town is currently hauled to a receiving station at the Neal Road Recycling and Waste Facility and NorCal Environmental Solutions. Once the Proposed Project is operational, the 1,500 parcels connecting to the Core Collection System would no longer require septage disposal at these landfills, which could result in beneficial impacts on solid waste generation in the Town. Chico WPCP produces biosolids, however, these biosolids are not transported to a landfill for disposal. Rather, they are placed back into the environment and recycled in land use applications. Therefore, the Proposed Project would comply with both State and local solid waste standards during operation, and maintenance. There would be no impact as it relates to solid waste generation in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Mitigation. *No mitigation required.*

3.18.4.5 Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (No Impact)

Construction, Operation, and Maintenance

The Proposed Project complies with federal, state, and local management and reduction statutes and regulations related to solid waste that have been identified in the Section 3.18.2, Regulatory Framework. Additionally, all construction-generated solid waste would be transported to an approved landfill or other approved location, such as a compost facility licensed for biosolids. Table 3.18-3 provides a consistency analysis of these local management and reduction statues and regulations. Therefore, there would be no impact during construction, operation and maintenance and no mitigation required.

Table 3.18-3. Consistency with State and Local Plans, Policies, and Regulations

Goals and Policies	Project Consistency
California Integrated Waste Management Act (AB 939)	**Consistent**. The Proposed Project will follow all relevant County and local solid waste management programs and regulations. These include *Butte County General Plan 2030*, *Town of Paradise General Plan*, *Chico 2030 General Plan*, and City of Chico Sanitary System Management Plan.
Butte County General Plan 2030	
Goal PUB-9: Provide safe, sanitary and environmentally acceptable solid waste management.	**Consistent**. The Proposed Project intends to construct a new sewer collection system that would reduce public health and environmental concerns caused by the existing failed septic system. Additionally, waste could be accommodated by Butte County landfills listed in Section 3.12.1. All solid waste and construction debris will be transported to a local landfill or another approved location. Project operations would not generate additional solid waste.
Goal PUB-11: Increase recycling among Butte County residents, businesses, and public agencies.	**Consistent.** The Proposed Project intends to construct a new a sewer collection system that is more efficient and safer for Paradise residents. Existing recycling services and practices would not be impacted and would remain the same as existing conditions in Butte County.
Policy PUB-P11.2: Construction sites will provide for the salvage, reuse, or recycling of construction and demolition materials.	**Consistent.** Waste could be accommodated by Butte County landfills listed in Section 3.12.1. All solid waste and construction debris will be transported to a local landfill or another approved location. Where possible, construction and demolition materials will be recycled, reused or salvaged. Project operations would not generate additional solid waste.
Town of Paradise General Plan	
Policy LUP-12: The character of future development should be compatible with the Town's service delivery abilities and will not result in service level declines.	**Consistent.** The new sewer collection system would not result in service level decline, rather it would provide improved sewer services for 1,500 parcels in Paradise. Once the Proposed Project is operational, the 1,500 parcels connecting to the Core Collection System would no longer require septage disposal at local landfills, which could result in beneficial impacts on solid waste generation and sewer service levels in the Town.
Policy LUP-13: The Town will attempt to assure that the rate and character of growth is commensurate with or does not exceed the current levels of public services, and will attempt to assure that municipal services can be provided to areas planned for annexation and development.	**Consistent.** The Proposed Project has the potential to foster population regrowth as a result of Camp Fire recovery efforts which could place an additional demand on existing utility services. However, long-term utility usage would be expected to be similar to pre-Camp Fire levels and within the approved capacities for these services.
Chico 2030 General Plan	
Goal PPFS-8: Ensure that solid waste and recyclable collection services are available to City residents.	**Consistent**. The Proposed Project intends to construct a new a sewer collection system that is more efficient and safer for Town residents. Existing solid waste and recyclable collection services would not be impacted and would remain the same and available to City residents.

Mitigation. *No mitigation required.*

3.18.5 Impacts Summary

Table 3.18-4 summarizes the utilities and service systems impacts of the Proposed Project.

Table 3.18-4. Utilities and Service Systems Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	S/M	MM-UTIL-1	LTS
Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years	NI	N/A	NI
Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	NI	N/A	NI
Impact UTIL-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	NI	N/A	NI
Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	NI	N/A	NI

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

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3.19 Wildfire

This section describes the environmental setting and regulatory framework for wildfire, and it identifies direct and indirect impacts of the Proposed Project during construction, operation, and maintenance. In particular, the wildfire analysis focuses on emergency response and evacuation, wildfire risk and hazards in the study area that may be exacerbated as a result of the Proposed Project's construction, and operation, and maintenance. The study area for wildfire refers to the areas within and directly adjacent to the Town and areas of unincorporated Butte County and the City where the proposed pipeline alignment would run.

3.19.1 Environmental Setting

The County encompasses over 1.1 million acres and is located at an elevation ranging between 60 feet to 7,000 feet above sea level (Butte County 2020). Approximately 52 percent of the County is designated SRA, and approximately 14 percent is designated Federal Responsibility Area (FRA) (Butte County 2020). Public lands primarily include parts of Lassen National Forest and the Plumas National Forest. The remaining 34 percent of the County is located in a LRA (Butte County 2020). Wildfires are common in the LRA, which poses a significant threat to the adjacent SRA.

The Core Collection System and Extended Collection System are located in a LRA Very High FHSZ (CALFIRE 2008). Farther south of the Town, the Export Pipeline traverses Very High, Moderate and High FHSZs in the SRA. The Chico WPCP is located in a LRA Non-Very High FHSZ.

Vegetation is generally grouped into three fuel types, including grass, brush, and timber. Numerous factors such as fuel type and size, loading (tons/acre), arrangement (vertical and horizontal), chemical composition, and dead and live fuel moisture, contribute to the flammability characteristics of vegetation (Butte County 2020). In the County, the valley and lower foothills (up to approximately 1,000 feet in elevation) are covered by the grass fuel types, which is the main carrier of fire. The mid-foothill and lower mountain areas (approximately 1,000 feet to 2,000 feet in elevation) are dominated by brush, which burns readily and can be difficult to control particularly on steep topography and when moisture content reaches critical levels. The mountainous areas (above approximately 2,000 feet in elevation) are generally covered by the timber fuel types, which burn readily and are difficult to control on steep topography and during strong wind events (Butte County 2020).

The County has a Mediterranean climate characteristic of hot, dry summers, and cool, wet winters. Occasionally during the summer, dry weather fronts will approach northern California bringing increased wind speeds from the south. Typically, annually in the autumn months, north wind events bring high temperatures, very low humidity, and strong winds. These conditions usually produce red flag warnings, which provide the highest potential for extreme fire behavior. These conditions in combination with fuels, already at their driest moisture content, can create a severe fire weather situation (Butte County 2020).

The responsibility for the prevention and suppression of wildfires within the County belongs to the BCFD/CALFIRE and to individual municipalities (Butte County 2012).

3.19.1.1 Local Setting

Wildland Urban Interface

Paradise

The Town is located in a LRA Very High FHSZ (CALFIRE 2008). Areas directly surrounding the Town are located in an SRA and zoned Very High FHSZ. The Town is characteristic of an urban interface environment where wildland abruptly adjoins housing and the population is approximately 4,500. However, prior to the Camp Fire the population was approximately 27,000 (DOF 2021a).

Emergency access and evacuation is a concern in the Town due to the limited narrow roads. To mitigate traffic issues during an evacuation, several miles of Skyway have been reconstructed and paved from Stirling City to Butte Meadows as a possible additional evacuation route. Emergency response in the Town is provided by CALFIRE/BCFD, PFD, and Paradise Fire Safe Council (Butte County 2020).

Chico

The City is located in a LRA Non-Very High FHSZ (CALFIRE 2008). Critical infrastructure within the City includes a UPRR main line, an underground petroleum pipeline, state highways and high voltage power lines. The 3,670-acre Bidwell Park located near the center of the city also has high potential for urban/wildland interface. Home development in the City has substantially increased in recent years and a large area of the city can be characterized as urban interface environment where the wildland abruptly adjoins high density housing. The BCFD/CALFIRE and CFD provide fire protection in the City and the unincorporated areas in and immediately surrounding the City (Butte County 2020).

Topography

Paradise

The Town ranges in elevation from approximately 1,000 to 2,300 feet and is located on a broad gently sloping ridge. There are numerous steep canyons near the perimeter of the Town. Butte Creek Canyon, bordering to the west, and the West Branch of the Feather River, bordering to the east, are the two largest canyons surrounding the Town and are most influential on fire behavior. Nance, Hamlin, Berry, Clear Creek, and Dry Creek Canyons are smaller north-south trending canyons located along the southern border of the Town. These small canyons are less prominent but are still very influential on fire behavior (Butte County 2020).

Chico

The City is predominantly flat and is located at an elevation of 197 feet. The western trending foothills in the City rise at a slope of approximately 15 percent. Big Chico Creek and Little Chico Creek traverse the City and the Lindo Channel acts as the major drainage for flood control. Other creeks traversing the city include Mud Creek, Sycamore Creek, Comanche Creek, Dead Horse Slough, and Butte Creek (Butte County 2020).

Weather and Fire History

Paradise

In the Town, seasonal weather patterns do not vary significantly from seasonal averages; average rainfall is 32 inches per year (Weather Atlas 2022a). As a result, extreme weather conditions have not been the primary factor in large fires within the area historically. However, weather outside of the Town limits has great potential to have an impact on fire behavior, thereby driving fire into the Town. In June

2008, a 23,000-acre fire in Humboldt burned 57 acres within the Town. Conditions under the Humboldt Fire were intensified by high winds. In 2018, the Camp Fire burned approximately 153,000 acres, over 18,000 buildings, and resulted in 85 fatalities (Butte County 2020).

Chico

The City is lower in elevation; the average annual rainfall is approximately 28 inches per year (Weather Atlas 2022b). In the summer, temperatures range from high to very high (above 100 °F), low humidity and light to moderate south winds associated with high pressure weather gradients.

The highest potential for extreme fire behavior occurs during north wind events that produce red flag warnings conditions. Wind is the primary factor resulting in large fire spread in the City. Historically, large fires in or near the City have included the Skyway Fire, which burned 425 acres in 2006, and the Humboldt Fire, described above (Butte County 2020).

Fuels

Paradise

Fuel loading in the Town was significantly reduced after the Camp Fire; however, conditions allow for regrowth of native and non-native (invasive) plant species. There are a wide range of vegetation types in the Town, ranging from chaparral brush mix and oak woodland to mixed-conifer timber. An overstory of ponderosa pine/California black oak mix, with an understory of chaparral brush component consisting of manzanita, ceanothus, scotch broom, and poison oak make up the lower elevations of the Town. Greenbelt areas and undeveloped areas also consist of regrowth brush, which has the potential to affect fire behavior. In addition to regrowth brush, the potential for invasive species is high. These vegetation types present fire risk and may lead to fuel driven fires in the Town (Butte County 2020).

Chico

The City is predominantly covered by grasses, planted trees, and brush. The areas surrounding the City and eastern parts of the City that extend to the foothills are covered primarily by annual grasses, oak woodland, and chapparal brush mix. These are considered light to medium fuels. The drainage areas in many of the City's channels are non-native weed Arundo. These fuel types combined with recent structural development and flat topography create fire suppression hazards given their ability to readily support ignition and fire spread, particularly under windy conditions (Butte County 2020).

3.19.2 Regulatory Framework

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the Proposed Project's impacts on wildfire. Additional information on the relevant regulations, laws, and plans is provided in Appendix C, Regulatory Framework.

3.19.2.1 Federal

The National Strategy

The Federal Land Assistance, Management, and Enhancement Act of 2009 (FLAME Act) directed the U.S. Department of the Interior (DOI) and U.S. Department of Agriculture (USDA) to develop a national cohesive wildland fire management strategy to comprehensively address wildland fire management across all lands in the United States. The DOI and USDA committed to a three-phased planning and analysis effort to thoroughly examine and address the complexities of wildland fire management. *The*

National Strategy: The Final Phase in the Development of the National Cohesive Wildland Fire Management Strategy (National Strategy) (DOI and USDA 2014) is the result of a collaborative effort by Federal, state, local, and tribal governments and nongovernmental partners and public stakeholders, in conjunction with scientific data analysis. The National Strategy recognizes and accepts fire as a natural process necessary for the maintenance of many ecosystems and strives to reduce conflicts between fire-prone landscapes and people (DOI and USDA 2014). Specifically, the National Strategy identifies the following primary goals:

- **Restoration and maintenance of landscapes:** Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.
- **Fire-adapted communities:** Human populations and infrastructure can withstand a wildfire without loss of life and property.
- **Wildfire response:** All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

The National Strategy guides federal direction for the state and local agencies responsible for fire protection in the vicinity of the Proposed Project.

The Proposed Project will be held to the goals of the National Strategy.

FEMA Grants – Town of Paradise Wildfire Mitigation Projects

The Town has applied to FEMA through the California Office of Emergency Services for four grants under FEMA's Hazard Mitigation Grant Program Post-Fire Assistance (FEMA 2022). The Town is proposing four wildfire mitigation projects to enhance fire safety and mitigate the threat of wildfire. The purpose of the proposed projects is to protect people and property by reducing wildfire-related hazards within the Town. The projects would implement wildfire mitigation measures throughout the Town, through a combination of enhanced enforcement, education, and incentives to help property owners reduce hazards on their own lands and reduce hazardous fuels on Town rights-of-way. The four projects include the following: (1) enhancing code enforcement activities to manage hazardous fuels and defensible space, (2) introducing a residential ignition-resistant improvement and defensible space program, (3) hazardous fuel reduction along Town rights-of-way, and (4) removing hazardous dead or dying trees on private properties (FEMA 2022).

The Proposed Project will be held to the requirements of FEMA's Hazard Mitigation Grant Program.

3.19.2.2 State

2018 Strategic Fire Plan for California

The *2018 Strategic Fire Plan for California*, developed by the State Board of Forestry and Fire Protection, provides direction and guidance to CALFIRE and its 21 field units. This plan sets forth a number of goals focused on fire prevention, natural resource management, and fire suppression efforts, including the following (CALFIRE 2018):

- Improve the availability and use of consistent, shared information on hazard and risk assessment.

- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognize individual landowner/homeowner responsibilities.
- Foster a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as community wildfire protection plans.
- Increase awareness and actions to improve fire resistance of human-made assets at risk and fire resilience of wildland environments through natural resource management.
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers.
- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services.
- Implement needed assessments and actions for post-fire protection and recovery.

The 2018 Strategic Fire Plan for California guides CALFIRE oversight of local agencies' responsibilities for fire protection and natural resource management in the vicinity of the Proposed Project.

The Proposed Project will be held to the goals set forth by the 2018 Strategic Fire Plan.

Community Wildfire Prevention and Mitigation Report

CALFIRE prepared the *Community Wildfire Prevention & Mitigation Report* in response to Executive Order N-05-19, which directed CALFIRE, in consultation with other state agencies and departments, to recommend immediate, medium-term, and long-term actions to help prevent destructive wildfires, with a specific focus on vulnerable communities and populations in the state (CALFIRE 2019). Based on local fire plans developed by CALFIRE units, CALFIRE identified 35 priority projects for immediate implementation to help reduce public safety risks for more than 200 communities. Projects include removal of hazardous dead trees, vegetation clearing, creation of fuel breaks and community defensible spaces, and creation of ingress and egress corridors. The *Community Wildfire Prevention & Mitigation Report* also identifies near-term administrative, regulatory, and policy actions to address community vulnerability and wildfire fuel buildup through rapid deployment of resources.

CALFIRE's identified medium-term and long-term actions encourage coordination and cooperation among the various levels of regional and local fire protection agencies.

The Proposed Project would be held to the strategies in the Community Wildfire Prevention & Mitigation Report.

California Fire Code

The California Fire Code (CCR Title 24, Part 9) establishes minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of the code contains requirements for fire preserving safety during construction, such as to develop a pre-fire plan in coordination with the fire chief, maintain vehicle access for firefighting at construction sites, and meet requirements for safe operation of construction equipment powered by internal combustion engines.

The Proposed Project will be held to the requirements set forth by the California Fire Code.

CALFIRE's Fire Hazard Severity Zone Mapping

CALFIRE is required by law to identify areas, referred to as FHSZs, based on the severity of fire hazard that is expected to prevail there. The FHSZ maps are developed using a science-based, field-tested computer model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior. The FHSZ maps are developed based on factors such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and weather (CALFIRE 2022).

SRAs are defined as areas where the State of California has financial responsibility for wildland fire protection and prevention; incorporated cities and federal ownership are not included. Within SRAs, CALFIRE is responsible for fire prevention and suppression (CALFIRE 2022). The Board of Forestry and Fire Protection classifies lands as SRA. All SRAs are within a FHSZ. There are three levels of hazard in the SRAs: moderate, high, and very high (CALFIRE 2022).

LRAs are defined as incorporated cities, urban regions, agricultural lands, and portions of the desert where the local government is responsible for wildfire protection. This is typically provided by city fire departments, fire protection districts, counties, and by CALFIRE under contract (CALFIRE 2022). CALFIRE uses an extension of the SRA FHSZ model as the basis for evaluating fire hazard in LRAs. The LRA hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area.

FHSZ maps evaluate wildfire hazards, which are the physical conditions that create a likelihood and expected fire behavior over a 30 to 50-year period without considering short-term modifications such as fuel reduction effort (CALFIRE 2022). FHSZ maps can be used for the following purposes: implementing wildland-urban interface building standards for new construction, natural hazard real estate disclosure at time of sale 100-foot defensible space clearance requirements around buildings, and property development standards such as road widths, water supply, and signage consideration in city and county general plans (CALFIRE 2022).

The Proposed Project will be held to the restrictions associated with FHSZ mapping.

3.19.2.3 Regional and Local

Butte County Local Hazard Mitigation Plan Update

The *Butte County Local Hazard Mitigation Plan Update* (Butte County 2019b) includes an assessment of the county's risk and vulnerability related to natural and other identified hazards and a comprehensive mitigation strategy which includes actions and projects designed to mitigate or reduce the impacts of those hazards and to increase community resiliency.

The Proposed Project will be held to the strategies in the *Butte County Local Hazard Mitigation Plan Update*.

Butte County General Plan 2030

The *Butte County General Plan 2030* (Butte County 2012) includes the following goals and policies related to wildland fires that are relevant to the Proposed Project:

- **Goal HS-11**: Reduce risks from wildland fire and urban fire.

- **Policy HS-P11.1**: Fire hazards will be considered in all land use and zoning decisions, environmental review, subdivisions review and the provision of public services.
- **Policy HS-P11.2**: Create communities that are resistant to wildfire by supporting the implementation of community wildfire protection plans and wildfire fuel load reduction measures in coordination with the appropriate government, community group, or non-profit organization and California Department of Forestry and Fire Protection (CALFIRE).
- **Policy HS-P11.3**: The County supports the Wildfire Mitigation Action Plan, the Butte County Local Hazard Mitigation Plan (LHMP), and the Butte Unit Community Wildfire Protection Plan prepared by CALFIRE and will cooperate with the Butte County Fire Department and the Butte County Fire Safe Council in implementing these plans.
- **Policy HS-P11.4**: New development projects will meet current fire safe ordinance standards for adequate emergency water flow, emergency vehicle access, signage, evacuation routes, fuel management, defensible space, fire safe building construction and wildfire preparedness.
- **Goal HS-12**: Protect people and property from wildland or urban fires.
- **Policy HS-P12.4**: All development projects in wildland urban interface areas in High or Very High Fire Hazard Severity Zones will provide, at a minimum, small-scale water systems for fire protection.
- **Goal HS-13**: Identify safe and effective evacuation routes and access for fire prevention and suppression
- **Policy HS-P13.1**: New development in High or Very High Fire Hazard Severity Zones, as shown in Figure HS-9, shall identify access and egress routes and make improvements or contribute to a fund to develop upgrade and maintain these routes.

The Proposed Project will be held to the goals and policies in the *Butte County General Plan 2030*.

Butte County Multi-Jurisdictional All Hazard Pre-Disaster Mitigation Plan

The *Butte County Multi-Jurisdictional All Hazard Pre-Disaster Mitigation Plan* (Butte County 2007) was developed by Butte County and participating jurisdictions (City of Biggs, City of Chico, City of Gridley, City of Oroville, and Town of Paradise) to meet the requirements of the Disaster Mitigation Act of 2000. This plan represents the commitment of Butte County and participating jurisdictions to reduce risks from natural and other hazards and serves as a guide for decision-makers as they commit resources to reducing the effects of natural and other hazards. The overall intent of this plan is to reduce or prevent injury and damage from hazards in the county. It identifies past and present mitigation activities, current policies and programs, and mitigation strategies for the future.

The Proposed Project will be held to the strategies in this plan.

Butte County Community Wildfire Protection Plan 2020–2025

The *Butte County Community Wildfire Protection Plan 2020–2025* (Butte County 2020) was developed by federal, State, and local agencies in order to identify and prioritize pre-fire and post-fire management strategies and tactics meant to reduce the loss of value at risk within the County. The plan establishes a framework for reducing the risks associated with wildfire by placing emphasis on what needs to be done before the fire starts. The plan strives to reduce firefighting costs and property losses, increase firefighter safety, and to enhance ecosystem health (Butte County 2020).

The Proposed Project will be held to the strategies in the *Butte County Community Wildfire Protection Plan*.

Town of Paradise General Plan

The *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008) includes the following policies related to wildland fires that are relevant to the Proposed Project:

- **Goal SG-1:** Assure that law enforcement and fire protection services are enhanced sufficiently to meet the demands of new and existing land use development.
- **Policy SP-1:** New and unmitigated land use development will not cause the police and fire protection services emergency response times to full below the service levels established by this plan.
- **Policy SP-2:** Through the development review process, adequate roads will be required to be constructed and/or improved for emergency vehicle access, particularly in high wildland fire hazard areas.
- **Policy SP-3:** Future development should be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.
- **Policy SP-5:** The Town should promote fire prevention by continuing to require brush removal and fuel load clearing as ongoing conditions of development approval and property maintenance.
- **Implementation Measure SI-6:** Enforce and comply with the provisions of the Unform Building Code and Uniform Fire Code.

The Proposed Project will be held to the goals, policies, and implementation measures in the *Town of Paradise General Plan*.

Town of Paradise Emergency Operations Plan

The purpose of the *Town of Paradise Emergency Operations Plan* (Town of Paradise 2011), its Functional Annexes and Hazard/Threat Specific Appendices is to provide the basis for a coordinated response before, during, and after a disaster incident affecting the Town. The plan is the principal guide for the Town's response to, and management of real or potential emergencies and disasters occurring within its designated geographic boundaries. It also identifies how the Town integrates into the Standardized Emergency management System and the National Incident Management System. Reducing risks from and response to wildland fire is also discussed in the plan and focuses on fuel reduction and the reduction of wildland fire to infrastructure.

The Proposed Project will be held to the strategies in this plan.

Paradise Fire Safe Council

Founded in 1999, the Paradise Fire Safe Council is comprised of volunteer community members under the umbrellas of the Butte County Fire Safe Council and the California Fire Safe Council. The council is designated under the Town of Paradise to provide community input on wildfire prevention and safety (Paradise Fire Safe Council 2008).

The Proposed Project will be held to the principles set forth by the Paradise Fire Safe Council.

Chico 2030 General Plan

The *Chico 2030 General Plan* (City of Chico 2017) includes the following policies related to wildland fires that are relevant to the Proposed Project:

- **Goal S-4**: Continue to provide effective and efficient fire protection and prevention services to Chico area residents.
- **Action S-4.1.1, Fire Response Time**: Strive to obtain an initial response time of five and a half minutes or less for at least 90 percent of fire emergency response calls in urbanized areas.
- **Action S-4.3.3, Project Design**: As part of the project review process in wildland fire areas, require consideration of emergency evacuation routes and defensible buffer areas.
- **Policy S-4.4, Vegetation Management**: Support vegetation management and weed abatement programs that reduce fire hazards.

The Proposed Project will be held to the goals and policies of the *Chico 2030 General Plan*.

3.19.3 Method of Analysis

This section describes the methods used to analyze wildfire impacts within the study area.

3.19.3.1 CEQA Significance Criteria

For the purposes of this PEIR, the Proposed Project would result in a significant impact on wildfire if it would:

- **Impact FIRE-1**: Substantially impair an adopted emergency response plan or emergency evacuation plan
- **Impact FIRE-2**: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire
- **Impact FIRE-3**: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
- **Impact FIRE-4**: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

3.19.3.2 Approach to Analysis

Construction, Operation, and Maintenance

Impacts on wildfire were identified qualitatively based on the Proposed Project's potential to increase wildfire occurrence and associated risks.

A desktop analysis was completed to collect and analyze data related to wildfire risks in the study area. For the purposes of this analysis, information related to wildfire risks was collected using the following sources:

- Map of Butte County Very High FHSZ in LRA (CALFIRE 2008)
- Butte County Community Wildfire Protection Plan (Butte County 2020)

The analysis of environmental effects focuses on foreseeable changes to wildfire in the context of effects listed in Section 3.19.3.1, CEQA Significance Criteria. The analysis considers the Core Collection System, Export Pipeline System, and Extended Collection System, as appropriate, in the context of construction, operation, and maintenance.

3.19.4 Impact Analysis

This section describes the potential environmental impacts on wildfire as a result of implementation of the Proposed Project. It includes an analysis of the Proposed Project's potential to the substantially impair an adopted emergency response plan or evacuation plan; exacerbate wildfire risks and expose project occupants to pollutant concentrations; require the installation or maintenance of associated infrastructure that may exacerbate fire risk; or expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

3.19.4.1 Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan (Less than Significant Impact with Mitigation Incorporated)

Construction

As discussed in Section 2.7.2 Traffic Management and Temporary Construction Road Closures, no total road closures would result from implementation of the Proposed Project, other than for movement of equipment, which would be very temporary. Installation of the Export Pipeline System would occur along Skyway, which is a primary evacuation route. Closures within the ROWs would be partial; however, in the event of a wildfire, all four lanes of Skyway would be required for evacuation. Therefore, the construction area for the Export Pipeline System along Skyway could potentially interfere with the flow of evacuation traffic. As a result, the impact on an emergency response or emergency evacuation plan during construction would be significant.

Mitigation. To minimize potentially significant impacts on emergency response or emergency evacuation plan during construction of the Proposed Project to a less than significant level, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6** will be implemented.

MM-HAZ-3: Road Closure Restrictions (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-4: Rapid Demobilization Plan (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-5: Evacuation Warning Procedures (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-6: Traffic Management Plan (see Section 0, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With implementation of mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6**, impacts on an emergency response or emergency evacuation plan would be reduced to a less than significant level.

Operation and Maintenance

Once operational, the Proposed Project would support objectives for multi-family housing units being located near emergency evacuation routes. This is because multi-family housing units typically generate a high amount of wastewater relative to their parcel size; this typically means that on-site septic systems are not feasible for this type of development, and they would need to connect to the Core Collection System. The main part of the Core Collection System would be installed along roads that also serve as the primary evacuation corridors for the Town. The end result is denser, multi-family housing being located on primary evacuation corridors, rather than on the canyon edges in Paradise, which in turn will facilitate safer, more rapid evacuation in case of a future fire.

Operation and maintenance activities, as described in Section 2.8, would not involve the presence or operation of equipment on roads for extended periods of time. Operation and maintenance activities would require few vehicles that would not alter the traffic volumes on roads in the study area. As a result, emergency access would remain similar to existing conditions during operations and maintenance. Therefore, operation and maintenance activities would have no impact on an adopted emergency response plan or emergency evacuation route.

Mitigation: No mitigation required.

3.19.4.2 Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire (Less than Significant Impact with Mitigation Incorporated)

Construction

The Core Collection System and Extended Collection System are located in a LRA Very High FHSZ (CALFIRE 2008). Farther south of the Town, the Export Pipeline traverses Very High, Moderate, and High FHSZs in the SRA. The Chico WPCP is located in a LRA Non-Very High FHSZ.

The Town is located at an elevation of 1,000 to 2,300 feet on a broad and gently sloping ridge. Vegetation types found in the Town present fire risk and may lead to fuel driven fires. Together, these factors, along with Town's history of wildfire, create a potential for high fire risks. The City is predominantly flat. However, the weather in Chico (temperatures ranging from high to very high in the summer, low humidity, and winds), fuel types and recent structural developments supportive of fire hazards, and the urban/wildland interface can also create wildfire risk in the study area.

Operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. As described in Section 0, Hazards and Hazardous Materials, hazardous materials will be used, transported, and disposed of during construction of the Proposed Project. The Town will comply with all relevant federal, state, and local statutes and regulations related to the transport, use, storage, or disposal of hazardous materials associated with construction activities, and all materials designated for disposal will be evaluated for appropriate state and federal hazardous waste criteria and properly disposed of according to their classifications.

Because the Proposed Project is located in a Very High FHSZ, the potential for wildfire exists during construction. Therefore, this impact is considered significant.

Mitigation. To minimize potentially significant impacts from exacerbating wildfire risk in the study area during construction of the Proposed Project to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 0, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With implementation of mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts from exacerbating wildfire risk in the study area would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Additionally, operation and maintenance activities would not be located adjacent to wildland areas. Furthermore, fire suppression equipment would be made available during operation and maintenance activities and Chico WPCP would continue to comply with existing fire codes. Therefore, operation and maintenance of the Proposed Project would not exacerbate wildfire risk in the study area, resulting in a less than significant impact.

Mitigation: No mitigation required.

3.19.4.3 Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment (Less than Significant Impact with Mitigation Incorporated)

Construction

The Proposed Project would involve the construction of the Core Collection System, Export Pipeline System, and Extended Collection System. As discussed under Impact FIRE-2, portions of the study area are located within Very High FHSZs. Construction activities such as operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. Therefore,

impacts on wildfire from the installation or maintenance of utility infrastructure during construction are considered significant.

Mitigation. To minimize potentially significant impacts on wildfire from installation or maintenance of utility infrastructure during construction of the Proposed Project to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 0, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 0, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With implementation of mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts on wildfire from the installation or maintenance of utility infrastructure would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Furthermore, fire suppression equipment would be made available during operation and maintenance activities and Chico WPCP would continue to comply with existing fire codes. Therefore, operation and maintenance of the Proposed Project would result in a less than significant impact on wildfire from installation or maintenance of utility infrastructure.

Mitigation. No mitigation required.

3.19.4.4 Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (Less than Significant Impact with Mitigation Incorporated)

Construction

The Town is located on a broad and gently sloping ridge, while the City is predominantly flat. Installation of the Core and Extended Collection Systems and Export Pipeline System would require

installation via trenching or open cut methods within the Town's roadway ROWs. Sections of the proposed Core Collection System and Export Pipeline System would cross private parcels and would require easements from the property owners. Once installed, disturbed areas would be backfilled and the ground surface would be restored to original conditions or better. Additionally, the Core Collection System, Extended Collection System and Export Pipeline System would be constructed in segments and any drainage impacts would be localized and temporary. However, given the sloped topography of the Town and ground disturbing activities that could create runoff or temporarily alter drainage patterns, impacts would be significant during construction.

Mitigation. To minimize significant impacts on post-fire slope instability, or drainage changes during construction of the Proposed Project to a less than significant level, mitigation measures **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 0, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 0, Hydrology and Water Quality, for description)

MM-GEO-1: Minimize Geologic Hazards (see Section 0, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With implementation of mitigation measures **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1**, impacts from exposing people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be less than significant.

Operation and Maintenance

As discussed in Section 2.8 Proposed Operations and Maintenance, while the Core Collection System, Export Pipeline System, and Extended Collection System pipelines are designed to maintain their integrity during operations, it is always possible that a segment of pipeline could break, for example during excavations near a pipeline by others. Procedures to address a pipeline break are discussed in Section 2.8. During any excavations or other work on the pipeline by Town Public Works, the same procedures and standards would apply. Operation and maintenance activities will be performed periodically according to the schedule discussed in Section 2.8.

Operation and maintenance activities, as described in Section 2.8, would not involve activities that create runoff or alter drainage. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Therefore, operation and maintenance of the Proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, resulting in a less than significant impact.

Mitigation. No mitigation required.

3.19.5 Impacts Summary

Table 3.19-1 summarizes the wildfire impacts of the Proposed Project.

Table 3.19-1. Wildfire Impacts Summary

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significance with Mitigation Incorporated
Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	SI	MM-HAZ-3, MM-HAZ-4, MM-HAZ-5, and MM-HAZ-6	S/M
Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	SI	MM-HAZ-1, MM-HAZ-7, MM-HAZ-8, and MM-HAZ-9	S/M
Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	SI	MM-HAZ-1, MM-HAZ-7, MM-HAZ-8, and MM-HAZ-9	S/M
Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	SI	MMHYD-1, MM-HYD-3, and MM-GEO-1	S/M

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level

3.19.6 References

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3.20 Summary of Environmental Impacts

Table 3.20-1 summarizes the environmental impacts of the Proposed Project.

Appendix H, Mitigation, Monitoring and Reporting Program, summarizes the Town's program to ensure compliance with all mitigation measures committed to in this PEIR and included below, and assigns responsibility and timeframe for implementation. As noted in Appendix H, and in accordance with Section 21083, Public Resources Code (CEQA Guidelines Section 15097 (a)), a public agency shall adopt a program for monitoring and reporting on the measures that it has imposed in an EIR or negative declaration to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or private entity which accepts the delegation; however, until mitigation measures have been completed, the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program (CEQA Guidelines Section 15097 (a)). This Mitigation Monitoring and Reporting Program (MMRP) addresses the requirement.

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Table 3.20-1. Proposed Project Impact Summary Table

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Agriculture and Forestry Resources			
Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use	No Impact	Not Applicable	No Impact
Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract	No Impact	Not Applicable	No Impact
Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by California Government Code Section 51104(g))	No Impact	Not Applicable	No Impact
Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use	No Impact	Not Applicable	No Impact
Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Air Quality			
Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Biological Resources			
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Plant Species	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-2: Special-status Plant Surveys MM-BIO-3: Special-status Plant Avoidance MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training MM-BIO-5: Restoration of Temporarily Disturbed Areas	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Vernal Pool Crustaceans	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Valley Elderberry Longhorn Beetle	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-9: Mapping of Elderberry Shrubs and Section 7 Consultation MM BIO-10: No Net Loss of Elderberry Shrubs MM-BIO-11: Elderberry Transplanting MM BIO-12: Avoidance Area MM-BIO-13: Chemical Use MM-BIO-14: Mowing	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Fishes	Significant Impact	MM-BIO-15: Frac-Out Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-status Amphibians and Reptiles	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas MM-BIO-16: Western Pond Turtle Visual Encounter Surveys MM-BIO-17: Foothill Yellow-legged Frog Surveys MM-BIO-18: California Red-legged Frog Surveys. MM-BIO-19: Conduct Construction Activities during the Active Period for Giant Garter Snakes. MM-BIO-20: Minimize Potential Effects on Giant Garter Snake Habitat.	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: MBTA and FGC-Protected Birds and Raptors	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-21: MBTA and FGC-Protected Bird and Raptor Surveys MM-BIO-22: Protocol Swainson's Hawk Surveys MM-BIO-23: Nest Avoidance	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Bats	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-24: Bat Surveys	Less-Than-Significant Impact
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: American Badger	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-25: American Badger Detection Surveys	Less-Than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-5: Restoration of Temporarily Disturbed Areas MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas	Less-Than-Significant Impact
Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands	Significant Impact	MM-BIO-1: Minimize Disturbance Footprint MM-BIO-5: Restoration of Temporarily Disturbed Areas MM-BIO-6: No Net Loss of Aquatic Resources MM-BIO-7: Sensitive Community Fencing MM-BIO-8: Dry Work Areas MM-BIO-26: State or Federally Protected Wetlands Mitigation	Less-Than-Significant Impact
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites	No Impact	Not Applicable	No Impact
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	No Impact	Not Applicable	No Impact
Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	No Impact	Not Applicable	No Impact
Cultural Resources			
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	Significant Impact	MM-CUL-1: Targeted archaeological monitoring MM-CUL-2: Follow inadvertent discovery procedures	Less-Than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Energy			
Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	No Impact	Not Applicable	No Impact
Geology, Soils, and Paleontological Resources			
Impact GEO-1(a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	No Impact	Not Applicable	No Impact
Impact GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	Significant Impact	MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	No Impact	Not Applicable	No Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Significant Impact	MM-GEO-2: Inadvertent Discovery Protocol	Less-Than-Significant Impact
Greenhouse Gas Emissions			
Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of GHG	No Impact	Not Applicable	No Impact
Hazards and Hazardous Materials			
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	Significant Impact	MM-HAZ-1: Vehicle Equipment Access and Fueling	Less-than-Significant Impact
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	Significant Impact	MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan	Less-than-Significant Impact
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	No Impact	Not Applicable	No Impact
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Significant Impact	MM-HAZ-3: Road Closure Restrictions MM-HAZ-4: Rapid Demobilization Plan MM-HAZ-5 : Evacuation Warning Procedures MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	Significant Impact	MM-HAZ-1: Vehicle Equipment Access and Fueling MM-HAZ-7: Incorporate Fire Prevention Measures MM-HAZ-8: Incorporate Public Safety Measures MM-HAZ-9: Wildland Fire Area	Less-than-Significant Impact
Hydrology and Water Quality			
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	Significant Impact	MM-HAZ-1: Vehicle and Equipment Access and Fueling MM-HYD-1: Stormwater Management and Treatment Plan MM-HYD-2: Construction Best Management Practices MM-BIO-15: Frac-out Plan	Less-than-Significant Impact
Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HYD-3(a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on or off-site	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan	Less-than-Significant
Impact HYD-3(b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan MM-HYD-3: Flood Protection Plan	Less-than-Significant Impact
Impact HYD-3(c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan MM-HYD-3: Flood Protection Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact HYD-3(d): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Impede or redirect flood flows	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation	Significant Impact	MM-HYD-3: Flood Protection Plan	Less-than-Significant Impact
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	Significant Impact	MM-HYD-1: Stormwater Management and Treatment Plan	Less-than-Significant Impact
Land Use and Planning			
Impact LU-1: Physically divide an established community	No Impact	Not Applicable	No Impact
Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	No Impact	Not Applicable	No Impact
Noise and Groundborne Vibration			
Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	Significant Impact	MM-NSE-1: Minimize Construction Noise	Less-Than-Significant Impact
Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels	Significant Impact	MM-NSE-1: Minimize Construction Noise	Less-Than-Significant Impact
Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Population and Housing			
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	No Impact	Not Applicable	No Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Public Services			
Impact PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact PS-1(b): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Recreation			
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Transportation			
Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	Less-than-Significant Impact	Not Applicable	Less-than-Significant Impact
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	No Impact	Not Applicable	No Impact
Impact TRA-4: Result in inadequate emergency access	Significant Impact	MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Tribal Cultural Resources			
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.	Significant Impact	MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe MM-TCR-2: Tribal Cultural Monitoring	Less-than-Significant Impact
Utilities and Service systems			
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	Significant Impact	MM-UTIL-1: Minimize Utility and Service System Disruptions	Less-Than-Significant Impact
Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years	No Impact	Not Applicable	No Impact
Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	No Impact	Not Applicable	No Impact

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact UTIL-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	No Impact	Not Applicable	No Impact
Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	No Impact	Not Applicable	No Impact
Wildfire			
Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	Significant Impact	MM-HAZ-3: Road Closure Restrictions MM-HAZ-4: Rapid Demobilization Plan MM-HAZ-5: Evacuation Warning Procedures MM-HAZ-6: Traffic Management Plan	Less-than-Significant Impact
Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	Significant Impact	MM-HAZ-1: Vehicle and Equipment Access and Fueling MM-HAZ-7: Incorporate Fire Prevention Measures MM-HAZ-8: Incorporate Public Safety Measures MM-HAZ-9: Wildland Fire Area	Less-than-Significant Impact
Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	Significant Impact	MM-HAZ-1: Vehicle and Equipment Access and Fueling MM-HAZ-7: Incorporate Fire Prevention Measures MM-HAZ-8: Incorporate Public Safety Measures MM-HAZ-9: Wildland Fire Area	Less-than-Significant Impact
Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	Significant Impact	MM-HYD-1: Stormwater Management Plan MM-HYD-3: Flood Protection Plan MM-GEO-1: Minimize Geologic Hazards	Less-than-Significant Impact

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4. Other CEQA Considerations

4.1 Introduction

In addition to identifying the potential for physical effects of the Proposed Project and measures to mitigate any identified significant effects (Chapter 3, Environmental Impact Analysis), the CEQA Guidelines also require evaluation of the following topics:

- Significant irreversible environmental changes
- (CEQA Guidelines Section 15126.2 [d])
- Significant and unavoidable impacts (CEQA Guidelines Section 15126.2[c])
- Growth-inducing impacts (CEQA Guidelines Section 15126[e])
- Cumulative impacts (CEQA Guidelines Section 15130)

4.2 Irreversible Impacts

CEQA Guidelines Section 15126.2(d) requires that an EIR must identify irreversible impacts (also referred to as irreversible environmental changes) that may be caused by a project if it is implemented. Irretrievable commitments of resources should be evaluated to justify current consumption. For the purpose of this analysis, the irreversible impacts described below could occur as a result of the Proposed Project.

Other than at the transition between Skyway and Southgate Avenue before crossing SR 99 (Chapter 2 Project Description), the Proposed Project would include activities primarily within the existing ROW and at the Chico WPCP. Constructing the Core Collection System, the Export Pipeline System, and the Extended Collection System, would involve using vehicles and heavy equipment that would use nonrenewable fossil fuels to transport construction materials, equipment, and construction workers to and from the work sites. Materials to be used for constructing the Core Collection System, the Export Pipeline System, and the Extended Collection System would include PVC pipe, metals, concrete, asphalt, backfill material and associated materials for installation such as slurry, pipe fittings, wire, and conduit.

Overall, construction activity included as part of the Proposed Project would not consume a substantial quantity of resources that would deplete current resources and prohibit their future use, such as fossil fuel energy, because work sites would be limited in size and duration (HDR 2022). During construction, the Town's compliance with applicable BCAQMD regulations would reduce potential air quality effects. As discussed in Section 3.3 Air Quality, the Proposed Project will also implement best practices as required by BCAQMD Rules 200 and 205 to reduce fugitive dust emissions. Finally, the Proposed Project will implement BCAQMD's best practice measures to minimize diesel particulate matter from construction equipment. As a result, impacts on air quality were found not to be significant.

Energy usage during construction and operation and maintenance would not result in irreversible environmental changes. As discussed in Section 3.6 Energy, a multitude of state regulations are aimed at improving vehicle fuel efficiency, including Pavley Standards (AB 1493), the Advanced Clean Cars

Program, and the In-Use Off-Road Diesel-Fueled Fleets Regulation. Required conformance of vehicles and equipment to the regulations would minimize wasteful, inefficient, or unnecessary consumption of transportation fuel during construction.

The Proposed Project would consist of a system of gravity sewers, pump stations, force mains and associated structures and conduits. Gravity sewers do not use energy; the wastewater flows by gravity through the pipes based on the movement of the effluent from higher to lower elevations. The pump stations associated with the Core Collection System would consume approximately 601,000 kWh/year of electrical energy. Refer to Appendix I, Pump Station Energy Consumption Calculation, for the detailed energy demand calculations. This increase in electricity consumption represents a small fraction of the total energy demand in Butte County. As it relates to energy efficiency and sustainability, the Chico WPCP operates a 1.1-megawatt, solar photovoltaic facility providing electric power to the WPCP, which reduces the plant's use of utility power by approximately 35 percent. Further, a 335-kilowatt co-generator is on site that uses methane produced by the plant processes as a fuel source to produce electricity, which is used at the WPCP (City of Chico 2021a). Therefore, energy efficiency and sustainability measures have already been built into the design of the Chico WPCP. While the Proposed Project would increase the amount of energy needed to treat wastewater at the existing Chico WPCP, it would be well within current capacity at the time of connection and would not result in an inefficient use of energy. As a result, impacts on energy were found to be not significant.

A review of the USGS Mineral Resources Online Spatial Data indicates that past or present mineral resources occur within the Core and Extended Collection Systems areas (USGS 2021). Past or present mineral resources may occur along the Skyway segment of the Export Pipeline System in unincorporated Butte County (USGS 2021). However, the Skyway segment of the Export Pipeline System would be constructed underground within the Butte County ROW. None of the parcels immediately adjacent to the Export Pipeline System are designated for mineral resource conservation or mining and mining is not allowed in any of those zones. As a result, the potential for mineral resources to be disturbed is low.

The proposed sewer collection system would replace private septic systems within the Town. Currently, the lack of municipal sewer infrastructure poses an environmental threat to groundwater and surface water quality, both precious regional resources. As discussed in Section 3.10, Hydrology and Water Quality, implementing a municipal wastewater collection system and reducing the reliance on private septic tanks and leach fields as a result of the Proposed Project could improve groundwater and surface water quality in the study area by removing the potential for contact with sewage, and removing the discharge of sewage into the ground within the sewer service area. Additionally, as discussed in Section 3.18, Utilities and Service Systems, the Proposed Project would connect to an existing and established treatment system at the Chico WPCP that has adequate capacity to serve the Proposed Project's projected wastewater demand.

In summary, vehicle and equipment operation associated with the Proposed Project activities would require using nonrenewable fossil fuels. As discussed in Section 2.5.1.3 Equipment, Crews, and Materials (Core Collection System) and Section 2.5.2.3 Equipment, Crews, and Materials (Export Pipeline System), construction would require use of materials such as PVC pipe, metals, concrete, asphalt, and backfill material, which are also nonrenewable resources. These materials and the

necessary volume that would be used for the Proposed Project would be in line with standard pipeline construction and would not noticeably reduce the availability of these resources for other project uses.

Under CEQA Guidelines Section 15127, an analysis of irreversible changes is required for adoption by a LAFCo of a resolution making determinations. However, the information required by Section 15126.2(c) concerning irreversible changes, need be included only in EIRs prepared in connection with any of the following activities:

a. The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency;
b. The adoption by a local agency formation commission of a resolution making determinations; or
c. A project which will be subject to the requirement for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 USC 4321 – 4347.

4.3 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(c) requires an EIR to discuss significant effects, including those that can be mitigated but not reduced to a level of insignificance. The CEQA Guidelines state that:

> *(w)here there are impacts that cannot be alleviated without imposing an alternative design, their implications, and reasons why the project is being proposed, notwithstanding their effect, should be described.*

Table 4.3-1 summarizes those resource topic areas found to have the potential for significant impacts resulting from the Proposed Project, as analyzed in Chapter 3. Significant impacts would occur for the following resource topic areas: biological resources; cultural resources; geology, soils and paleontological resources; hazards and hazardous materials; hydrology and water quality; noise and groundborne vibration; public services; transportation; tribal cultural resources; utilities and service systems; and wildfire. However, as discussed in detail in the Chapter 3 resource sections and summarized below, all impacts could be mitigated to a less than significant level, and no significant and unavoidable impacts are anticipated.

Table 4.3-1. Significant Impacts Mitigated from the Proposed Project

Resource Topic Area	Significant Impacts from the Proposed Project	Effectively Mitigated to Less than Significant	Significant and Unavoidable Impacts
Biological Resources			
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS	✓	✓	—
BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	✓	✓	—

Resource Topic Area	Significant Impacts from the Proposed Project	Effectively Mitigated to Less than Significant	Significant and Unavoidable Impacts
BIO-3: Have a substantial adverse effect on state or federally protected wetlands	✓	✓	—
Cultural Resources			
CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	✓	✓	—
Geology, Soils, and Paleontological Resources			
GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking	✓	✓	—
GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	✓	✓	—
GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	✓	✓	—
GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	✓	✓	—
GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	✓	✓	—
GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	✓	✓	—
Hazards and Hazardous Materials			
HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	✓	✓	—
HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	✓	✓	—
HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	✓	✓	—
HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	✓	✓	—

Resource Topic Area	Significant Impacts from the Proposed Project	Effectively Mitigated to Less than Significant	Significant and Unavoidable Impacts
Hydrology and Water Quality			
HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	✓	✓	—
HYD-3(a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on or off-site	✓	✓	—
HYD-3(b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	✓	✓	—
HYD-3(c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	✓	✓	—
HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation	✓	✓	—
Noise and Groundborne Vibration			
NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	✓	✓	—
NSE-2: Generate excessive groundborne vibration or groundborne noise levels	✓	✓	—
Public Services			
PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	✓	✓	—

Resource Topic Area	Significant Impacts from the Proposed Project	Effectively Mitigated to Less than Significant	Significant and Unavoidable Impacts
PS-1(b): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection	✓	✓	—
PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	✓	✓	—
PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	✓	✓	—
Transportation			
TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	✓	✓	—
TRA-4: Result in inadequate emergency access	✓	✓	—
Tribal Cultural Resources			
TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC	✓	✓	—

Resource Topic Area	Significant Impacts from the Proposed Project	Effectively Mitigated to Less than Significant	Significant and Unavoidable Impacts
Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe			
Utilities and Service Systems			
UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	✓	✓	—
Wildfire			
FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	✓	✓	—
FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	✓	✓	—
FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	✓	✓	—
FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	✓	✓	—

4.4 Growth Inducing Impacts

CEQA Guidelines Section 15126(e) requires an EIR to include an analysis of the growth-inducing impacts of the project. CEQA Guidelines Section 15126.2(d) states that the analysis of growth-inducing impacts should discuss the ways in which the program or project could foster economic or population growth (such as by removing obstacles to growth) or the construction of additional housing, either directly or indirectly, in the surrounding environment.

The primary need for the Proposed Project is public health and safety. However, the secondary need is to accommodate the return of residents and commercial businesses to Paradise. A detailed discussion of the Need and Objectives of the Proposed Project is in Section 2.3 of this PEIR.

In general, a project can be considered growth inducing if it meets one or more of the following criteria:

- Fosters population growth directly or indirectly
- Fosters economic expansion directly or indirectly

- Establishes precedent-setting actions (such as innovation or expansion beyond the existing limits of the study area)
- Results in the development or encroachment in an isolated or adjacent area of open space
- Removes an obstacle to growth (such as a major expansion of a wastewater treatment plant).

Examples of projects that are growth inducing might be the expansion of urban services into a previously unserved or underserved area, the creation or extension of transportation links, or the removal of major obstacles to growth. It is important to note that these direct forms of growth have secondary effects of expanding the size of local markets and attracting additional economic activity to the area. Typically, the growth-inducing potential of a project would be considered significant if it stimulates population growth or a population concentration above what is assumed in local and regional land use plans, or in projections made by regional planning authorities such as the BCAG. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those anticipated by local or regional plans and policies. It should not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines Section 15126.2(e).

The Proposed Project is a part of the Town's recovery efforts from the 2018 Camp Fire and would address the need for a municipal wastewater collection, treatment and disposal solution, to improve and replace the private, failing or damaged septic systems (Section 2.3 Project Need and Objectives). As a result, the Proposed Project is intended to foster population regrowth, support construction of multi-family and affordable housing, and generate economic recovery within the Town (Section 2.3 Project Need and Objectives). As discussed in Section 3.13, Population and Housing, a substantial decrease of approximately 83 percent of the population in Paradise occurred as a result of the 2018 Camp Fire. Any inducement of the population growth that might occur as a result of the Proposed Project in the shorter term would be a return and/or *regrowth* and *repopulation* toward pre-fire levels. Any growth beyond pre-fire levels that could occur in the longer term would be consistent with the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a). This growth would be limited by (1) the current boundaries of the Town, (2) the capacity of the Proposed Project infrastructure, and (3) the Chico WPCP operational (disposal permit allowance) and existing plant infrastructure (facilities limitations) capacity. In either case, implementation of the Proposed Project would not, in and of itself, cause the growth, but it would accommodate growth, eliminating an obstacle to planned growth within the Town. The Proposed Project would not provide new service to the City or the County outside of the Town boundaries, so would not induce growth to the City or other communities within the County outside of the Town. Some previous residents of the Town may choose to return when services and housing become available, which could slightly reduce the City population; however, estimating exact numbers would be speculative.

The *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) states: "the proposed sewer collection system and treatment will facilitate regrowth, replace failed septic systems, provide for affordable housing, and improve the local economy". In addition, the plan outlines a proposed SSA that will "serve approximately 1,400 parcels through the Skyway, Clark Road, and Pearson Road corridors, which represents most businesses in Paradise and provide for future development of more multi-family residences, which is currently limited because of septic system constraints (Town of Paradise 2022a). This proposed SSA is consistent in geography with the Core

Collection Area included in the Proposed Project. In addition, as discussed in Section 3.11.1.1 Town of Paradise General Plan (Land Use), the Proposed Project is also consistent with the broader goals and policies being included in the *Town of Paradise General Plan* updates.

The Housing Element includes implementation measures to guide Town staff, decision makers, and housing stakeholders by "translat(ing) goals and policies into actions". The following measures demonstrate alignment of the Proposed Project with the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a), and in some cases, how the Proposed Project is key to the Town meeting identified goals and policies:

- **HI-1:** *Reduce Infrastructure Constraints to Development* – Continue to reduce infrastructure constraints to new development, particularly those constraints associated with wastewater disposal. The General Plan authorizes an ongoing identification of infrastructure and service limitations including those related to sanitary waste disposal which inhibit housing development.
- **HI-5:** *Density Bonus and Other Opportunities for Increased Density* – Revise the density bonus ordinance (Chapter 17.44) to be consistent with State law, including AB 2345 and Government Code Sections 65915 and 65917 and identify incentives for affordable housing development. Perform the rezonings described in Chapter 4 (of the *2022-2030 Housing Element of the Town of Paradise General Plan*), for key parcels in the (sewer service area) and establish a Sewer Service Overlay Zone to allow increased densities up to 30 dwelling units/acre in the (sewer service area) to accommodate affordable housing.
- **HI-8:** *Small Lot Consolidation and Development* – Continue to encourage consolidation of small multi-family parcels as well as small, commercially designated parcels appropriate for residential use. This program can facilitate the development of affordable housing by creating lots large enough to accommodate denser multi-family residential projects. The planned sewer system is anticipated to also be an impetus for lot consolidation.

Often, when specific data relating to growth that might be induced are available, it is possible, based on historic averages or other data, to develop a reasonable forecast of the amount of new development that could be accommodated by the expanded capacity. For example, when the capacity of utility systems or other infrastructure is expanded into a new area or infrastructure is sized to serve a larger population. The return of the Town's population (that is, *regrowth*) to Paradise is driven by a disaster and, if it occurs, will occur only over an extended period of time. In their *Provisional Long-Term Regional Growth Forecasts 2018-2040* (BCAG 2019b), BCAG forecasted a Low, Medium, and High Scenario for total housing growth for Paradise that reflects -31 percent, -13 percent, or 6 percent growth, respectively, between pre-fire conditions in 2018 and 2040. In other words, in the low and medium forecasts, it is not anticipated that the Town will even recover to pre-fire conditions until after 2040. The assumptions for these forecasts did not include construction of the sewer system; estimating if and how much these forecasts could change with implementation of the Proposed Project would be speculative, at best. Further, in the *Post Camp Fire Regional Population and Transportation Study* (Fehr and Peers 2021) prepared for BCAG in 2021, key findings in the housing and employment forecast included that there would be a reduction in total county housing count for each forecast year as compared to findings in a previous study in 2020, partially because the DOF lowered their population projections for all of Butte County (Fehr & Peers 2021). Further, specific to the Town, the report states "In addition to the countywide reduction, Paradise is expected to have slower growth (as compared to

their 2020 study) in both near and long-term forecasts, with Chico's growth making up the difference" (Fehr and Peers 2021).

In *The Demography of Disasters* (Karacsonyi et al. 2021), a study and comparison of recent large-scale worldwide disasters, the authors find:

> …there is inevitably short- to medium-term population loss as many people temporarily move away from danger and the loss of services, infrastructure and economic support. The return of this population has to be phased over a long period as the city is rebuilt, but a portion of this population may never return, or a different demographic or social group replaces some of those who have left. The challenge of recovery and adaptation is correctly identifying and anticipating this demographic change in order to adopt approaches that suit the altered settlement. Within this change are activities and strategies to build back better, and to enhance both resilience and sustainability" (King and Gurtner 2021).

The authors conclude that "rather than traditional planning premised on anticipated future growth and development, post-disaster recovery should be prepared to plan-to-scale or right sizing for greater resilience and sustainability (King and Gurtner 2021)." Implementation of the Proposed Project allows for this scalable regrowth over time, but forecasting the specific timing or level of population recovery over a 30-year horizon would be speculative and would not "constitute substantial evidence" at this time (CEQA Guidelines Section 15064 [f][5]).

For the most part, the Core Collection system would not induce growth because it replaces failed or failing septic systems in what was already a concentrated area for businesses and housing (Section 2.5.1 Core Collection System). According to the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a), key parcels in the sewer service area will require rezoning, and a Sewer Service Overlay Zone was established to allow increased densities up to 30 dwelling units per acre in the sewer service area (Town of Paradise 2022a). The main purpose of that rezoning is to accommodate affordable multifamily development that was not possible with only septic. The Proposed Project is consistent with the goals and policies in the Housing Element as it would serve most businesses in the Town and provide for future development of more multi-family residences, which is currently limited because of septic system constraints. As discussed in Section 2.5.1 Core Collection System, the estimated maximum wastewater conveyance and treatment need for the sewer service area is 464,000 gallons per day (0.464 mgd). This sewer estimate accounts for current and future estimated growth consistent with the current *Town of Paradise General Plan* and updated *Town of Paradise 2022-2030 Housing Element* and would be realized progressively over the projected 30-year planning horizon (Town of Paradise and Quad Consultants 2008, Town of Paradise 2022a). This flow limit will also be contained within the inter-municipal agreement being developed between the Town and the City.

The Expanded Collection System is for a broader geographic area and would allow development to occur in additional areas and forms within the Town boundaries, such as multifamily rather than single family housing. However, this population growth is still limited, as it would be contained within the existing Town boundaries and would be controlled by the permits issued by the Town. Parcels in the

Extended Collection System might want to connect in the future (either before or after the 30-year planning horizon), prior to (or in lieu of) complete build-out of the Core Collection System. If so, those parcels in the Extended Collection System could be allowed to connect, as long as the total flow from the Core Collection System and Extended Collection System remained at or below 0.464 mgd. Further, as stated in Chapter 2 Project Description, the proposed sewer system would not extend to other cities or counties or benefit populations outside of the Town.

Paradise lost 83 percent of its population. Thus, return of that population would not place a burden on existing community systems which remained in place after the Camp Fire. Assessments of the effects of the Proposed Project on these community resources are included in Chapter 3 (Section 3.6 Energy, 3.14 Public Services, 3.15 Recreation, and 3.18 Utilities and Service Systems) and no growth inducing effects on these Town's community services and resources over pre-fire conditions, at which level they were designed to support, were identified. A population increase above the recovery level is, at best, speculative, but as noted previously, would be expected to occur gradually over time.

As discussed in Section 3.13 Population and Housing, all construction jobs associated with the Proposed Project would be temporary and many of those jobs could be filled by the current workforce within the region. However, some workers could become permanent residents as part of the Town's short-term repopulation growth. During operation and maintenance, as discussed in Chapter 2 Project Description, about 5–10 permanent employees would be required to serve the Proposed Project. The Town may hire additional staff to handle these operation and maintenance activities. The increase in permanent jobs from operation and maintenance, however, would not be at a level that would cause substantial or unplanned growth within the area or necessitate the construction of additional housing or business services specifically for the minimal number of staff that would be employed long term for operation and maintenance at the facilities.

There would be no precedent-setting action that might trigger expansion of the Town as the proposed sewer system would not change Town boundaries and does not allow for service beyond those boundaries. As such, there would be no resulting development or encroachment to isolated or adjacent areas of open space. Further, the Proposed Project would not trigger unplanned expansion of the existing Chico WPCP. The proposed sewer service is within the current capacity, facility function, and purpose of the Chico WPCP. Section 2.4.2 Chico Water Pollution Control Plant provides a brief description of the existing Chico WPCP facilities and the City's planned expansion of the facility, which will be evaluated in a separate CEQA process and is not a part of this PEIR. Costs associated with meeting future regulatory requirements and system upgrades can be spread over a larger population and will ultimately reduce the per capita costs of wastewater treatment and disposal. Regionalization also increases the technical and economic feasibility of a higher level of wastewater treatment, allowing the treated water to be a resource for the communities instead of merely being a waste. In support of this goal, the City of Chico Municipal Code (CMC) Section 15.40.285 sets forth procedures and guidance for regional connections to the Chico WPCP.

Finally, the CEQA Guidelines state that growth inducement could occur if an obstacle to growth in the surrounding environment is removed, such as a major expansion of a wastewater treatment plant (CEQA Guidelines Section 15126.2(e)). The Proposed Project is intended to foster economic growth and population growth within the Town through an improved wastewater system. However, (1) much of

this growth would be in the context of *regrowth* and *repopulation* since the 2018 Camp Fire, (2) all growth would be consistent with the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a), and (3) all growth would be contained within existing Town boundaries. Therefore, given the parameters imposed on the Proposed Project so as to remain consistent with the *Town of Paradise General Plan* and updated *Town of Paradise 2022-2030 Housing Element* (Town of Paradise and Quad Consultants 2008, Town of Paradise 2022a), compliant with the inter-municipal agreement being created between the City and Town, and remain within Town boundaries, as assumed in this PEIR, the Proposed Project would not be considered growth inducing.

4.5 Cumulative Impacts

CEQA require that EIRs include a discussion of cumulative impacts, specifically stating:

> *"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*
>
> *(a) The individual effects may be changes resulting from a single project or a number of separate projects.*
>
> *(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines Section 15355).*

According to the CEQA Guidelines, “cumulatively considerable” means that “the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” (CEQA Guidelines Section 15065(a)(3))

CEQA Guidelines also provide guidelines for assessing the potential for proposed projects to contribute to cumulative impacts when the project would include implementing measures (including mitigation) to reduce effects as defined in previously approved plans or regulations:

> *A lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including, but not limited to, water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, plans or regulations for the reduction of greenhouse gas emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (CEQA Guidelines Section 15064 (h)(3)).*

Further, the CEQA Guidelines state that “the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable” (CEQA Guidelines Section 15064 (h)(4)).

4.5.1 Methods Used in the Cumulative Analysis

Two methods can be used for cumulative impact analysis (CEQA Guidelines Section 15130). In the list approach, the lead agency identifies related projects or activities that could add to the proposed project’s environmental impacts. In the projection, or plan, approach, the lead agency relies on projections in an adopted planning document or prior environmental document. This PEIR uses the list approach.

The following terminology is used in this PEIR to describe the various levels and types of environmental impacts associated with the Proposed Project:

- **Cumulative impact**: As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.
- **Significance threshold**: Consistent with thresholds used to evaluate the impacts resulting from the Proposed Project in Chapter 3, this is the criterion used in the EIR to determine whether the magnitude of a cumulative environmental impact would be significant.
- **Significant cumulative impact**: A cumulative impact is considered significant if it would result in a substantial adverse change in the physical conditions of the environment, as determined by whether it exceeds the applicable significance threshold.
- **Cumulatively considerable:** Pursuant to CEQA Guidelines Section 15065(a)(3), “cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. Where a lead agency is examining a project with an incremental effect that is not “cumulatively considerable,” the lead agency need not consider that effect significant (CEQA Guidelines Section 15130).

Table 4.5-1 lists and describes the reasonably foreseeable probable future projects and activities considered for the cumulative impact analysis. This list of foreseeable probable future projects and activities was developed based on a review of the Town, City, Butte County, and BCAG websites and input from with Susan Hartman, the Town Planning Director. Construction schedules are estimated for the purpose of informing a cumulative analysis and will be refined as project planning proceeds.

The cumulative condition and activities, including a resource-specific analysis of the potential cumulative effects when the Proposed Project is added to those cumulative activities. s discussed in Section 4.5.2, Cumulative Impact Analysis.

Table 4.5-1. Cumulative Activities

Project Name	Description	Activity Location	Sponsor	Timeframe
Chico WPCP Condition, Regulatory, and Capacity-Driven Upgrades	In the future, the City will implement a series of projects at the Chico WPCP to (a) accommodate expansion needs due to development within Chico and the potential addition of the Town's wastewater flow, (b) address the deteriorated condition of some existing facilities, and (c) meet more stringent regulatory requirements as defined by the renewed NPDES discharge permit. Treatment of the Town's wastewater is being included in the planning of the Chico WPCP projects. The first projects contemplated are addition of a secondary clarifier; emergency effluent bypass, storage and return improvements; and various near-term condition-driven improvements involving replacement of equipment.	Chico	City of Chico	2022 to 2057
Paradise Irrigation District Project Water Intertie	Assemblyman James Gallagher and Jim Nielsen introduced Assembly Bill 36, which would fast-track the Paradise Sewer Project and the Paradise Irrigation District Project Water Intertie. The water intertie would allow the sale of unused surface water in PID reservoirs, to help make up for losing most of its customers after the fire. It would involve transporting water to Chico. In 2020, Gallagher made this proposal linked with PID and the California Water Service Chico Division. The bill is sponsored by the Town, PID, and the State Building and Construction Trades Council of California. At this time, it is uncertain if the project is viable or moving forward by Paradise Irrigation District.	Paradise and Chico	PID	March 2020 to unknown
Tuscan Ridge Project	The project is to build an on-site sewage wastewater treatment and disposal facility to serve as a temporary workers camp for those who were involved in the recovery and rebuilding efforts of facilities and properties damaged during the Camp Fire. The project Notice of Exemption was received and posted in 2019. Its exempt status was declared emergency. At this time, the facility is being used for various equipment staging intermittently.	3100 Skyway in Paradise	Regional Board	2019 to current
City of Chico Nitrate Plan	**Nitrate Area 3N, Phase 5, Unit 3, Northwood Woodcourt**: Sanitary sewer installation. The project included the placement of approximately 5,200 linear feet of sanitary sewer main pipe, installation of sanitary sewer laterals, and trench replacement. (Work completed 12/9/2020; Notice of Completion 12/23/2021) **Nitrate Area 3S, Phase 6, Unit 6, Nord:** The project included installation of 1,650 linear feet of 10-inch sanitary sewer pipe, 1,200 linear feet of 8-inch sanitary sewer pipe, 800 linear feet of 6- inch sanitary sewer pipe, and 950 linear feet of 4-inch sanitary sewer lateral. (Project accepted 1/8/2021; Notice of Completion 1/19/2021)	Chico	City of Chico	2020 to current
Paradise Transit Center	The intent of the project is to provide a location for transit users to centrally access the B-Line in Paradise and also	Paradise	BCAG	2018 to 2023

Project Name	Description	Activity Location	Sponsor	Timeframe
	enhance the downtown multi modal atmosphere. The project has tentatively been allocated FTA funding and is anticipated to be allocated in 2022 for construction in 2023.			
Town of Paradise Recovery Projects, Road Repairs	**On-System Road Rehabilitation:** This project includes 32 miles of on-system roadway rehabilitation, consisting of asphalt concrete overlays and full depth roadway section replacement for areas with severe pavement damage. On-system roads are public roads that are a part of the federal-aid system, and do not include local roads or rural minor collectors. **Off-System Road Rehabilitation:** This project includes 47 miles of off-system roadway rehabilitation, consisting of asphalt concrete overlays and full depth roadway section replacement for areas with severe pavement damage. Off-system roads are public roads that are not part of the federal aid system, and include local roads and rural minor collectors.	Paradise	Town of Paradise	2022-2025
Town of Paradise Recovery Projects, Damage Repairs	**On-System Culvert Replacements:** This project includes replacement of damaged culverts, including restoration of the roadway section above the pipe at various locations, along on-system roads to improve safety and provide safe and effective management of storm runoff. **On-System Hardscape Replacement**: This project will remove and replace existing damaged concrete curb, gutter and sidewalk, lighting, planters, and amenities at 30 locations town-wide to improve safety and pedestrian accessibility along on-system roads. **On-System Sign Replacement**: This project will replace 123 damaged roadway signs at various locations along on-system roads. **Off-System Culvert Replacements:** This project includes replacement of damaged culverts, including restoration of the roadway section above the pipe at various locations, along off-system roads to improve safety and provide safe and effective management of storm runoff.	Paradise	Town of Paradise	2022
Town of Paradise Recovery Projects, Road Widening	**Upper Skyway Widening**: This project includes the widening of Skyway between Bille Road and Pentz Road (2.7 miles) and the addition of a 12-feet wide center turn lane, increased shoulder widths, and a multi-use pathway. This project is currently a high priority, however wholly unfunded and may not proceed. **Upper Clark Road Widening:** This project includes the widening of Clark Road between Wagstaff Road and Skway (1.5 miles) and the addition of a 12-feet wide center turn lane, increased shoulder widths, and a multi-use pathway. This project is currently a high priority, however wholly unfunded and may not proceed. **Roe Road Extension Phases 1&2:** This project includes	Paradise	Town of Paradise	2022-2027

Project Name	Description	Activity Location	Sponsor	Timeframe
	the construction of an extended Roe Road between Pentz Road and Clark Road, establishing a southerly east-west connection to South Libby Road, Sawmill Road and Edgewood Road. The roadway would include travel lanes and a multi-use pathway. This project is currently a high priority, however wholly unfunded and may not proceed. **Pentz Road Widening:** This project includes the widening of Pentz Road between Pearson Road and Skway (4.0 miles) and the addition of a 12-feet wide center turn lane, increased shoulder widths, and a multi-use pathway. This project is currently a high priority, however mostly unfunded and may not proceed. **Neal Road Widening:** This project includes the widening of Neal Road between Skyway and Town Limits at Wayland Road (2.5 miles) and the addition of a 12-feet wide center turn lane, increased shoulder widths, and a multi-use pathway. This project is currently a high priority, however wholly unfunded and may not proceed.			
Town of Paradise Recovery Projects, Resiliency Improvements	**Early Warning System**: This project includes the installation of an audible communication tower at 21 locations throughout the Town of Paradise to increase awareness of various hazards including information of evacuation zones and warnings. **Category 4 Tree Removal**: This project includes an optional program for property owners to have dead or dying trees burned by the Camp Fire removed at a reduced cost. These trees are located on private property and are a threat. Fuels Reduction Project: This project includes a multi-faceted program to remove fire fuels from the public right of way in the Town of Paradise. **Defensible Space Code Enforcement**: This project includes proactive code enforcement and compliance measures to reduce fuels located on private property in Paradise. **Ignition Resistant Home Hardening Program**: This project includes proactive retrofits on existing structures to improve structure resiliency in the event of a wildfire.	Paradise	Town of Paradise	2020-2024
Undergrounding of Utilities	**Electric Telecommunications**: This project, initiated by PG&E in 2019 includes the conversion of all traditionally aerial electric facilities underground. Telecommunication facilities are also being included in joint trenching work with this project. The overall project will reduce community risk.	Paradise	Utility Companies	Ongoing

Source: Carollo Engineers 2022, Watkins-Bennett 2021, RWQCB 2019, City of Chico 2021g, BCAG 2022, and Town of Paradise 2021b

4.5.2 Cumulative Impact Analysis

The resource-specific cumulative impact analysis is provided in this section. These analyses consider those potential effects of the cumulative activities introduced in Table 4.5-1 combined with those of the Proposed Project discussed in Chapter 3.

4.5.2.1 Agriculture and Forestry Resources

The geographic study area for the cumulative impact analysis for agriculture and forestry resources is Butte County. The Proposed Project and cumulative projects listed in Table 4.5-1 are located within Butte County, which is located in the vast, productive floodplain of Sacramento River.

Cumulative impact thresholds for agriculture and forestry resources are the same as the impact thresholds presented in Section 3.2 Agriculture and Forestry Resources. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact AG-1:** Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use
- **Cumulative Impact AG-2:** Conflict with existing zoning for agricultural use, or a Williamson Act contract
- **Cumulative Impact AG-3:** Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by California Government Code Section 51104(g))
- **Cumulative Impact AG-4:** Result in the loss of forest land or conversion of forest land to non-forest use
- **Cumulative Impact AG-5:** Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use

Past and existing cumulative urban development within Butte County has contributed to substantial loss of productive farmland to non-agricultural use in the county over time. The DOC monitors conversion of farmland through its FMMP. According to DOC's *Butte County 2004-2018 Land Use Summary* table, approximately 4,844 acres of Prime Farmland within the county were converted to non-agricultural use or reclassified as another type of farmland during this period (DOC 2021c). In Butte County, from 2004 to 2018, Farmland of Statewide Importance increased by 74 acres and Unique Farmland decreased by 1,196 acres (DOC 2021c). Past and existing development within the county has resulted in a cumulatively significant impact on productive farmland, especially Prime Farmland, through conversion to urban and other uses.

As discussed in Section 3.2, the Proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use, resulting in no impact. Cumulative projects listed in Table 4.5-1 have the potential to result in the conversion of productive farmland to non-agricultural use, depending on their locations. Cumulative projects would be subject to the land use plans, policies, or regulations that would support necessary growth while minimizing conversion of productive agricultural land to non-agricultural use, where possible. Therefore, the

Proposed Project would not contribute to cumulative impacts on this criterion, and impacts would not be cumulatively considerable in combination with other cumulative projects.

The Proposed Project would not conflict with existing zoning for an agricultural use, or a Williamson Act contract, resulting in no impact. Cumulative projects listed in Table 4.5-1 could conflict with existing zoning for agricultural use or Williamson Act contract, depending on their locations. Cumulative projects would be subject to zoning regulations, land use plans, policies, or regulations, that would otherwise protect and prevent conflict with land zoned for agricultural use and Williamson Act contract parcels. Therefore, the Proposed Project would not contribute to cumulative impacts on this criterion, and impacts would not be cumulatively considerable in combination with other cumulative projects.

The Proposed Project would not conflict with zoning for forest land, timberland, or timberland zoned Timberland Production, resulting in no impact. Additionally, the Proposed Project would not convert forestland to non-forest use, resulting in no impact. None of the cumulative projects listed in Table 4.5-1 under consideration are located within or adjacent to forest land or timberland. Further, the cumulative projects would be subject to compliance with zoning regulations, land use plans, policies, or regulations, that would otherwise protect forest and timber resources and prevent their conversion to non-forest use. Therefore, the Proposed Project would not contribute to cumulative impacts, and impacts would not be cumulatively considerable in combination with other cumulative projects.

As discussed under Impact AG-5 in Section 3.2, the Proposed Project would not involve changes in the existing environment that could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use, resulting in a less-than-significant impact. None of the cumulative projects under consideration are located within or adjacent to forest land or timberland. Cumulative projects listed in Table 4.5-1 have the potential to result in changes in the existing environment resulting in the conversion of farmland to non-agricultural use. However, cumulative projects, including the Proposed Project, would be subject to compliance with zoning regulations, land use plans, policies, or regulations, that would otherwise protect agricultural lands and prevent their conversion to non-agricultural use. Therefore, the Proposed Project's impacts from changes in the existing environment, in combination with other cumulative projects, would not be cumulatively considerable. Table 4.5-2 provides a summary of cumulative impacts on agriculture and forestry resources.

Table 4.5-2. Summary of Proposed Project Impact Contribution to Cumulative Agriculture and Forestry Resources Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use	NI	NCC	N/A	NCC
Cumulative Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract	NI	NCC	N/A	NCC

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by California Government Code Section 51104(g))	NI	NCC	N/A	NCC
Cumulative Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use	NI	NCC	N/A	NCC
Cumulative Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use	LTS	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.2 Air Quality

The geographic study area for the cumulative impact analysis for air quality encompasses the entire Butte County. This is the area for which the BCAQMD has prepared plans for reducing specific types of air emissions and otherwise manages air quality to meet federal and state air quality standards. With regards to regional criteria air pollutants, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to cumulatively significant adverse air quality impacts.

Cumulative impact thresholds for air quality are the same as the thresholds presented in Section 3.3 Air Quality. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact AIR-1:** Conflict with or obstruct implementation of an applicable air quality plan
- **Cumulative Impact AIR-2:** Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard
- **Cumulative Impact AIR-3:** Expose sensitive receptors to substantial pollutant concentrations
- **Cumulative Impact AIR-4:** Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people

Conflict with Air Quality Plan

All construction jobs associated with cumulative projects would be temporary and would be expected to be filled by the current workforce within the County. Construction jobs associated with the Proposed Project will likely be filled by a mix of local and non-local workers; however, any temporary or permanent growth resulting from these positions would fall within the re-growth of the Town. Construction of cumulative projects, including the Proposed Project, would not result in employment

growth within the County beyond growth projections presented in the 2018 Air Quality Attainment Plan and the *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008).

As discussed under Impact AIR-1 in Section 3.3, the Proposed Project foster population growth in response to the 2018 Camp Fire recovery efforts. Cumulative projects, such as the City of Chico Nitrate Plan, Chico WPCP Upgrades, Paradise Irrigation District Project Water Intertie, Paradise Transit Center, and Town of Paradise Recovery Projects, could also foster population growth in the study area. However, any population growth as a result of cumulative projects, including the Proposed Project, would be contained within the Town and the City, which are under the jurisdiction of the BCAQMD. As discussed in Section 3.3, the minimal increase in employment during operation and maintenance of the Proposed Project would be consistent with the growth projections in the 2018 Air Quality Attainment Plan. Other cumulative projects would likely result in a similar increase in employment during operation and maintenance, which would be consistent with the growth projections in the 2018 Air Quality Attainment Plan. Therefore, the Proposed Project would not contribute to cumulative impacts from criteria air pollutants, and in combination with the cumulative projects, would not be cumulatively considerable.

Criteria Air Pollutant Emissions

The Sacramento Valley Air Basin in Butte County is currently in nonattainment for O_3; existing cumulative development has created a significant cumulative impact with regards to O_3 emissions. Potential growth and development within the cumulative study area could contribute to cumulative air quality impacts by contributing pollutants during construction and operation and maintenance within the cumulative study area.

Many of the cumulative projects include criteria pollutant emissions-generating activities during construction and operation and maintenance. Construction-related criteria air emissions would be generated from use of construction equipment, haul trucks, and construction labor commute vehicles. Operational criteria air emissions would vary depending on the project but may include emissions from mobile, energy, area, water, and solid waste sources. Cumulative projects, such as the Paradise Irrigation District Project Water Intertie, Tuscan Ridge Project, Chico WPCP Upgrades, Paradise Transit Center, and Town of Paradise Recovery Projects, would generate criteria air pollutant emissions during construction and/or operations and maintenance. In general, these projects, combined with the Proposed Project, would affect air quality in the cumulative study area during construction and/or operation and maintenance.

In developing thresholds of significance for criteria air pollutants, BCAQMD considered the emissions levels for which a project's individual emissions would be cumulatively considerable. Projects that do not exceed the BCAQMD's significance thresholds may be assumed to not result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment (BCAQMD 2014).

As discussed under AIR-2 in Section 3.3, during construction, the Proposed Project would generate criteria air pollutant emissions that do not exceed BCAQMD thresholds. Criteria air pollutant emissions from operation and maintenance activities of the Proposed Project would be minimal and immeasurable due to the infrequency of these activities. Cumulative projects listed in Table 4.5-1 have the potential to

generate criteria air pollutant emissions during construction and/or operation and maintenance. Cumulative projects, including the Proposed Project, would be subject to BCAQMD rules and regulations that would reduce criteria air pollutant emissions during construction and operation and maintenance. Therefore, the Proposed Project would not contribute to cumulative impacts from criteria air pollutants, and in combination with the cumulative projects, would not be cumulatively considerable.

Sensitive Receptors

The Proposed Project has the potential to generate TAC emissions from the use of diesel equipment during construction that could affect existing sensitive receptors. However, construction activities are temporary and short-term, and therefore, would not expose sensitive receptors to substantial pollutant concentrations. TAC emissions from operation and maintenance activities of the Proposed Project would be minimal and immeasurable due to the infrequency of these activities. Cumulative projects listed in Table 4.5-1 have the potential to generate TAC emissions during construction and/or operation and maintenance. Cumulative projects, including the Proposed Project, would be subject to BCAQMD rules and regulations that would reduce TAC emissions during construction and operation and maintenance. Based on these factors, the Proposed Project would not contribute to cumulative impacts on sensitive receptors, and in combination with the cumulative projects, would not be cumulatively considerable.

Odors

Construction of cumulative projects, including the Proposed Project, could result in emissions of odors in the form of diesel exhaust from construction equipment and vehicles. However, odors during construction would be short-term, limited in extent at any given time, and distributed throughout the area, and therefore, would not affect a substantial number of individuals. Odor emissions from operation and maintenance activities of the Proposed Project would be minimal and immeasurable due to the infrequency of these activities. The Proposed Project would include periodic inspection of odor control cannisters during routine operations and maintenance. Other cumulative projects would likely require similar odor control measures during operation and maintenance. Based on these factors, the Proposed Project would not contribute to cumulative impacts related to odors, and in combination with the cumulative projects, would not be cumulatively considerable. Table 4.5-3 provides a summary of cumulative impacts on air quality.

Table 4.5-3. Summary of Proposed Project Impact Contribution to Cumulative Air Quality Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan	LTS	NCC	N/A	NCC
Cumulative Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard	LTS	NCC	N/A	NCC
Cumulative Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations	LTS	NCC	N/A	NCC
Cumulative Impact AIR-4: Result in other	LTS	NCC	N/A	NCC

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
emissions, such as those leading to odors, adversely affecting a substantial number of people				

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.3 Biological Resources

The geographic study area for the cumulative impact analysis for biological resources is defined by the Proposed Project's construction limits and includes the sewer service areas in and between Paradise and Chico.

Cumulative impact thresholds for biological resources are the same as the thresholds presented in Section 3.4 Biological Resources. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact BIO-1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations, or by the CDFW or USFWS
- **Cumulative Impact BIO-2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- **Cumulative Impact BIO-3:** Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means
- **Cumulative Impact BIO-4:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- **Cumulative Impact BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- **Cumulative Impact BIO-6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

In addition to the Proposed Project, the Paradise Irrigation District Project Water Intertie Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects could affect biological resources. Ground disturbance and vegetation clearing activities associated with each of the aforementioned projects, and the Proposed Project, would result in potentially significant cumulative impacts on biological resources, including special-status species, sensitive natural communities, and state or federally protected wetlands. However, implementing the mitigation measures listed below (and described in greater detail in Section 3.4) would reduce the Proposed Project's potential contribution to cumulative impacts to a less than significant level by minimizing direct or indirect impacts on these resources, requiring monitoring during construction to clarify those avoidance elements, and installing a

restoration protocol to bring the project footprint back to pre-construction conditions following construction:

- MM-BIO-1: Minimize Disturbance Footprint
- MM-BIO-2: Special-status Plant Surveys
- MM-BIO-3: Special-status Plant Avoidance
- MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training
- MM-BIO-5: Restoration of Temporarily Disturbed Areas
- MM-BIO-6: No Net Loss of Aquatic Resources
- MM-BIO-7: Sensitive Community Fencing
- MM-BIO-8: Dry Work Areas
- MM-BIO-9: Mapping of Elderberry Shrubs and Section 7 Consultation
- MM-BIO-10: No Net Loss of Elderberry Shrubs
- MM-BIO-11: Elderberry Transplanting
- MM-BIO-12: Avoidance Area
- MM-BIO-13: Chemical Use
- MM-BIO-14: Mowing
- MM-BIO-15: Frac-Out Plan
- MM-BIO-16: Western Pond Turtle Visual Encounter Surveys
- MM-BIO-17: Foothill Yellow-legged Frog Surveys
- MM-BIO-18: California Red-legged Frog Surveys
- MM-BIO-19: Conduct Construction Activities during the Active Period for Giant Garter Snakes
- MM-BIO-20: Minimize Potential Effects on Giant Garter Snake Habitat
- MM-BIO-21: MBTA and FGC-Protected Bird and Raptor Surveys
- MM-BIO-22: Protocol Swainson's Hawk Surveys
- MM-BIO-23: Nest Avoidance
- MM-BIO-24: Bat Surveys
- MM-BIO-25: American Badger Detection Surveys
- MM-BIO-26: State or Federally Protected Wetlands Mitigation

Impacts from the cumulative projects considered would be similar. However, they would require similar environmental review to identify and mitigate for specific impacts. Therefore, the Proposed Project's contribution to cumulative impacts on special-status species, sensitive natural communities, and state or federally protected wetlands would be less than significant with the implementation of aforementioned mitigation measures, and in combination with the cumulative projects would not be cumulatively considerable.

The Proposed Project would not interfere with movement of any fish or wildlife species, conflict with any local policies or ordinances protecting biological resources, or conflict with the provisions of an adopted habitat conservation plan. Impacts from the cumulative projects considered would be similar. However, they would require similar environmental review to identify and mitigate for specific impacts. Therefore, the Proposed Project would not contribute to cumulative impacts on these criteria, and impacts would

not be cumulatively considerable in combination with other cumulative projects. Table 4.5-4 provides a summary of cumulative impacts on biological resources.

Table 4.5-4. Summary of Proposed Project Impact Contribution to Cumulative Biological Resources Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations, or by the CDFW or USFWS	SI	CC	MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, MM-BIO-6, MM-BIO-7, MM-BIO-8, MM-BIO-9, MM BIO-10, MM-BIO-11, MM BIO-12, MM-BIO-13, MM-BIO-14, MM-BIO-15, MM-BIO-16, MM-BIO-17, MM-BIO-18, MM-BIO-19, MM-BIO-20, MM-BIO-21, MM-BIO-22, MM-BIO-23, MM-BIO-24, MM-BIO-25	NCC
Cumulative Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS	SI	CC	MM-BIO-1, MM-BIO-5, MM-BIO-6, MM-BIO-7, MM-BIO-8	NCC
Cumulative Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means	SI	CC	MM-BIO-1, MM-BIO-5, MM-BIO-6, MM-BIO-7, MM-BIO-8, MM-BIO-26	NCC
Cumulative Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife	NI	NCC	N/A	NCC

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
corridors, or impede the use of native wildlife nursery sites				
Cumulative Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	NI	NCC	N/A	NCC
Cumulative Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	NI	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.4 Cultural Resources

The geographic study area for the cumulative impact analysis for cultural resources includes central and northern Butte County and was selected because these areas include the relatively undeveloped portions of the ancestral Mechoopda and Konkow territory, and those rural areas outside of the historically developed urban population center in Chico.

According to CEQA, the importance of cultural resources comes from the research value and the information that they contain. Therefore, the issue that must be explored in a cumulative analysis is the cumulative loss of that information. For sites considered less than significant, the information is preserved through recordation and test excavations, if necessary. Significant sites that are placed in open space easements avoid impacts on cultural resources and also preserve the data. Significant sites that are not placed within open space easements preserve the information through recordation, test excavations and data recovery programs that would be presented in reports and filed with the county and the California Historical Resources Information System.

Cumulative impact thresholds for cultural resources are the same as the thresholds presented in Section 3.5 Cultural Resources. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact CUL-1:** Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5.
- **Cumulative Impact CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5.
- **Cumulative Impact CUL-3:** Disturb any human remains, including those interred outside of formal cemeteries.

The Paradise Irrigation District Project Water Intertie, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects have the potential to impact cultural resources. Ground disturbance associated with each of the aforementioned projects, and the Proposed Project, could result in potentially significant cumulative impacts on previously recorded and/or newly discovered

cultural resources if identified within the footprint of each project. However, implementing **MM-CUL1: Targeted Archaeological Monitoring** and **MM-CUL-2: Follow Inadvertent Discovery Procedures** would reduce the Proposed Project's contribution to cumulative impacts to a less than significant level because appropriate procedures would be followed to ensure that any unanticipated cultural resources discovered during Project-related ground-disturbing activities are appropriately handled and documented and that all appropriate parties are contacted and coordinated with in a timely manner, in order to either avoid or minimize impacts on the cultural resources. Implementing these mitigation measures would provide assurances that the Proposed Project would not have a significant contribution to impacts on cultural resources meeting one of the significance criteria of the CRHR. With similar considerations and mitigation on other cumulative projects, impacts on cultural resources from Proposed Project, in combination with other cumulative projects, would not be cumulatively considerable. Table 4.5-5 provides a summary of cumulative impacts on cultural resources.

Table 4.5-5. Summary of Proposed Project Impact Contribution to Cumulative Cultural Resources Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5.	LTS	NCC	N/A	NCC
Cumulative Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5.	SI	CC	MM CUL-1 MM CUL-2	NCC
Cumulative Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries.	LTS	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.5 Energy

The geographic study area for the cumulative impact analysis for energy resources is Butte County. The Proposed Project and cumulative projects listed in Table 4.5-1 are located within Butte County.

Cumulative impact thresholds for energy are to the same as the thresholds presented in Section 3.6 Energy. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact ENG-1**: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation and maintenance
- **Cumulative Impact ENG-2**: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Potential growth and development within the cumulative study area could contribute to energy impacts by increasing energy demand during construction and operation and maintenance within the cumulative study area.

Cumulative projects, such as the Paradise Irrigation District Project Water Intertie, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, would increase energy demand during construction and/or operational activities. Primary sources of energy use would be electricity, natural gas, and/or transportation fuel. In general, these projects, combined with the Proposed Project, would affect energy demand in the cumulative study area during construction and/or operation and maintenance. As presented in Section 3.6, the Proposed Project would result in a less than significant impact related to the wasteful, inefficient, or unnecessary consumption of energy during construction, operation, and maintenance. Cumulative projects, including the Proposed Project, would be subject to the plans, policies, or regulations that are aimed at improving vehicle fuel efficiency, improving energy efficiency, and enhancing energy conservation. Therefore, the Proposed Project's contribution would be less than significant, and in combination with the cumulative projects would not be cumulatively considerable.

The Proposed Project would not conflict with a state or local plan for renewable energy or energy efficiency, resulting in no impact. Construction of the Proposed Project in combination with other cumulative projects identified in Table 4.5-1 has the potential to result in cumulative energy impacts. A multitude of state regulations and legislative acts are aimed at improving vehicle fuel efficiency, improving energy efficiency, and enhancing energy conservation. These include, but are not limited to, AB 1493, Advanced Clean Cars Program, In-Use Off-Road Diesel-Fueled Fleets Regulation, SB 100, and 2017 Scoping Plan. The Proposed Project and other cumulative projects are required to comply with these adopted plans and regulations. Therefore, the Proposed Project would not contribute to cumulative impacts on this criterion, and impacts would not be cumulatively considerable in combination with other cumulative projects. Table 4.5-6 provides a summary of cumulative impacts on energy resources.

Table 4.5-6. Summary of Proposed Project Impact Contribution to Cumulative Energy Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation and maintenance	LTS	NCC	N/A	NCC
Cumulative Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	NI	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.6 Geology, Soils, and Paleontological Resources

The geographic study area for the cumulative impact analysis for geology, soils, and paleontological resources is defined as the areas within and directly adjacent to the Town of Paradise and areas of unincorporated Butte County and Chico where the proposed pipeline alignment runs. The cumulative study area for geology, soils, and paleontological resources is not cumulatively additive across projects because each project site has a different set of geological formations and considerations.

Cumulative impact thresholds for geology, soils, and paleontological resources are the same as the thresholds presented in Section 3.7 Geology, Soils, and Paleontological Resources. Cumulative impacts are considered significant if the result in the following:

- **Cumulative Impact GEO-1:** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42
    - Strong seismic ground shaking
    - Seismic-related ground failure, including liquefaction
    - Landslides
- **Cumulative Impact GEO-2:** Result in substantial soil erosion or the loss of topsoil
- **Cumulative Impact GEO-3:** Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
- **Cumulative Impact GEO-4:** Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property
- **Cumulative Impact GEO-5:** Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater
- **Cumulative Impact GEO-6:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Geology and Soils

As discussed in Section 3.7, the Proposed Project is not located within an Alquist-Priolo Earthquake Fault Zone. As discussed in Section 3.7, use of vibration-generating equipment during construction of the Proposed Project may exacerbate ground shaking, liquefaction, landslides. Additionally, use of vibration-generating equipment during construction of the Proposed Project may exacerbate risks associated with unstable soils and expansive soils. With the implementation of **MM-GEO-1: Geologic Hazards** impacts related to ground shaking, liquefaction, landslides, unstable soils, and expansive soils would be reduced to less than significant. The Proposed Project would expose and disturb soils during construction, making them vulnerable to erosion. The Proposed Project would be subject to the SWRCB's CGP requirements and applicable grading permit requirements, which would ensure impacts related to soil erosion are less than significant. Additionally, the Proposed Project would not locate septic tanks or alternative wastewater disposal systems on soils incapable of adequate support.

Cumulative projects identified in Table 4.5-1 could result in damage to life and property from geologic and soils-related hazards during construction activities such as grading, excavations, or other ground disturbing activities. While these would be project-specific geologic- and soils-related risks during

construction, it is not anticipated that these impacts would combine across projects to create additional public risk. The magnitude of geologic- and soils-related hazards for individual cumulative projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Cumulative projects would require individual environmental review with project-specific analysis to evaluate the geologic- and soils-related hazard risks. Specific geologic- and soils-related hazards associated with individual project sites would be limited to those sites without affecting other areas. Cumulative projects would be subject to the SWRCB's CGP requirements and applicable grading permit requirements, which would minimize soil erosion. Furthermore, cumulative projects would be subject to applicable regulations, building codes, and construction standards that are designed to reduce geology and soils-related hazards. Additionally, none of the cumulative projects include septic tanks or alternative wastewater disposal systems. Based on these factors, the Proposed Project's contribution to cumulative impacts on geology and soils would be less than significant with the implementation of mitigation measure **MM-GEO-1**, and in combination with the cumulative projects would not be cumulatively considerable.

Paleontological Resources

Potential growth and development within the cumulative study area could contribute to cumulative impacts on paleontological resources by disturbing, damaging, or destroying paleontological resources during construction and operation and maintenance within the cumulative study area. Once lost, such resources cannot be recovered.

Ground disturbance during construction of the Proposed Project could disturb unknown paleontological resources within the Modesto Formation. With the implementation of mitigation measure **MM-GEO-2: Inadvertent Discovery Protocol**, impacts on unknown paleontological resources would be less than significant. Future cumulative projects identified in Table 4.5-1 include ground-disturbing activities that could disturb, damage, or destroy paleontological resources. Cumulative projects would require individual environmental review with project-specific analysis to evaluate their impacts on unknown paleontological resources. Furthermore, cumulative projects would be subject to applicable regulations and construction standards that are designed to reduce potential impacts on paleontological resources from ground-disturbing activities. Therefore, the Proposed Project's contribution to cumulative impacts on paleontological resources would be less than significant with the implementation of mitigation measure **MM-GEO-2**, and in combination with the cumulative projects would not be cumulatively considerable. Table 4.5-7 provides a summary of cumulative impacts on geology, soils, and paleontological resources.

Table 4.5-7. Summary of Proposed Project Impact Contribution to Cumulative Geology, Soils, and Paleontological Resources Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map	SI	CC	MM-GEO-1	NCC

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42 b. Strong seismic ground shaking c. Seismic-related ground failure, including liquefaction d. Landslides				
Cumulative Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	LTS	NCC	N/A	NCC
Cumulative Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	SI	CC	MM-GEO-1	NCC
Cumulative Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	SI	CC	MM-GEO-1	NCC
Cumulative Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	NI	NCC	N/A	NCC
Cumulative Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	SI	CC	MM-GEO-2	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.7 Greenhouse Gas Emissions

The geographic study area for the cumulative impact analysis for GHG encompasses the state of California. Climate change is a global phenomenon resulting from the combined effects of GHG emissions produced worldwide. While the true study area affected by GHG emissions is global, for purposes of this EIR, the study area is considered to be the state of California. This study area is selected because GHG emissions generated by individual projects must comply with statewide GHG emissions reduction goals. The analysis is conducted within the framework of California's legislative and regulatory climate change framework, which is designed to reduce GHG emissions in the state over time to levels that substantially reduce California's contribution to global climate change.

Cumulative impact thresholds for GHG emissions are the same as the thresholds presented in Section 3.8 Greenhouse Gas Emissions. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact GHG-1:** Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- **Cumulative Impact GHG-2:** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions

GHGs are global pollutants, unlike criteria air pollutants (such as O_3 precursors), which are primarily pollutants of regional and local concern. Given their long atmospheric lifetimes, GHGs emitted by countless sources worldwide accumulate in the atmosphere. No single emitter of GHGs is large enough to trigger global climate change on its own. Rather, climate change is the result of the individual contributions of countless past, present, and future sources. Therefore, GHG impacts are inherently cumulative. Consequently, the analysis of climate change impacts from production of GHGs as included in Section 3.8 is inherently cumulative in nature.

Potential growth and development within the cumulative study area could contribute to climate change impacts by contributing GHG emissions during construction and operation and maintenance within the cumulative study area.

A number of planned cumulative projects include GHG emissions-generating activities during construction and operation and maintenance. Construction-related GHG emissions would be generated by operation of construction equipment, fueling activities, materials hauling, and daily trips by construction workers. Operational GHG emissions would vary depending on the project but may include emissions from mobile, energy, area, water, and solid waste sources. Cumulative projects, such as the Paradise Irrigation District Project Water Intertie, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, would generate GHG emissions during construction and/or operation and maintenance activities. In general, these projects, combined with the Proposed Project, would affect GHGs in the cumulative study area during construction and/or operation and maintenance. As presented in Section 3.8, the Project's construction GHG emissions would be below SMAQMD's threshold of significance for construction emissions. GHG emissions from operation and maintenance activities of the Proposed Project would be minimal and immeasurable due to the infrequency of these activities. Impacts from other cumulative projects would likely be similar. Therefore, the Proposed Project's contribution would be less than significant, and in combination with the cumulative projects would not be cumulatively considerable.

The Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, resulting in no impact. The Proposed Project, in combination with other cumulative projects identified in Table 4.5-1, has the potential to result in GHG impacts, which are inherently cumulative. Statewide efforts are underway to reduce GHG emissions, and the Proposed Project and other cumulative projects are required to comply with these adopted plans and goals. Therefore, the Proposed Project would not contribute to cumulative impacts on this criterion, and impacts would not be cumulatively considerable in combination with other cumulative projects. Table 4.5-8 provides a summary of cumulative impacts on GHG emissions.

Table 4.5-8. Summary of Proposed Project Impact Contribution to Cumulative Greenhouse Gas Emissions Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	LTS	NCC	N/A	NCC
Cumulative Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of GHG emissions	NI	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.8 Hazards and Hazardous Materials

The geographic study area for the cumulative impact analysis for hazards and hazardous materials is defined by the Proposed Project's construction limits. The cumulative study area for hazards and hazardous materials is not cumulatively additive across projects because each project site has a different set of hazardous materials and considerations.

Cumulative impact thresholds for hazards and hazardous material are the same as the thresholds presented in Section 3.9 Hazards and Hazardous Materials. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact HAZ-1:** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- **Cumulative Impact HAZ-2:** Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- **Cumulative Impact HAZ-3:** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- **Cumulative Impact HAZ-4:** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment
- **Cumulative Impact HAZ-5:** For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area
- **Cumulative Impact HAZ-6:** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- **Cumulative Impact HAZ-7:** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

Transport, Use, or Disposal

Cumulative projects listed in Table 4.5-1 would involve the transport, use, and disposal of hazardous materials during construction and/or operation and maintenance. As discussed in Section 3.9, during construction, the Proposed Project would involve the transport and use of common construction materials such as fuel and grease, which could pose a threat as hazardous materials. Cumulative projects, including the Proposed Project, would be subject to the requirements of the SWRCB's CGP and the NPDES permit for discharges of storm water associated with construction and land disturbance activities. The CGP requires preparation and implementation of a SWPPP, which would include measures to safely use and store hazardous materials. Cumulative projects, including the Proposed Project, would be subject to federal, state, and regional requirements for the transport, use, and disposal of hazardous materials, which would reduce impacts. The Proposed Project has the potential to result in fuel and grease spills associated with the use of trucks and equipment during operation and maintenance activities. With the implementation of mitigation measure **MM-HAZ-1: Vehicle Equipment Access and Fueling**, impacts related to routine transport, use, or disposal of hazardous materials would be less than significant. It is possible that other cumulative projects could increase fuel and grease drips over existing levels during operation and maintenance. Other cumulative projects may also implement similar mitigation measure to reduce impacts related to hazardous materials. Therefore, the Proposed Project's contribution to cumulative hazardous materials impacts would be less than significant with the implementation of mitigation measure **MM-HAZ-1**. When combined with other cumulative projects, these impacts would not be cumulatively considerable.

Accidental Release

Cumulative projects, including the Proposed Project, would be required to implement a SWPPP with best management practices to reduce the likelihood and severity of the release of construction-related pollutants like fuel and grease to a less-than-significant level. Any contaminated soils encountered by the project would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit, which would minimize impacts related to the accidental release of hazardous materials. During operation and maintenance, the Proposed Project would involve the use of trucks and equipment that would use fuel and grease, which are considered hazardous materials. However, these vehicles would be operated in areas that already experiences vehicle traffic and maintenance activities would be very infrequent therefore not increasing the potential for fuel and grease drips significantly over existing levels. Impacts from other cumulative projects during operation and maintenance would likely be similar. Therefore, the Proposed Project's contribution would be less than significant, and in combination with other cumulative projects would not be cumulatively considerable.

Hazardous Emissions near Schools

The Proposed Project has the potential to emit hazardous materials or substances near schools during construction. It is possible that some cumulative projects could emit hazardous materials or substances near schools during construction, depending on the project location. Cumulative projects, including the Proposed Project, would require implementation of a project SWPPP, consistency with hazardous materials handling, and consistency with BCAQMD requirements regarding diesel particulate matter. During operation and maintenance, the Proposed Project would not increase the potential for hazardous emissions near schools significantly over existing levels. Impacts from other cumulative projects during operation and maintenance would likely be similar. Therefore, the Proposed Project's

contribution would be less than significant, and in combination with other cumulative projects would not be cumulatively considerable.

List of Hazardous Materials Sites

As discussed in Section 3.9, construction of the Proposed Project has the potential to encounter contaminated soils associated with an underground kerosine storage tank site on the Envirostor database. With the implementation of mitigation measure **MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan**, impacts from being located on a hazardous materials site during construction would be reduced to less than significant. It is possible that some cumulative projects could encounter contaminated soils during construction, depending on the project location. Any contaminated soils encountered by cumulative projects, including the Proposed Project, would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit. Additionally, any hazardous materials encountered, including contaminated soils, would be managed and disposed of in accordance with California Department of Toxic Substances Control regulations. Therefore, cumulative impacts on this criterion would be less than significant with the implementation of mitigation measure **MM-HAZ-2**, and in combination with the cumulative projects, would not be cumulatively considerable.

Airport Hazards

As discussed in Section 3.9, the Proposed Project would result in a safety hazard or excessive noise for people residing or working in the project area due to nearby public airports, resulting in no impact. None of the cumulative projects, including the Proposed Project, are located within two miles of a public airport. Therefore, the Proposed Project would not contribute to cumulative impacts on this criterion, and impacts would not be cumulatively considerable in combination with other cumulative projects.

Emergency Response Plan or Emergency Evacuation Plan

The Proposed Project has the potential to result in interruptions to emergency response or evacuation routes due to temporary road/lane closures during construction. Construction of the Proposed Project would occur along Skyway, which is an evacuation route in Paradise. With the implementation of mitigation measures **MM-HAZ-3: Road Closure Restrictions**, **MM-HAZ-4: Rapid Demobilization Plan**, **MM-HAZ-5: Evacuation Warning Procedures**, and **MM-HAZ-6: Traffic Management Plan**, impacts on emergency response plan or emergency evacuation plan during construction would be reduced to less than significant. There would be no interruptions to emergency response or evacuation routes during operation and maintenance activities. Impacts from other cumulative projects would likely be similar and would likely require similar mitigation measures. Therefore, the Proposed Project's contribution to cumulative impacts on this criterion would be less than significant with the implementation of aforementioned mitigation measures, and in combination with the cumulative projects, would not be cumulatively considerable.

Wildland Fire Hazards

The Proposed Project has the potential to expose workers to wildland fires during construction, operation, and maintenance. With the implementation of mitigation measures **MM-HAZ-1: Vehicle Equipment Access and Fueling**, **MM-HAZ-7: Incorporate Fire Prevention Measures**, **MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**, impacts from wildland fire exposure would be reduced to less than significant. It is possible that some cumulative projects could expose workers to wildland fires during construction and/or operation and maintenance, depending on project location. These cumulative projects would likely require similar mitigation measures to reduce

impacts related to wildland fires. Therefore, the Proposed Project's contribution to cumulative impacts on this criterion would be less than significant with the implementation of aforementioned mitigation measures, and in combination with the cumulative projects, would not be cumulatively considerable. Table 4.5-9 provides a summary of cumulative impacts on hazardous materials.

Table 4.5-9. Summary of Proposed Project Impact Contribution to Cumulative Hazards and Hazardous Materials Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	SI	CC	MM-HAZ-1	NCC
Cumulative Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTS	NCC	N/A	NCC
Cumulative Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LTS	NCC	N/A	NCC
Cumulative Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	SI	CC	MM-HAZ-2	NCC
Cumulative Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	NI	NCC	N/A	NCC
Cumulative Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	SI	CC	MM-HAZ-3, MM-HAZ-4, MM-HAZ-5	NCC
Cumulative Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	SI	CC	MM-HAZ-1, MM-HAZ-7, MM-HAZ-8, MM-HAZ-9	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.9 Hydrology and Water Quality

The cumulative projects are located throughout Butte County, primarily within Paradise and Chico. Therefore, the geographic study area for the cumulative impact analysis for hydrology and water quality includes waterbodies within and the groundwater basin underlying Paradise and Chico. The cumulative projects and the Proposed Project are all located within the Sacramento Valley groundwater basin.

Therefore, the Sacramento Valley groundwater basin is considered in the cumulative study area for hydrology and water quality.

Cumulative impact thresholds for hydrology and water quality are the same as the thresholds presented in Section 3.10 Hydrology and Water Quality. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact HYD-1:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality
- **Cumulative Impact HYD-2:** Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin
- **Cumulative Impact HYD-3:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in substantial erosion or siltation on or off-site
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
    - Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff
    - Impede or redirect flood flows
- **Cumulative Impact HYD-4:** In flood hazard zones, risk release of pollutants due to project inundation
- **Cumulative Impact HYD-5:** Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Under the cumulative condition, the population of Paradise is expected to increase as the Town focuses on recovery efforts from the 2018 Camp Fire. Population increases could result in additional commercial, recreational, industrial, and residential developments in Paradise.

Surface Water Quality

Potential growth and development within the cumulative study area could contribute to cumulative surface water quality degradation, and the collective effect of development could degrade stormwater quality by contributing pollutants during construction and operation and maintenance within the cumulative study area.

A number of cumulative projects in the cumulative study area, described below, involve improvements or changes in the current water and sewer systems in the Town. Legislation has also been introduced to streamline the process for developing certain water projects. For example, AB 32 would allow the use of the design-build procurement method for projects, which would help to fast-track projects like the Paradise Irrigation District Project Water Intertie. The Proposed Project would allow the sale of unused surface water in PID reservoirs to help make up for losing most of its customers after the Camp Fire and would involve transporting water to Chico. The Tuscan Ridge Project would build an on-site

sewage wastewater treatment and disposal facility to serve as a temporary workers' camp for those who are involved in the Camp Fire recovery and rebuilding efforts. Other projects such as the Tuscan Ridge Project, City of Chico Nitrate Plan, Chico WPCP Upgrades would also factor into changes in water quality and supply in the cumulative study area. In general, these projects, coupled with the Proposed Project, were intended to improve water quality in the cumulative study area during operation and maintenance. As discussed in Section 3.10, studies have shown evidence of high levels of fecal coliform and septic system effluent in water supply resulting in the degradation of water quality in the cumulative study area as a result of historical individually managed septic systems. As a result, in 1992 the Town of Paradise created the Town of Paradise Onsite Wastewater Management Zone in order to centralize the management of wastewater and improve public health. The Proposed Project would further improve public health and water quality in the cumulative study area by removing septic tanks and implementing an improved sewer system.

The additional amount of treated discharge entering into the Sacramento River as a result of Proposed Project operation and maintenance would also not impact water quality in the cumulative study area. The Chico WPCP is licensed to treat 12 mgd of wastewater and is operating at 6.3 mgd. The Proposed Project would add an additional 0.5 mgd of wastewater to the system during operation and maintenance, which would then be discharged into the Sacramento River. Consistent with existing conditions, the treated wastewater from the Chico WPCP would continue to be discharged to the Sacramento River through a submerged outfall diffuser and is regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). This incremental increase in discharge as a result of the Proposed Project is within the permitted allowance and would not violate water quality standards or waste discharge requirements.

The Proposed Project will be subject to applicable permitting requirements (Section 404, Section 401, the Streambed Alteration Agreement, CGP, Small MS4 permit, and other standard water treatment BMPs), which would minimize water quality impacts during construction. To minimize significant water quality impacts during construction to a less than significant level, the Proposed Project will implement mitigation measures **MM-HAZ-1: Vehicle and Equipment Access and Fueling, MM-HYD-1: Stormwater Management and Treatment Plan**, **MM-HYD-2: Construction Best Management Practices**, and **MM-BIO-15: Frac-Out Plan**. Impacts from other cumulative projects would likely be similar and would likely require similar mitigation measures. Therefore, the Proposed Project's contribution to cumulative water quality impacts would be less than significant with the implementation of aforementioned mitigation measures, and in combination with the cumulative projects would not be cumulatively considerable.

Groundwater

The projects considered in this cumulative analysis may require dewatering and the use of groundwater during construction. Impacts on groundwater from the cumulative projects would largely be temporary and localized during construction and likely not cause a net deficit in aquifer volume or lower the groundwater table. The cumulative projects could also involve the addition of new impervious surfaces that would reduce groundwater recharge. However, given the developed nature of the study area, the cumulative impact of the cumulative projects on groundwater recharge would not be significant. During construction and operation and maintenance, any cumulative projects would be required to conform to groundwater management plans and state, local, and regional policies regarding groundwater supplies,

such as the Butte County Groundwater Conservation Ordinance. Once constructed, the Proposed Project would not impact groundwater. Therefore, cumulative impacts on this criterion would be less than significant and the Proposed Project's contribution would not be cumulatively considerable.

Erosion

The Proposed Project has the potential to result in sediment transport from construction work near waterbodies. It is possible that some cumulative projects could increase sediment discharge into waterbodies, depending on the project location. Cumulative projects, including the Proposed Project, would be subject to the requirements of the SWRCB's CGP, which requires preparation and implementation of a SWPPP. The construction SWPPP would propose BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements and stormwater management. To minimize significant impacts associated with erosion or siltation during construction to a less than significant level, the Proposed Project will implement mitigation measure **MM-HYD-1: Stormwater Management and Treatment Plan**. Once constructed, the Proposed Project would not result in erosion or siltation. Impacts from other cumulative projects would likely be similar and would likely require similar mitigation measures. Therefore, cumulative impacts on this criterion would be less than significant with the implementation of **MM-HYD-1** and the Proposed Project's contribution would not be cumulatively considerable.

Surface Water Hydrology

Cumulative projects, such as the City of Chico Nitrate Action Plan, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, have the potential to change the surface water hydrology in the study area on a temporary basis during construction or permanently by potentially impacting or relocating stormwater infrastructure. However, adhering to existing laws and permit processes that control streambed alteration and limit changes to drainages, such as the federal Clean Water Act and the SWRCB's CGP, would avoid cumulative impacts from these cumulative projects. Once constructed, stormwater facilities built as a part of these projects would capture and slow releases to waterways, thereby avoiding cumulative impacts. Construction of cumulative projects, including the Proposed Project, would result in construction flows to existing drainage systems as well as polluted runoff. Laws and permitting processes, including local stormwater permits, generally require new development projects to incorporate stormwater capture and infiltration features during construction. such that runoff volumes would not exceed the capacity of existing and planned stormwater facilities to accommodate the runoff. To minimize significant impacts associated with polluted runoff during construction to a less than significant level, the Proposed Project will implement mitigation measures **MM-HYD-1: Stormwater Management** and **Treatment Plan and MM-HYD-3: Flood Protection Plan**. Once constructed, the Proposed Project would not result in polluted runoff. Impacts from other cumulative projects would likely be similar and would likely require similar mitigation measures. Therefore, cumulative impacts on this criterion would be less than significant with the implementation of aforementioned mitigation measures and the Proposed Project's contribution would not be cumulatively considerable.

Floodplains

Future cumulative projects require work within a floodway or floodplain. All ongoing and planned cumulative projects, including the Proposed Project, are subject to and must comply with applicable

federal, state, and local policies, programs, and ordinances, which would reduce the impact on floodplains and flood risks during construction and operation and maintenance. The local flood control agencies and applicable flood control design criteria require projects in areas within the designated 100-year flood zones to design project-specific drainage systems in accordance with findings of site-specific studies. As discussed in Section 3.10, with the implementation of mitigation measure **MM-HYD-3: Flood Protection Plan**, the Proposed Project would have a less than significant impact from being located within a flood hazard zone. Construction associated with cumulative projects in such areas would be designed to comply with regulatory agency requirements as well and impacts on floodplains would require similar mitigation measures. Therefore, cumulative impacts on this criterion would be less than significant with the implementation of mitigation measure **MM-HYD-3** and the Proposed Project's contribution would not be cumulatively considerable.

Water Quality Control Plan or Sustainable Groundwater Management Plan

The Proposed Project will require regulatory permits from USACE (Section 404), the Regional Board (Section 401), CDFW (Streambed Alteration Agreement), SWRCB (CGP), and Small MS4 Permit. The Proposed Project will comply with NPDES permitting. As discussed in Section 3.10, with the implementation of mitigation measure **MM-HYD-1: Stormwater Management and Treatment Plan**, impacts on a water quality control plan or sustainable groundwater management plan would be reduced to a less than significant level. Cumulative projects listed in Table 4.5-1 would be subject to similar permitting requirements and would require similar mitigation measures. Therefore, cumulative impacts on this criterion would be less than significant with the implementation of mitigation measure **MM-HYD-1** and the Proposed Project's contribution would not be cumulatively considerable. Table 4.5-10 provides a summary of cumulative impacts on hydrology and water quality.

Table 4.5-10. Summary of Proposed Project Impact Contribution to Cumulative Hydrology and Water Quality Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	SI	CC	MM-HAZ-1, MM-HYD-1, MM-HYD-2, and MM-BIO-15	NCC
Cumulative Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin	LTS	NCC	NA	NCC
Cumulative Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: a. Result in substantial erosion or siltation on or off-site	SI	CC	MM-HYD-1, MM-HYD-3	NCC

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site c. Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff Impede or redirect flood flows				
Cumulative Impact HYD-4: In flood hazard zones, risk release of pollutants due to project inundation	SI	CC	MM-HYD-3	NCC
HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	SI	CC	MM-HYD-1	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.10 Land Use and Planning

The geographic study area for the cumulative impact analysis for land use and planning is defined by the Proposed Project's construction limits and includes all areas in and between Paradise and Chico, including unserved areas. This cumulative study area would capture impacts generated from the Proposed Project's construction and potential regional impacts on land use and planning.

Cumulative impact thresholds for land use and planning are the same as the impact thresholds presented in Section 3.11, Land Use and Planning. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact LU-1:** Physically divide an established community
- **Cumulative Impact LU-2:** Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

As discussed in Section 3.11, the Proposed Project would not physically divide an established community, resulting in no impact. As a result, by definition, the Proposed Project would not contribute to a significant cumulative impact. The cumulative projects listed in Table 4.5-1 would be subject to zoning requirements and require approval if zoning changes are proposed. According to the Town of Paradise 2022-2030 Housing Element Update, key parcels in the sewer service area would require rezoning, and a Sewer Service Overlay Zone will be established to allow increased densities up to 30 dwelling units per acre in the sewer service area (Town of Paradise 2022). The Proposed Project is consistent with the goals and policies in the Housing Element Update as it would serve most businesses in the Town and provide for future development of more multi-family residences, which is currently limited because of septic system constraints. It is possible that some cumulative projects could divide an established community depending on the project location. However, many of the cumulative projects under consideration, such as the Tuscan Ridge Project, City of Chico Nitrate Plan, Chico

WPCP Upgrade/Expansion Project, Paradise Transit Center, and Town of Paradise Recovery Projects, do not include major roads, and would be constructed on an existing site, on existing infrastructure, or underground, and would not divide an established community. During construction of the cumulative projects, staging of construction vehicles and equipment could impede road access and road closures might be required. Similar to the Proposed Project, these impacts would be temporary and road access would be restored once construction is complete. Therefore, the Proposed Project's impacts from dividing an established community, in combination with other cumulative projects, would not be cumulatively considerable.

The Proposed Project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, resulting in no impact. As a result, by definition, it would not contribute to a significant cumulative impact. As stated in Table 3.11-1, the Proposed Project is consistent with applicable land use and planning goals and policies identified in Section 3.11 Land Use and Planning, and Appendix C, Regulatory Framework, including Town of Paradise General Plan Objective LUO-10, which calls for the construction and installation of a formal sewer system. The Town of Paradise is updating its General Plan in response to the 2018 Campfire, and will include updates to its land use, circulation, conservation, noise, open space, and air quality elements, as well as other new state laws. It is anticipated to be a minimum 3-year process (S. Hartman, personal communication, November 19, 2021). According to Susan Hartman, the Town Planning Manager, the Proposed Project is also consistent with the goals and policies of the updated Town of Paradise General Plan (S. Hartman, personal communication, November 19, 2021). The Proposed Project would also comply with goals, policies and objectives in the updated City of Chico General Plan The other cumulative activities defined in Table 4.5-1 would be subject to compliance with similar zoning regulations, land use plans, policies, or regulations, and would otherwise require approval by Butte County, the Town, and the City of Chico prior to construction. Based on these factors, the Proposed Project would not contribute to cumulative impacts on land use and planning, and in combination with the cumulative projects, would not be cumulatively considerable. Table 4.5-11 provides a summary of cumulative impacts on land use and planning.

Table 4.5-11. Summary of Proposed Project Impact Contribution to Cumulative Land Use and Planning Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact LU-1: Physically divide an established community	LTS	NCC	N/A	NCC
Cumulative Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.11 Noise and Groundborne Vibration

Noise and groundborne vibration impacts are highly localized in nature. As such, the geographic study area for the cumulative impact analysis for noise includes the Proposed Project as well as a 1,000-foot buffer surrounding the Proposed Project, which includes sensitive receptors that could be exposed to noise and groundborne vibration impacts.

Cumulative impact thresholds for noise are the same as the thresholds presented in Section 3.12 Noise and Groundborne Vibration. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact NSE-1:** Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies
- **Cumulative Impact NSE-2:** Generate excessive groundborne vibration or groundborne noise levels
- **Cumulative Impact NSE-3:** Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels

Noise

Potential growth and development within the cumulative study area could contribute to cumulative noise impacts by generating noise during construction and operation and maintenance within the cumulative study area. Cumulative projects, such as the Paradise Irrigation District Project Water Intertie, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, would generate noise during construction activities. Likewise, during construction, the Proposed Project could result in noise levels that would exceed the applicable daytime noise limits. However, Project-generated noise levels would not combine with the noise of these projects to result in cumulative noise impacts because temporary Proposed Project construction activities would not be located in close proximity to planned, concurrent construction projects. Further, construction-related noise is typically a site-specific impact that affects only those in the vicinity of the construction activities. Still, with the implementation of mitigation measure **MM-NSE-1: Minimize Construction Noise**, the Proposed Project's noise levels during construction would be within the allowable limits of all applicable jurisdictions. Noise levels from operation and maintenance activities of the Proposed Project would be minimal and immeasurable due to the infrequency of these activities. Impacts from other cumulative projects listed in Table 4.5-1 would likely be similar and would likely require similar mitigation measures. Therefore, with the implementation of mitigation measure **MM-NSE-1**, the Proposed Project's contribution to cumulative noise impacts would be less than significant. Cumulative noise impacts would be distinct in location and would not be expected to be additive, and therefore would not be cumulatively considerable.

Groundborne Vibration

Potential growth and development within the cumulative study area could contribute to cumulative groundborne vibration impacts by generating groundborne vibration during construction and operation and maintenance within the cumulative study area.

Cumulative projects, including the Paradise Irrigation District Project Water Intertie, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, would be expected to generate groundborne vibrations during construction activities. During construction, groundborne vibration associated with the Proposed Project is not anticipated to result in structural damage within the cumulative study area. However, groundborne vibration associated with Proposed Project construction could exceed the criteria for human annoyance. However, Project-generated groundborne vibration levels would not combine with the noise levels of these projects to result in cumulative groundborne vibration impacts. This is because groundborne vibration generally only travels short distances from the vibration source and does not readily combine with other vibration sources to increase in magnitude because of differing frequencies. Even if construction of cumulative projects occurs on adjacent properties at the same time, it is unlikely that there would be multiple vibration sources (such as impact pile drivers) generating high levels of vibration at the same frequency and at the same time in proximity to the same sensitive receptors. Still, with the implementation of mitigation measure **MM-NSE-1: Minimize Construction Noise**, the Proposed Project's vibration levels on nearby noise-sensitive receptors would be below the criteria for human annoyance. Groundborne vibration levels from operation and maintenance activities of the Proposed Project would be minimal and immeasurable due to the infrequency of these activities. Impacts from other cumulative projects listed in Table 4.5-1 would likely be similar and would likely require similar mitigation measures. Therefore, with the implementation of mitigation measure **MM-NSE-1**, the Proposed Project's contribution to cumulative groundborne vibration impacts would be less than significant. Like noise impacts, cumulative impacts from groundborne vibration would be distinct in location and would not be expected to be additive, and therefore would not be cumulatively considerable.

Airport Noise

As discussed in Section 3.12 Noise and Groundborne Vibration, the Proposed Project would result in a less-than-significant impact on people residing or working in the area to excessive airport noise levels. Cumulative projects listed in Table 4.5-1 have the potential to expose people residing or working in the vicinity of public or private airports to excessive noise levels, depending on their locations. Cumulative projects, including the Proposed Project, would be subject to land use plans, policies, or regulations that support necessary growth while minimizing impacts from airports or airstrips on surrounding land uses. Therefore, the Proposed Project's contribution would be less than significant, and in combination with the cumulative projects would not be cumulatively considerable. Table 4.5-12 provides a summary of cumulative impacts on noise.

Table 4.5-12. Summary of Proposed Project Impact Contribution to Cumulative Noise and Groundborne Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact NOISE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	SI	CC	MM-NSE-1	NCC

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact NOISE-2: Generate excessive groundborne vibration or groundborne noise levels	SI	CC	MM-NSE-1	NCC
Cumulative Impact NOISE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels	LTS	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.12 Population and Housing

The geographic study area for the cumulative impact analysis for population and housing is defined as the jurisdictions that are within the Core and Extended Collection Systems and the Export Pipeline System alignment. This includes Paradise and Chico as well as the unincorporated areas of Butte County. This cumulative study area would capture impacts generated from the Proposed Project's construction and potential regional impacts on population and housing.

Cumulative impact thresholds for population and housing are the same as the thresholds presented in Section 3.13 Population and Housing. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact POP-1:** Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)
- **Cumulative Impact POP-2:** Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere

The Proposed Project, considered along with the cumulative projects, such as the City of Chico Nitrate Plan, Chico WPCP Upgrades, Paradise Irrigation District Project Water Intertie, Paradise Transit Center, and Town of Paradise Recovery Projects, could indirectly foster population growth through by installing improved infrastructure and wastewater treatment. As a matter of fact, many of these cumulative projects are in response the Camp Fire recovery efforts. As discussed in Section 3.1,3 Population and Housing, a substantial decrease of approximately 83 percent of the population in Paradise occurred as a result of the 2018 Camp Fire. Any inducement of the population as a result of the Proposed Project or other cumulative projects would be a regrowth or repopulation of this area once found to be the most populated area of Butte County. While population growth that might result indirectly from the Proposed Project would be contained in Paradise, other cumulative activities could induce growth in Chico or elsewhere. Therefore, the Proposed Project's contribution would be less than significant, and in combination with the cumulative projects would not be cumulatively considerable.

The Proposed Project would not displace substantial numbers of existing people or housing which would necessitate the construction of replacement housing, resulting in no impact. The Proposed Project and the cumulative projects would not acquire or take any residential-zoned land in the area. Many of the cumulative projects are infrastructure improvement projects that would occur at an existing site, on existing infrastructure, or below ground. Improvements would not displace people or housing. Therefore, the Proposed Project would not contribute to cumulative impacts on this criterion, and impacts would not be cumulatively considerable in combination with other cumulative projects. Table 4.5-13 provides a summary of cumulative impacts on population and housing.

Table 4.5-13. Summary of Proposed Project Impact Contribution to Cumulative Population and Housing Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	LTS	NCC	N/A	NCC
Cumulative Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	NI	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.13 Public Services

The geographic study area for the cumulative impact analysis for public services is defined by the Proposed Project's construction limits and includes all areas in and between Paradise and Chico

Cumulative impact thresholds for recreation are the same as the impact thresholds presented in Section 3.14 Public Services. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact PS-1:** Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:
    a. Fire Protection
    b. Police Protection
    c. Schools
    d. Other Public Facilities

Construction of Cumulative projects, including the Proposed Project, would not directly impact fire protection facilities, police protection facilities, schools, and other public facilities. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction of

cumulative projects, including the Proposed Project. As discussed in Section 3.14, with the implementation of mitigation measure **MM-HAZ-6: Traffic Management Plan**, the Proposed Project's impacts on fire protection facilities, police protection facilities, schools, and other public facilities during construction would be less than significant. The Proposed Project, Chico WPCP Upgrades, City of Chico Nitrate Plan, Paradise Irrigation District Project Water Intertie, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects are all infrastructure projects intended to improve water supply and quality or the wastewater system. None of the cumulative projects, including the Proposed Project, would result in any permanent impacts to fire protection facilities, police protection facilities, schools, and other public facilities. Some of these projects, including the Proposed Project and the Chico WPCP Upgrades, could indirectly induce population growth, resulting in the need for additional fire protection facilities, police protection facilities, schools, and other public facilities. However, the Town of Paradise General Plan Update would consider future development in the area and further include elements and policies that address the need for additional public services. Impacts from other cumulative projects listed in Table 4.5-1 would likely be similar and would likely require similar mitigation measures. Therefore, the Proposed Project's contribution to cumulative public services impacts would be less than significant with the implementation of mitigation measure **MM-HAZ-6**, and in combination with the cumulative projects would not be cumulatively considerable. Table 4.5-14 provides a summary of cumulative impacts on public services.

Table 4.5-14. Summary of Proposed Project Impact Contribution to Cumulative Public Services Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: a. Fire Protection b. Police Protection c. Schools d. Other Public Facilities	SI	CC	MM-HAZ-6	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.14 Recreation

The geographic study area for the cumulative impact analysis for recreation is defined by the Proposed Project's construction limits and includes all areas in and between Paradise and Chico

Cumulative impact thresholds for recreation are the same as the impact thresholds presented in Section 3.15 Recreation. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact REC-1:** Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- **Cumulative Impact REC-2:** Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment

The Proposed Project, Chico WPCP Upgrades, City of Chico Nitrate Plan, Paradise Irrigation District Project Water Intertie, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects are all infrastructure projects intended to improve water supply and quality or the wastewater system. None of the cumulative projects, including the Proposed Project, would result in any permanent impacts to recreational facilities. Some of these projects, including the Proposed Project, the Chico WPCP Upgrades, and the Town of Paradise Recovery Projects, could induce population growth, resulting in the need for additional recreational facilities. However, the Town of Paradise General Plan Update would consider the need for additional recreational facilities and balance these needs against local goals and policies. Cumulative projects, including the Proposed Project, would not directly result in permanent acquisition, displacement, or relocation of parks and recreational facilities. During Project construction, temporary road and bike path closures may be required that could limit access to parks and recreational facilities. Minor increases in recreational use at other available facilities may occur on a short-term basis, but substantial physical deterioration of these facilities is not expected to occur or to be accelerated. Impacts from other cumulative projects listed in Table 4.5-1 would likely be similar. Therefore, the Proposed Project would not contribute to cumulative recreation impacts, and impacts would not be cumulatively considerable in combination with other cumulative projects. Table 4.5-15 provides a summary of cumulative impacts on recreation.

Table 4.5-15. Summary of Proposed Project Impact Contribution to Cumulative Recreation Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact REC-1: Increase the use of existing neighborhood and regional parks or recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LTS	CC	N/A	NCC
Cumulative Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	LTS	CC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.15 Transportation

The geographic study area for the cumulative impact analysis for transportation is defined by the Proposed Project's construction footprint within Paradise, Chico, and the unincorporated county between the two where the Export Pipeline System would be installed. This cumulative study area

would capture impacts generated from the Proposed Project's construction and potential regional impacts on transportation.

Cumulative impact thresholds for transportation are the same as the thresholds presented in Section 3.16 Transportation. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact TRA-1:** Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
- **Cumulative Impact TRA-2:** Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)
- **Cumulative Impact TRA-3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- **Cumulative Impact TRA-4:** Result in inadequate emergency access

The Proposed Project, considered along with the cumulative projects, including the Paradise Irrigation District Project Water Intertie, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, would have potential for temporary construction-related transportation impacts and traffic operations degradation. The Proposed Project would implement mitigation measure **MM-HAZ-6: Traffic Management Plan** to reduce transportation impacts during construction to a less-than-significant level. Other cumulative projects may also implement a similar mitigation measure to minimize transportation impacts. Cumulative projects, including the Proposed Project, do not involve the permanent closure of any roads or features that would substantially impact the transportation system or circulation in the region. Therefore, the Proposed Project's cumulative contribution to conflicting with a transportation program, plan, ordinance, or policy would be less than significant with the implementation of mitigation measure **MM-HAZ-6**. When combined with other cumulative projects, these impacts would not be cumulatively considerable.

The Proposed Project and cumulative projects would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). This is because the Proposed Project and cumulative projects would not cause an increase in travel for the future besides the increase in trips due to construction. Therefore, the Proposed Project would not significantly contribute to a cumulative impact on inconsistencies with CEQA Guidelines Section 15064.3, subdivision (b), and in combination with the cumulative projects would not be cumulatively considerable.

Finally, the Proposed Project and the cumulative projects would not involve any permanent hazard geometric design feature or incompatible uses. This is because the Proposed Project and most of the cumulative projects, such as the Tuscan Ridge Project, City of Chico Nitrate Plan, Paradise Irrigation District Project Water Intertie, Paradise Transit Center, and Town of Paradise Recovery Projects, are infrastructure improvement projects and would largely occur on an existing site, on existing infrastructure, or underground. Based on these factors, the Proposed Project would not significantly contribute to a cumulative impact on transportation, and in combination with the cumulative projects, would not be cumulatively considerable.

The Proposed Project, considered along with the cumulative projects, including the Paradise Irrigation District Project Water Intertie, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, would have potential to interfere with emergency access during construction. The Proposed Project would implement mitigation measure **MM-HAZ-6: Traffic Management Plan** to reduce impacts associated with inadequate emergency access during construction to a less-than-significant level. Other cumulative projects may also implement a similar mitigation measure. Cumulative projects, including the Proposed Project, would not include any permanent impacts to emergency response routes. Therefore, the Proposed Project's cumulative contribution to inadequate emergency access would be less than significant with the implementation of mitigation measure **MM-HAZ-6**. When combined with other cumulative projects, these impacts would not be cumulatively considerable. Table 4.5-16 provides a summary of cumulative impacts on transportation.

Table 4.5-16. Summary of Proposed Project Impact Contribution to Cumulative Transportation Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	SI	CC	MM-HAZ-6	NCC
Cumulative Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	LTS	NCC	N/A	NCC
Cumulative Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	LTS	NCC	N/A	NCC
Cumulative Impact TRA-4: Result in inadequate emergency access	SI	CC	MM-HAZ-6	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.16 Tribal Cultural Resources

The geographic study area for the cumulative impact analysis for tribal cultural resources includes central and northern Butte County and was selected because these areas include the relatively undeveloped portions of the ancestral Mechoopda and Konkow territory, and those rural areas outside of the historically developed urban population center in Chico.

As discussed in Section 4.5.2.4, according to CEQA, the importance of cultural resources comes from the research value and the information that they contain. Therefore, the issue that must be explored in a cumulative analysis is the cumulative loss of that information.

Cumulative impact thresholds for tribal cultural resources are the same as the thresholds presented in Section 3.17 Tribal Cultural Resources. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact TCR-1:** Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The Chico WPCP Upgrades, Paradise Irrigation District Project Water Intertie, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects have the potential to impact TCRs. Ground disturbance associated with each of the aforementioned projects, and the Proposed Project, could result in potentially significant cumulative impacts on previously recorded and/or newly discovered TCR if identified within the footprint of each project. However, implementing **MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe** and **MM-TCR-2: Tribal Cultural Monitoring** would reduce the Proposed Project's contribution to cumulative impacts to a less than significant level because appropriate procedures would be followed to avoid impact on TCR in sensitive areas identified by the tribes during Proposed Project-related ground-disturbing activities. Implementation of these measures would provide assurances that the Proposed Project would not have a significant contribution to impacts on TCR that meet significance criteria of the CRHR. Impacts from other cumulative projects listed in Table 4.5-1 would likely be similar and would likely require similar mitigation measures. Therefore, the Proposed Project's contribution to cumulative impacts on tribal cultural resources would be less than significant with the implementation of mitigation measures **MM-TCR-1** and **MM-TCR-2**, and in combination with the cumulative projects would not be cumulatively considerable. Table 4.5-17 provides a summary of cumulative impacts on tribal cultural resources.

Table 4.5-17. Summary of Proposed Project Impact Contribution to Cumulative Tribal Cultural Resources Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or	SI	CC	MM-TRC-1, MM-TCR-2	NCC

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
• A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.17 Utilities and Service Systems

The geographic study area for the cumulative impacts analysis for utilities and service systems is defined by the Proposed Project's construction footprint within Paradise, Chico, and unincorporated Butte County between the two where the export pipeline would be installed. This cumulative study area would capture impacts generated from the Proposed Project's construction and potential regional impacts due to the nature of utility connections.

Cumulative impact thresholds for public utilities are the same as the thresholds presented in Section 3.18 Utilities and Service Systems. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact UTIL-1:** Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects
- **Cumulative Impact UTIL-2:** Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years
- **Cumulative Impact UTIL-3:** Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments
- **Cumulative Impact UTIL-4:** Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals
- **Cumulative Impact UTIL-5:** Comply with federal, state, and local management and reduction statutes and regulations related to solid waste

Relocation and Construction of Utility Infrastructure

As discussed in Section 3.18, the Proposed Project would not require or result in relocating or constructing utility infrastructure. However, utilities could be affected during construction of the Proposed Project, with the potential for disruption of utility service. The Proposed Project would implement mitigation measure **MM-UTIL-1: Minimize Utility and Service System Disruptions** to reduce impacts on utility service during construction to a less-than-significant level. Cumulative projects, such as the

Chico WPCP Upgrades, Paradise Irrigation District Project Water Intertie, Tuscan Ridge Project, Paradise Transit Center, and Town of Paradise Recovery Projects, would involve ground-disturbing work during construction that could intersect with utility infrastructure. PG&E is also currently relocating their utility infrastructure underground in the Town of Paradise. However, it is assumed that cumulative projects could avoid or otherwise restore or replace electric infrastructure, stormwater drainage, or telecommunications facilities and that exposed ground from construction activities would be restored. Other cumulative projects may also implement a similar mitigation measure to minimize impacts on utility service. Any potential service disruptions would be short term and would require coordination with utility service providers, the Town, and the City, depending on the location of the service interruption. Based on these factors, the Proposed Project's contribution to cumulative impacts on utility service would be less than significant with the implementation of mitigation measure **MM-UTIL-1**. When combined with other cumulative projects, these impacts would not be cumulatively considerable.

Water Supply

As discussed in Section 3.18, the Proposed Project would have no impact on water supply. Water supply required during construction of the Proposed Project would be the responsibility of the construction contractor and would only be required temporarily during the duration of construction. No potable water would be required during operation and maintenance of the Proposed Project. Other cumulative projects may require use of water supply during construction and/or operation and maintenance. However, projects such as the City of Chico Nitrate Plan, Chico WPCP Upgrades, Tuscan Ridge Project, Paradise Irrigation District Project Water Intertie, Paradise Transit Center, and Town of Paradise Recovery Projects would likely only require water supply during the duration of construction and would not require water supply during operation and maintenance given that these are largely infrastructure improvement projects. Therefore, the Proposed Project would not contribute to significant cumulative impacts on water supply, and in combination with other cumulative projects, would not be cumulatively considerable.

Wastewater

As discussed in Section 3.18, the Proposed Project would have no impact on wastewater generation. Other cumulative projects would generate wastewater temporarily during the duration of construction. It is assumed that cumulative projects involved in the construction of wastewater treatment, such as the Tuscan Ridge Project, City of Chico Nitrate Plan, Chico Upgrades, and Paradise Irrigation District Project Water Intertie , would have similar objectives as the Proposed Project. While these projects are not part of the Proposed Project's sewer collection system, these projects would allow for more efficient wastewater management compared to the region's existing sewer systems. Therefore, it is anticipated that some of these projects would result in beneficial cumulative impacts on wastewater. As a result, The Proposed Project would not contribute to significant cumulative impacts on wastewater, and in combination with other cumulative projects, would not be cumulatively considerable.

Solid Waste

As discussed in Section 3.18, the Proposed Project would have no impact on solid waste. The Proposed Project would generate solid waste during construction; however, the volume of waste is within the capacity accommodated by the existing landfills in the region. No solid waste would be generated during operation and maintenance. The Proposed Project has the potential to foster population regrowth as a result of Camp Fire recovery efforts which could place an additional demand on landfills. However, long-term landfill usage would be similar to pre-Camp Fire levels and within the approved capacities. The Proposed Project would also comply with federal, state, and local management and reduction statutes and regulations related to solid waste, as discussed in Table 3.18-2, Consistency with State and Local

Plans, Policies, and Regulations. Other cumulative projects in the area would also generate solid waste during construction and/or operation and maintenance; however, these projects would be subject to compliance with federal, state, and local regulations regarding solid waste. While there is a potential for cumulative projects listed in Table 4.5-1 to generate solid waste, these projects would require coordination with existing landfills or redistribution to other landfills with adequate capacity. The Proposed Project would not contribute to significant cumulative impacts on solid waste, and in combination with other cumulative projects, would not be cumulatively considerable. Table 4.5-18 provides a summary of cumulative impacts on utilities and service systems.

Table 4.5-18. Summary of Proposed Project Impact Contribution to Cumulative Utilities and Service Systems Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	SI	CC	MM-UTIL-1	NCC
Cumulative Impact UTIL-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years	NI	NCC	N/A	NCC
Cumulative Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments	NI	NCC	N/A	NCC
Cumulative Impact UTIL-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	NI	NCC	N/A	NCC
Cumulative Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	NI	NCC	N/A	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

4.5.2.18 Wildfire

The geographic study area for the cumulative impact analysis for wildfire is defined as the areas within and directly adjacent to the Town of Paradise and areas of unincorporated Butte County and Chico where the proposed pipeline alignment runs.

Cumulative impact thresholds for hazards and hazardous material are the same as the thresholds presented in Section 3.19 Wildfire. Cumulative impacts are considered significant if they result in the following:

- **Cumulative Impact FIRE-1:** Substantially impair an adopted emergency response plan or emergency evacuation plan
- **Cumulative Impact FIRE-2:** Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire
- **Cumulative Impact FIRE-3:** Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
- **Cumulative Impact FIRE-4:** Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

Emergency Response Plan or Emergency Evacuation Plan

The Proposed Project has the potential to result in interruptions to emergency response or evacuation routes due to temporary road/lane closures during construction. Construction of the Proposed Project would occur Skyway, which is an evacuation route in Paradise. With the implementation of mitigation measures **MM-HAZ-3: Road Closure Restrictions**, **MM-HAZ-4: Rapid Demobilization Plan**, **MM-HAZ-5: Evacuation Warning Procedures**, and **MM-HAZ-6: Traffic Management Plan**, impacts on emergency response plan or emergency evacuation plan during construction would be reduced to less than significant. There would be no interruptions to emergency response or evacuation routes during operation and maintenance activities. Impacts from other cumulative projects would likely be similar and would likely require similar mitigation measures. Therefore, the Proposed Project's contribution to cumulative impacts on this criterion would be less than significant with the implementation of aforementioned mitigation measures, and in combination with the cumulative projects, would not be cumulatively considerable.

Exacerbate Wildfire Risks

The Proposed Project is located in a VHFHSZ and has the potential to exacerbate wildfire risks during construction that could affect the public and the environment. With the implementation of mitigation measures **MM-HAZ-1: Vehicle Equipment Access and Fueling**, **MM-HAZ-7: Incorporate Fire Prevention Measures**, **MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**, impacts from exacerbating wildfire risks would be reduced to less than significant. Operation and maintenance activities associated with the Proposed Project would not exacerbate wildfire risks that affect the public or the environment. It is possible that some cumulative projects could exacerbate wildfire risks during construction, operation and maintenance, depending on project location. These cumulative projects would likely require similar mitigation measures to reduce impacts from exacerbating wildfire risks. Therefore, the Proposed Project's contribution to cumulative impacts on these criteria would be less than significant with the implementation of aforementioned mitigation measures, and in combination with the cumulative projects, would not be cumulatively considerable.

Fire-related Flooding or Landslides

Given the sloped topography of the Town, the Proposed Project has the potential to create runoff or alter drainage patterns during construction. With the implementation of mitigation measures **MM-HYD-1: Stormwater Management and Treatment Plan**, **MM-HYD-3: Flood Protection Plan**, and **MM-GEO-1: Minimize Geologic Hazards,** impacts from exposing people or structures to significant

risks, including downslope or downstream flooding or landslides, would be reduced to less than significant. Operation and maintenance of the Proposed Project would not involve activities that create runoff or alter drainage. Impacts from other cumulative projects would likely be similar and would likely require similar mitigation measures. Therefore, cumulative impacts on this criterion would be less than significant with the implementation of aforementioned mitigation measures and the Proposed Project's contribution would not be cumulatively considerable. Table 4.5-19 provides a summary of cumulative impacts on wildfires.

Table 4.5-19. Summary of Proposed Project Impact Contribution to Cumulative Wildfire Impacts

Impact	Level of Cumulative Significance	Incremental Project Contribution	Applicable Project Mitigations	Incremental Impact After Mitigation
Cumulative Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	SI	CC	MM-,HAZ-3 MM-HAZ-4, MM-HAZ-5, MM-HAZ-6	NCC
Cumulative Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	SI	CC	MM-HAZ-1, MM-,HAZ-7 MM-HAZ-8, MM-HAZ-9	NCC
Cumulative Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	SI	CC	MM-HAZ-1, MM-HAZ-7, MM-HAZ-8, MM-HAZ-9	NCC
Cumulative Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	SI	CC	MM-HYD-1, MM-HYD-3, MM-GEO-1	NCC

Notes: CC = cumulatively considerable, N/A = not applicable, NCC = not cumulatively considerable, NI = no impact, LTS = less than significant impact, SI = significant impact

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5. Alternatives

5.1 Introduction

5.1.1 CEQA Requirements

This chapter describes alternatives to the Proposed Project, consistent with CEQA Guidelines Section 15126.6. This chapter presents a description of the alternatives that were considered but eliminated from further consideration, followed by an analysis of the five alternatives evaluated, including the No Project Alternative. A comparison of the alternatives to the Proposed Project is provided, and the environmentally superior alternative is identified.

CEQA Guidelines Section 15126.6(a) states that "an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation."

Further, an EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative and/or infeasible (CEQA Guidelines Section 15126.6(f)(3)). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent) (CEQA Guidelines Section 15126.6(f)(1)).

The CEQA Guidelines specifically require consideration of a "No Project" alternative. Including a No Project alternative allows decision-makers to compare the impacts of approving the project with the impacts of not approving the project. The No Project alternative is discussed in detail in Section 5.3.1, No Project Alternative.

In addition to the No Project Alternative and the Alternatives evaluated in the PEIR (Section 5.3), this chapter also introduces alternatives considered during the early planning process that were eliminated from further consideration. These alternatives, as discussed in Section 5.2, do not respond to or reduce significant impacts from the Proposed Project; however, they are included to describe the background of alternatives screening process and to present those results.

5.1.2 Project Objectives and Goals

Alternatives were evaluated and considered largely based on their ability to meet the objectives and goals of the Proposed Project. As discussed in Section 2.3 Project Need and Objectives, the objectives and associated goals of the Proposed Project are as follows:

- Provide long-term, efficient, reliable treatment of wastewater in a cost-effective, environmentally beneficial manner to current and returning Town residents, in a manner acceptable to the RWQCB and other permitting agencies;
    - Accommodate regrowth while reducing further environmental degradation of groundwater and surface water from failing septic systems;
    - Reduce the public health risk associated with failing septic systems;
- Generate economic recovery by eliminating septic-related capacity limitations, as well as the general burden of on-site wastewater management for businesses;
    - Promote the return or arrival of essential community services and businesses by removing restrictions caused by on-site septic systems;
- Provide for the ability to construct and maintain affordable housing, specifically multi-family housing;
    - Support centralizing affordable housing to Paradise's urban core, along major evacuation routes.

5.2 Alternatives Considered but Eliminated from Detailed Consideration

Per CEQA Guidelines Section 15126.6, the EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR also should identify any alternatives that were considered by the lead agency but were rejected and should briefly explain the reasons underlying the lead agency's determination to remove these alternatives from consideration. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:

9. failure to meet most of the project objectives,
10. effects that cannot be reasonably ascertained, for which implementation is remote and speculative,
11. infeasibility, or
12. inability to avoid significant environmental impacts that could result from implementation of the Proposed Project.

Per CEQA Guidelines Section 15126.6, discussion on alternatives to the proposed project should focus on those alternatives that feasibly accomplish most of the basic objectives and avoid or substantially lessen one or more of the significant effects (CEQA Guidelines Section 15126.6 [b]). As used here, feasible means ""capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." (14 CCR Section 15364. See also PRC Section 21061.1). Specific factors may include:

- Site suitability;
- Economic viability;
- Availability of infrastructure;
- Availability of infrastructure;

- General plan consistency;
- Other plans or regulatory limitations;
- Jurisdictional boundaries;
- Whether the project proponent already owns the site; and
- Whether the project proponent can acquire, control, or have access to the site if it does not own it. (14 CCR Section 15126.6(f)(1))

As such, the Town considered the following Project alternatives, which were developed during early planning efforts but eliminated them from further consideration, as explained in the following sections:

- Local construction of a new wastewater treatment plant in Town of Paradise
- Neal Road export pipeline alignment
- Butte Creek alignment spur within the Skyway Export Pipeline System alignment

5.2.1 Local Construction of New Wastewater Treatment Plant

Since 1969, the Town has prepared 13 different studies in its efforts to identify a viable wastewater solution for the Town (Section 2.2 Project Background). All of those studies considered a sewer collection system within the Town to gather wastewater that currently goes to existing septic tank systems and also assessed alternatives for treating and discharging or reusing the wastewater gathered by that collection system. The studies considered building a new wastewater treatment plant near the Town, to be owned and operated by the Town, with various options for reusing or discharging the treated wastewater. The studies also considered piping the wastewater to the City of Chico's WPCP, for treatment. In the 2017 Town of Paradise Sewer Project, Alternative Analysis and Feasibility Report (Bennett Engineering 2017), construction of a local wastewater treatment plant was not recommended, primarily due to funding and land use restrictions. However, following the devastation caused by the November 2018 Camp Fire, the Town Council voted to reconsider a local wastewater treatment alternative because of the potential for more funding becoming available; availability of more land to consider as a location for a local WWTP due to the devastation caused by the Camp Fire; and because the Town would have more control over future decisions related to wastewater management if it owned its own wastewater treatment plant. The four local alternatives that were considered are presented in Table 5.2-1. The table also provides reasons why these alternatives were found to be infeasible and were not considered in this EIR. For these reasons, the local wastewater treatment alternative was eliminated from consideration due to infeasibility, as described in CEQA Guidelines Section 15126.6 (criterion 2 above).

As discussed in Section 2.3.2, Project Objectives and Goals, removing septic systems in areas where specific systems have failed, or are projected to fail would directly respond to the goals and priorities identified in SWECB's Strategic Plan. The document also describes SWRCB's Strategic Priority Actions, and in a discussion on wastewater infrastructure and sustainability, states:

> *The need for updated and new infrastructure is particularly critical for small communities with very limited resources. The State Water Board will emphasize a renewed focus on small community wastewater projects and make it a priority to help ensure that small and/or disadvantaged communities have the resources needed to protect water quality and public health related to wastewater (SWRCB 2010).*

A lead agency may determine that an alternative is infeasible because of a conflict with relevant policies or regulatory limitations. Recent caselaw examples include the following:

- *Bay Area Citizens v Association of Bay Area Gov'ts* (2016) 248 CA4th 966, 1018 (alternative proposed in comments would not comply with statutory requirements for regional greenhouse gas reduction plan)
- *Center for Biological Diversity v Department of Fish & Wildlife* (2015) 234 CA4th 214, 255 (alternative of discontinuing hatchery production and fish stocking activities was infeasible due to conflict with Department's statutory mandate)
- *City of Maywood v Los Angeles Unified Sch. Dist.* (2012) 208 CA4th 362, 417 (school district reasonably determined that reduced school size alternative was infeasible because of conflict with state school siting guidelines)

Table 5.2-1. Local Alternatives and Reasons for Elimination from Consideration.

Local Alternative	Reasons for Infeasibility
Local Alternative 1: Local WWTP with Effluent Storage and Land Application	• Does not comply with State and Regional Water Board policies supporting regionalization of wastewater services. Likely to receive less favorable consideration, or outright denial, especially if regionalization has similar or better overall feasibility. (Regional Board 2020) • Land application would require extensive permitting from the Regional Board. • Due to the topography, geology and hydrology of the Paradise area, finding a suitable site for both treatment and disposal would be difficult. Acreage requirements for land application given local rocky soil conditions would be high and likely unavailable. • Finding 150 acres of land to purchase for effluent storage was found to be infeasible due to the high risk of increased impacts to biological resources, cultural resources, and tribal resources. (HDR 2020) • Would take approximately 150 acres of land out of agricultural use including possible prime farmland and properties under Williamson Act contracts. • Negotiating agreements with farmers to use treated effluent or irrigation of pastureland would be complex and finding willing participants might be difficult. • Available land for effluent storage and land application would likely have environmentally sensitive plants and resources that would be destroyed or heavily impacted beyond mitigation by installation of the effluent storage and land application facilities: vernal pools, meadowfoam, and other rare plants. • Extensive truck traffic would be involved with hauling soil off-site during construction of the effluent storage reservoir and would impact local access and circulation. • Construction of a local WWTP would be a lengthy process and would involve significant noise, dust, and visual impacts on neighbors in the area. Permanent visual, noise and odor impacts would also occur during operations. • If facility is designed for a maximum predicted rate, even though flows will ramp up gradually, and may never reach the maximum rate, this would result in a WWTP that is oversized, at least for much of its useful life. Building a larger WWTP and initially operating at reduced capacity is technically challenging, wasteful of energy, and unnecessarily costly. • Operation and maintenance for a full scale WWTP would have to be supported by small initial ratepayer base. • High long-term monitoring costs and resources required to oversee adjacent farm uses for compliance with permit conditions associated with this alternative. • Alternatively, if a smaller facility is initially constructed, expansion of the WWTP to

Local Alternative	Reasons for Infeasibility
	accommodate larger future flows would be costly. Further, treatment processes may not be easily scalable without substantial redesign and reconstruction of WWTP elements. • Extensive, ongoing monitoring required for both the local WWTP and the land application system, including monitoring wells, farmers' proper handling of runoff, and the potential for continued impacts on groundwater.
Local Alternative 2: Local WWTP with Surface Water Discharge	• May not comply with State and Regional Water Board policies supporting regionalization of wastewater services. Likely to receive less favorable consideration, or outright denial, • especially if regionalization has similar or better overall feasibility. (Regional Board 2020) • Siting a local wastewater facility within residential and business areas is more complex than other local alternatives. • The lack of year-round water flow in local streams makes a surface water discharge very difficult to permit. If permitted, there is a high potential for a very onerous discharge permit, including extensive, on-going monitoring requirements. • Initiating a new surface water discharge is contrary to the goal of the National Pollutant Discharge Elimination System program and may not be supported by the Regional Water Board (Regional Board 2020). • Construction of a local WWTP would be a lengthy process and would involve significant noise, dust, and visual impacts on neighbors in the area. Permanent visual, noise and odor impacts would also occur during operations. • If facility is designed for a maximum predicted rate, even though flows will ramp up gradually, and may never reach the maximum rate, this would result in a WWTP that is oversized, at least for much of its useful life. Building a larger WWTP and initially operating at reduced capacity is technically challenging, wasteful of energy, and unnecessarily costly. • Operation and maintenance for a full scale WWTP would have to be supported by small initial ratepayer base. • Alternatively, if a smaller facility is initially constructed, expansion of the WWTP to accommodate larger, future flows would be costly. Further, treatment processes may not be easily scalable without substantial redesign and reconstruction of WWTP elements.
Local Alternative 3: Local WWTP with Water Recycling within the Town for Local Reuse and Wildfire Defense	• May not comply with State and Regional Water Board policies supporting regionalization of wastewater services. Likely to receive less favorable consideration, or outright denial, • especially if regionalization has similar or better overall feasibility. (Regional Board 2020) • Siting a local wastewater facility within residential and business areas is more complex than other alternatives • Lack of sufficient potential recycled water users in the area to match the quantity of wastewater produced. • A large effluent storage facility likely needed for winter flows, similar to Local Alternative 1. Finding 150 acres of land to purchase for effluent storage was found to be infeasible. This alternative would also take approximately 150 acres of land out of agricultural use. • Available land for effluent storage would likely have environmentally sensitive plants and resources that would be destroyed or heavily impacted beyond mitigation by installation of the effluent storage facilities: vernal pools, meadowfoam, and other rare plants (HDR 2020) • Construction of a local WWTP would be a lengthy process and would involve

Local Alternative	Reasons for Infeasibility
	significant noise, dust, and visual impacts on neighbors in the area. Permanent visual, noise and odor impacts would also occur during operations. • The addition of an auxiliary water supply system for fire suppression would be a separate pipeline system that would have to be constructed within the Town and would greatly increase construction and operations costs that would be supported by small initial ratepayer base. • If facility is designed for a maximum predicted rate, even though flows will ramp up gradually, and may never reach the maximum rate, this would result in a WWTP that is oversized, at least for much of its useful life. Building a larger WWTP and initially operating at reduced capacity is technically challenging, wasteful of energy, and unnecessarily costly. • Operation and maintenance for a full scale WWTP would have to be supported by small initial ratepayer base. • Alternatively, if a smaller facility is initially constructed, expansion of the WWTP to accommodate larger, future flows would be costly. Further, treatment processes may not be easily scalable without substantial redesign and reconstruction of WWTP elements. • Extensive, ongoing monitoring required for the local WWTP and recycling facilities.
Local Alternative 4: Local WWTP with discharge to the Miocene Canal	• May not comply with State and Regional Water Board policies supporting regionalization of wastewater services. Likely to receive less favorable consideration, or outright denial, • especially if regionalization has similar or better overall feasibility. (Regional Board 2020) • Siting a local wastewater facility within residential and business areas is more complex than other alternatives. • Current agriculture users along the Miocene Canal may not want treated effluent to be mixed with Lake Oroville water supplied to the canal. • Because of the potential for direct use of treated wastewater by users along the Miocene Canal, there would likely be additional treatment processes required, resulting in more land required for treatment facilities and a more complex plant to operate. • Very stringent discharge requirements in a permit issued by the Regional Board, including extensive, on-going monitoring requirements. • The requirement to have several state agencies approve the discharge of advanced treated wastewater with downstream municipal drinking water uses would be more complex than other alternatives. • Pentz Road, where the pipeline to the local WWTP would be built, is narrow and construction truck traffic would impact local residents and businesses. • Construction of a local WWTP would be a lengthy process and would involve significant noise, dust, and visual impacts on neighbors in the area. Permanent visual, noise and odor impacts would also occur during operations. • Potential for impacts on habitat along the Miocene Canal, or in Kunkle Reservoir if discharge were to occur there. • Little or no storage would be available in the event of a WWTP upset and no alternative discharge location would be available. • If facility is designed for a maximum predicted rate, even though flows will ramp up gradually, and may never reach the maximum rate, this would result in a WWTP that is oversized, at least for much of its useful life. Building a larger WWTP and initially operating at reduced capacity is technically challenging, wasteful of energy, and unnecessarily costly. • Operation and maintenance for a full scale WWTP would have to be supported by

Local Alternative	Reasons for Infeasibility
	small initial ratepayer base. • Alternatively, if a smaller facility is initially constructed, expansion of the WWTP to accommodate larger, future flows would be costly. Further, treatment processes may not be easily scalable without substantial redesign and reconstruction of WWTP elements.

Source: HDR 2020

5.2.2 Neal Road Export Pipeline System Alignment Alternative

The Neal Road Alternative would place the pipeline along Neal Road rather than Skyway. This alternative would start at the intersection of Skyway and Neal Road and continue southwest along Neal Road. The Neal Road Alternative would follow Neal Road as it turns west and make a perpendicular trenchless crossing at SR 99. It would continue along Neal Road until it reaches the Oroville-Chico Highway, where it would turn northwest. The Neal Road Alternative would continue along the northern edge of the Oroville-Chico Highway and makes a trenchless crossing of Butte Creek. This alternative would then turn north on Midway and continue along Midway until it reaches Hegan Lane. At Hegan Lane, the Neal Road Alternative would turn southwest and continue along the same route as the Proposed Project to the Chico WPCP.

This alternative was eliminated based on criterion 2 (infeasibility) and criterion 3 (inability to avoid significant environmental impacts), as described in further detail below.

- The Neal Road ROW is narrow in several locations and constructability would be difficult. Because Neal Road is very narrow, homes are located very close to the road and there is little available ROW (**criterion 2**).
- The Neal Road alignment would be longer and more expensive. Specifically, the cost estimate for the Neal Road Alternative would be substantially more expensive than the Proposed Project during construction because the length of the open cut construction for the Neal Road Route is 22 percent longer. The Neal Road Alternative would also require an additional 19,000 feet of force main, which would incur additional pumping head loss and therefore would incur higher power costs during operations and maintenance (**criterion 2**).
- Both the Proposed Project and the Neal Road Alternative would have similar constraints associated with biological resources, seasonal wetlands vernal pools, and sensitive and protected species documented in each location Moreover, each route would require the same types of permitting and regulatory consultation for these resources in Phase 2 of this planning process (**criterion 3**).
- Near SR 99 both the Neal Road Alternative and the Proposed Project would cross an agricultural ditch and Butte Creek. Because the pipeline installation across these water bodies would be done using trenchless methods, impacts on the water quality at these water bodies would be similar and would be an issue only if those activities resulted in a frac-out (**criterion 3**).

Although this alternative alignment would meet the Proposed Project objectives, it would not reduce the potential for significant effects on biological resources, and, since the alignment would be 22-percent longer, the construction period would be extended and would exacerbate impacts on other resources,

such as air quality and greenhouse gases. Only those locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (CEQA Guidelines Section 15126.6 [b]). Therefore, the Neal Road alternative was eliminated from consideration based on criterion 2 and criterion 3, as described above.

5.2.3 Butte Creek Alignment Spur within the Skyway Export Pipeline Alignment Alternative

The Butte Creek Alternative would follow much of the proposed Skyway alignment; however, it would provide an alternate route between Skyway and Midway, crossing Butte Creek and SR 99 south of the proposed export pipeline alignment. The Butte Creek Alternative would turn southwest from Skyway and cross the Virgin Valley Unit of the Butte Creek Canyon Ecological Reserve before crossing Butte Creek and SR 99 with trenchless HDD. The pipeline would continue west along Marybill Ranch Road and would then turn north on Midway and rejoin the proposed export pipeline alignment along Midway to Hegan Lane.

This alternative was eliminated based on criterion 2 (infeasibility) and criterion 3 (inability to avoid significant environmental impacts) because it would require extensive open-cut trenching across the ecological reserve, which is both considered infeasible and highly impactful to a sensitive and protected area of habitat. Further, similar to the Neal Road alignment alternative, this alignment would also be longer and more expensive. Therefore, the Butte Creek alignment spur alternative was eliminated from consideration based on criteria 2 and 3, as described in Section 5.2.1.

5.3 Alternatives Evaluated in the EIR

This section describes the alternatives to the Proposed Project that were selected and analyzed according to CEQA Guidelines Section 15126.6(a) as part of this PEIR. The analyzed alternatives, including the No Project Alternative, represent a reasonable range of alternatives to the Proposed Project that would feasibly attain most of the Proposed Project's basic objectives, and that would avoid or lessen the significant adverse environmental effects of the Proposed Project. The Proposed Project's objectives are discussed in detail in Chapter 2 and listed in 5.1.2 Project Objectives and Goals. Significant Proposed Project impacts are summarized in Section 4.3 and are described in detail under the corresponding resource in Chapter 3 Environmental Impact Analysis.

The following four alternatives were selected for comparative analysis in this PEIR:

- **No Project Alternative:** The No Project Alternative is required by CEQA and consists of the circumstances under which the Proposed Project does not proceed.
- **Entler Avenue Hybrid Alternative**: Proposed Project with alternative pipeline alignment for crossing SR 99.
- **Crouch Avenue Alternative:** Proposed Project with alternative pipeline alignment for crossing Little Chico Creek.
- **Entler Avenue Hybrid and Crouch Avenue Alternative**: Proposed Project with alternative pipeline alignment for crossing SR 99 and alternative pipeline alignment for crossing Little Chico Creek.

Each alternative is described below. Consistent with the Proposed Project, the transition to the Core Collection System for the Entler Avenue Hybrid Alternative, Crouch Avenue Alternative, and the Entler Avenue Hybrid and Crouch Avenue Alternative for existing structures would be at a property owner's discretion, although the City is pursuing grants to incentivize sewer connection within the Core Collection System area; new construction would be required to connect to the system. Remediation and disposition of existing on-site septic tanks and leach fields would be the responsibility of the individual parcel owner, and these actions are not considered in this PEIR as part of the Proposed Project or alternatives, but a parcel's septic system would need to be remediated (abandoned or removed) as a condition of connecting to the Proposed Project and alternatives. The following discusses whether the alternative would avoid or lessen identified Project impacts, whether new significant impacts may occur, and the ability of the alternative to meet Proposed Project objectives.

5.3.1 No Project Alternative

The No Project alternative represents conditions in the study area in the absence of approval of the proposed project (CEQA Guidelines Section 15126.6(e)(1)). The No Project Alternative must discuss current conditions as well as reasonably foreseeable future conditions expected to occur if the project were not approved (CEQA Guidelines Section 15126.6(e)(2)). However, the analysis of the No Project alternative should not be confused with comparison of the proposed project to Existing Conditions (the baseline for determining the project's environmental impacts) (CEQA Guidelines Section 15126.6(e)(1)). The purpose of describing and analyzing a No Project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The analysis of the No Project alternative, as with the analysis of other alternatives, is usually a comparative or qualitative assessment (CEQA Guidelines Section 15126.6(d)(e))

Under the No Project Alternative, the Town would not construct a Core Collection System, an Export Pipeline System, or an Extended Collection System. The Town would continue to rely on private, individual septic systems for wastewater management. The Town's objectives and goals for the Proposed Project would not be met and the risk of water contamination; public health risks; burdens of on-site wastewater management for business; and restrictions on essential community services, multi-family, and affordable housing would continue. In addition, regrowth in the community would continue to be limited by a requirement for separate septic systems. Multi-family housing construction in the core area would be restricted in size and numbers and would likely provide no additional multi-family housing for the community. Business growth would be limited to septic systems consistent with individual lot sizes, limiting growth for larger businesses and those that have higher capacity needs for sewage management (e.g., restaurants).

5.3.2 Entler Avenue Hybrid Alternative

The Entler Avenue Hybrid Alternative would include the same Core Collection System within the Town and the same Export Pipeline System along Skyway but would provide an alternative route between Skyway and Entler Avenue (see Figure 5.3-1). This alternative would cross Butte Creek with trenchless HDD at the same location as the Proposed Project but would cross SR 99 north of the Proposed Project alignment, bisecting the California Highway Patrol property and another private parcel. Similar to the Proposed Project, the Entler Avenue Hybrid Alternative would cross SR 99 with a trenchless

crossing aligned with Norfield Avenue. The pipeline would then rejoin the Proposed Project alignment along Entler Avenue. According to the Butte County General Plan Land Use Designations Map, land uses near the Entler Avenue Hybrid Alternative include Very Low Density Residential, Public and Industrial (Butte County 2012). The total length of this alternative is approximately 2,622 feet. All other components of the Proposed Project would remain the same as defined in Chapter 2, Project Description. Short- and possibly long-term easements would be required from California Highway Patrol and an adjacent property owner.

The Entler Avenue Hybrid Alternative offers an alternative alignment to a portion of the Export Pipeline System crossing SR 99. This alternative is feasible, meets the Proposed Project objectives, and could result in similar or fewer environmental impacts as compared to the Proposed Project; therefore, this alternative was carried forward for detailed environmental review in this PEIR.

5.3.3 Crouch Avenue Alternative

The Crouch Avenue Alternative would include the same Core Collection System within the Town and the same Export Pipeline System along Skyway but would provide an alternative route for the pipeline to cross Little Chico Creek (see Figure 5.3-2). After the Proposed Project alignment would cross Comanche Creek and turn north along Crouch Avenue, the Crouch Avenue Alternative would continue along Crouch Avenue to Chico River Road, crossing Little Chico Creek along the way. Little Chico Creek would be crossed using trenchless technology via HDD methods. The Crouch Avenue Alternative would then turn west to rejoin the Proposed Project alignment as it travels west along Chico River Road to the Chico WPCP. The area surrounding the Crouch Avenue Alternative is designated as Agriculture (Butte County 2012). The total length of this alternative is approximately 7,353 feet. All other components of the Proposed Project would remain the same as defined in Chapter 2, Project Description. The Crouch Avenue Alternative offers an alternative alignment to a portion of the Export Pipeline System crossing Little Chico Creek. This alternative is feasible, meets the Proposed Project objectives, and could result in similar or fewer environmental impacts as compared to the Proposed Project; therefore, this alternative was carried forward for detailed environmental review in this PEIR.

5.3.4 Entler Avenue Hybrid and Crouch Avenue Alternative

The Entler Avenue Hybrid and Crouch Avenue Alternative would include the same Core Collection System within Paradise and the same Export Pipeline System along Skyway but would provide alternative routes for the pipeline to cross SR 99 and Little Chico Creek. This alternative comprises a combination of the Entler Avenue Hybrid and Crouch Avenue alternatives discussed in the previous two sections.

Consistent with the Entler Avenue Hybrid alternative, this alternative would cross Butte Creek with trenchless HDD at the same location as the Proposed Project but would cross SR 99 north of the Proposed Project alignment, bisecting the California Highway Patrol property and another private parcel. Similar to the Proposed Project, the Entler Avenue Hybrid Alternative would cross SR 99 with a trenchless crossing aligned with Norfield Avenue. The pipeline would then rejoin the Proposed Project alignment along Entler Avenue. Consistent with the Crouch Avenue alternative, this alternative would

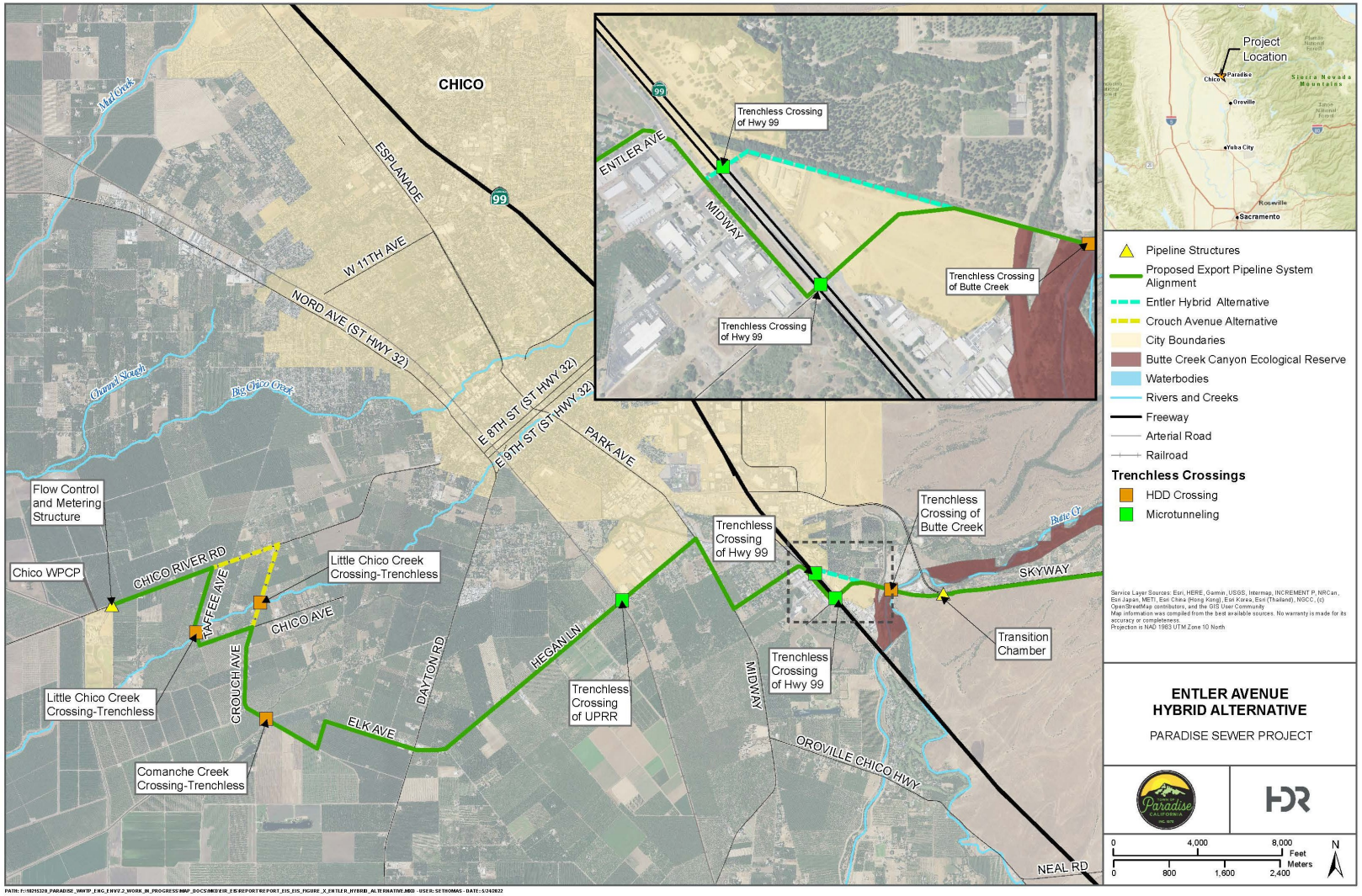

Figure 5.3-1. Entler Avenue Hybrid Alternative

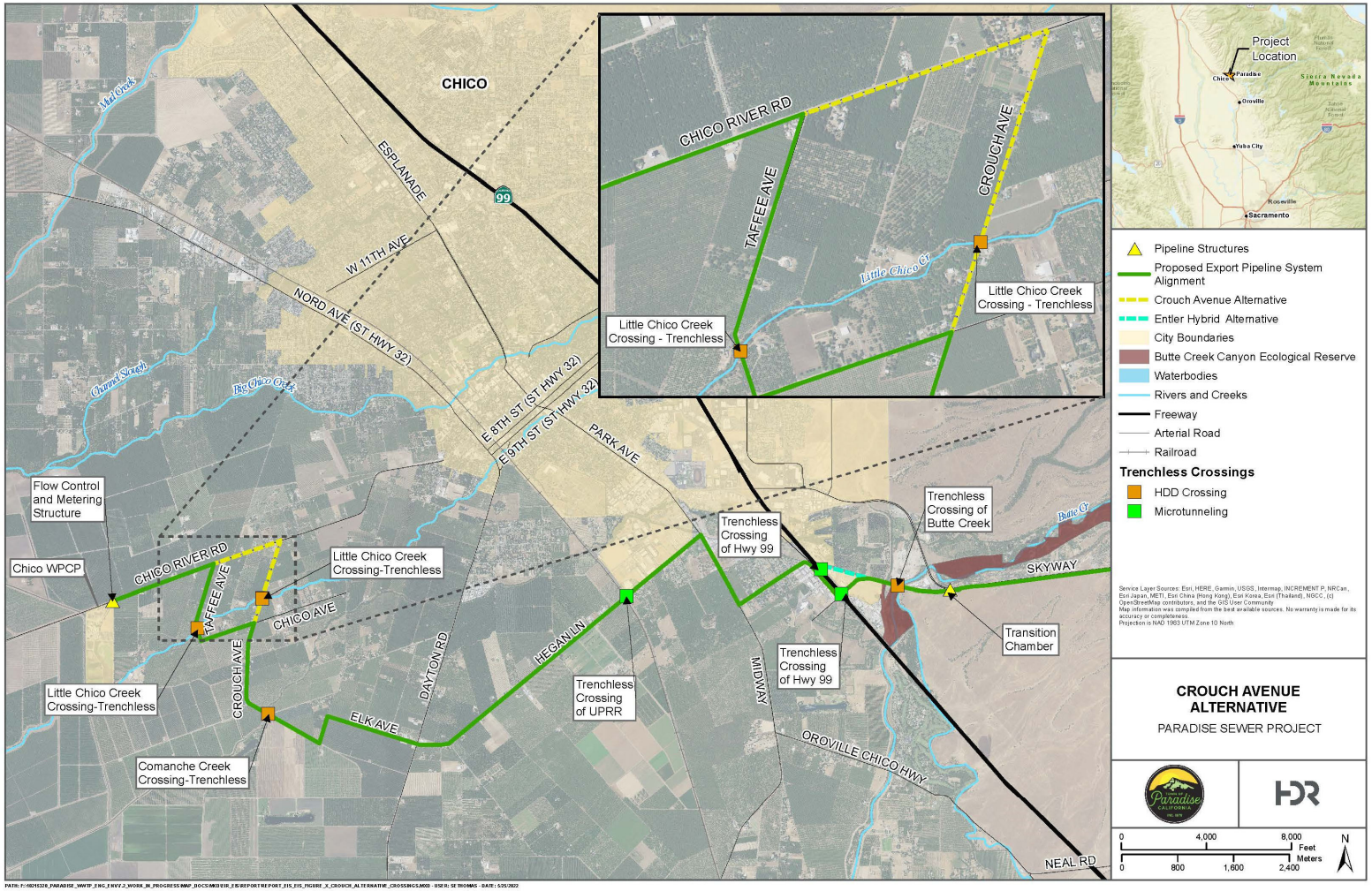

Figure 5.3-2. Crouch Avenue Alternative

leave the Proposed Project alignment at Chico Avenue to continue along Crouch Avenue, crossing Little Chico Creek using trenchless technology along the way. This alternative would then turn west to rejoin the Proposed Project alignment as it travels west along Chico River Road to the Chico WPCP. According to the Butte County General Plan Land Use Designations Map, land uses near the Entler Avenue Hybrid Alternative include Very Low Density Residential, Public and Industrial, and Agriculture (Butte County 2012). The total length of this alternative is approximately 9,975 feet. All other components of the Proposed Project would remain the same as defined in Chapter 2 Project Description.

The Entler Avenue Hybrid and Crouch Avenue Alternative offers an alternative alignment to portions of the Export Pipeline System crossing SR 99 and Little Chico Creek. This alternative is feasible, meets the project objectives, and could result in similar or fewer environmental impacts as compared to the Proposed Project; therefore, this alternative has been carried forward for detailed environmental review in this PEIR.

5.4 Methodology and Organization for Evaluating Alternatives

This section discusses the methods used for evaluating impacts from implementation of the alternatives during construction, operation, and maintenance. This section also describes how the alternatives impact analysis is organized.

5.4.1 Method for Evaluating Alternatives

Each of the alternatives was evaluated using the same Project area and methodology as described in Chapter 3, Environmental Impact Analysis, for the Proposed Project. The alternatives analysis evaluates each alternative's impacts on the various resources during construction, operation, and maintenance activities. A resource-specific study area is defined for each respective resource topic in Chapter 3 and carried forward in this alternatives analysis. Methods and data sources that analysts used to identify impacts on each resource are also consistent with those discussed in Chapter 3. Accordingly, the methods for analysis vary by resource, and rely on both qualitative and quantitative techniques. For some resource topics, fieldwork was conducted to collect data to support the impact analysis. Thresholds of significance for each resource in the alternatives analysis were also developed consistent with CEQA Guidelines Appendix G to determine the significance of potential impacts. Where feasible, mitigation measures are proposed to minimize significant adverse impacts from the alternatives.

5.4.2 Organization for Alternatives Impact Analysis

This section is organized first by resource, then by alternative: No Project Alternative, Entler Avenue Hybrid Alternative, Crouch Avenue Alternative, and the Entler Avenue Hybrid and Crouch Avenue Alternative. Under each alternative, each resource topic area follows the same order as the Proposed Project analysis in Chapter 3, Environmental Impact Analysis. As applicable, construction impacts were considered and are discussed based on the three Project components: (1) construction of the Core Collection System; (2) construction of the Export Pipeline System; and (3) construction of the Extended Collection System. When impacts are found to be significant, mitigation measures are proposed, and

post-mitigation significance conclusions are provided. Impacts and mitigation measures follow the same naming and numbering structure as in Chapter 3.

5.5 Alternatives Impact Analysis

5.5.1 Agriculture

5.5.1.1 No Project Alternative

Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use (No Impact)

Under the No Project Alternative, existing conditions would remain the same and no ground disturbance would occur. Therefore, the No Project Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use.

Mitigation. No mitigation required.

Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract (No Impact)

Under the No Project Alternative, existing conditions would remain the same. Therefore, the No Project Alternative would not conflict with existing zoning for agricultural use or a Williamson Act contract, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would conflict with agricultural zonings or a Williamson Act contract.

Mitigation. No mitigation required.

Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) (No Impact)

Under the No Project Alternative, existing conditions would remain the same. Therefore, the No Project Alternative would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would conflict with such zonings.

Mitigation. No mitigation required.

Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use (No Impact)

Under the No Project Alternative, existing conditions would remain the same and no ground disturbance would occur. Therefore, the No Project Alternative would not result in the loss of forest land or conversion of forest land to non-forest use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would impact forest land.

Mitigation. No mitigation required.

Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use (No Impact)

Under the No Project Alternative, existing conditions would remain the same and no ground disturbance would occur. Therefore, the No Project Alternative would not result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use, resulting in no impact.

The level of impact would be less than that for the Proposed Project because the Proposed Project would result in a less-than-significant impact on this criterion.

Mitigation. No mitigation required.

5.5.1.2 Entler Avenue Hybrid Alternative

Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would be located primarily within the Butte County ROW. When the Entler Avenue Hybrid Alternative leaves UPRR's ROW, it would traverse private parcels before rejoining the public ROW at the Entler Avenue and Norfield Avenue intersection. The Entler Avenue Hybrid Alternative would traverse parcels designated as Urban and Built-Up Land (DOC 2021b). The remaining Entler Avenue Hybrid Alternative alignment would be located in the Butte County public ROW. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would be located primarily within the Butte County public ROW. When the Entler Avenue Hybrid Alternative leaves UPRR's ROW, it would traverse private parcels before rejoining the public ROW at the Entler Avenue and Norfield Avenue intersection. The Entler Avenue Hybrid Alternative would traverse parcels with a City of Chico zoning of CR – Regional Commercial (City of Chico 2020b). The Entler Avenue Hybrid Alternative would traverse parcels that are not enrolled in the Williamson Act (Butte County 2021b). The remaining Entler Avenue Hybrid Alternative alignment would be located within the Butte County public ROW. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not conflict with existing zoning for agricultural use, or a Williamson Act contract, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with existing zoning for agricultural use, or a Williamson Act contract and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) (No Impact)

No lands zoned forest land, timberland, or timberland zoned Timberland Production occur within the Entler Avenue Hybrid Alternative area. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use (No Impact)

A review of aerial imagery and street view indicates no forest or timber resources occur within the Entler Avenue Hybrid Alternative area (Google Earth 2022). Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not result in the loss of forest land nor conversion of forest land to non-forest use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would result in loss or conversion of forest land and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use (Less than Significant Impact)

As noted under Impact AG-4, no forest resources occur within the Entler Avenue Hybrid Alternative area. While the Entler Avenue Hybrid Alternative would be located primarily within the Butte County public ROW, it would be adjacent to farmlands (Google Earth 2022). Construction activities associated with this alternative have the potential to result in temporary, indirect effects involving dust and stormwater runoff at adjacent farmlands. The Entler Avenue Hybrid Alternative will be required to implement best practices during construction to minimize dust emissions and reduce stormwater runoff. The temporary effects at adjacent farmlands would cease once construction is complete. Therefore, impacts on farmlands during construction of the Entler Avenue Hybrid Alternative would be less than significant. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads). Operation and maintenance activities, as described in Section 2.8, would not generate excessive dust or substantially increase stormwater runoff in the vicinity of farmlands due to the infrequency of these activities. Therefore, no impacts on farmlands would occur.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less than significant impacts on this criterion.

Mitigation. No mitigation required.

5.5.1.3 Crouch Avenue Alternative

Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use (No Impact)

The Crouch Avenue Alternative would be located entirely within the Butte County public ROW. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract (No Impact)

The Crouch Avenue Alternative would be located entirely within the Butte County public ROW. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with existing zoning for agricultural use, or a Williamson Act contract, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with existing zoning for agricultural use, or a Williamson Act contract and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) (No Impact)

There are no lands zoned forest land, timberland, or timberland zoned Timberland Production within the Crouch Avenue Alternative area. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use (No Impact)

A review of aerial imagery and street view indicates that there are no forest or timber resources within the Crouch Avenue Alternative area (Google Earth 2022). Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not result in the loss of forest land or conversion of forest land to non-forest use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would result in loss or conversion of forest land and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use (Less than Significant Impact)

As noted under Impact AG-4, there are no forest resources within the Crouch Avenue Alternative area. While the Crouch Avenue Alternative would be located entirely within the Butte County public ROW, it would be adjacent to farmlands (Google Earth 2022). Construction activities associated with this alternative have the potential to result in temporary effects involving dust and stormwater runoff at adjacent farmlands. The Crouch Avenue Alternative will be required to implement best practices during construction to control dust emissions and reduce stormwater runoff. The temporary effects at adjacent farmlands would cease once construction is complete. Therefore, impacts on farmlands during construction of the Crouch Avenue Alternative would be less than significant. Operation and maintenance activities, as described in Section 2.8, associated with this alternative would not generate excessive dust or substantially increase stormwater runoff in the vicinity of farmlands due to the infrequency of these activities and no impacts on farmlands would occur.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less than significant impacts on this criterion.

Mitigation. No mitigation required.

5.5.1.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would be located primarily within the Butte County public ROW. When the Entler Avenue Hybrid and Crouch Avenue Alternative leaves UPRR's ROW, it would traverse private parcels before rejoining the public ROW at the Entler Avenue and Norfield Avenue intersection. The Entler Avenue Hybrid and Crouch Avenue Alternative would traverse parcels designated as Urban and Built-Up Land (DOC 2021b). The remaining Entler Avenue Hybrid and Crouch Avenue Alternative alignment would remain within the Butte County public ROW. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project Entler alignment would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would be located primarily within the Butte County public ROW. When the Entler Avenue Hybrid and Crouch Avenue Alternative leaves UPRR's ROW, it would traverse private parcels before rejoining the public ROW at the Entler Avenue and Norfield Avenue intersection. The Entler Avenue Hybrid and Crouch Avenue Alternative would traverse parcels with a City of Chico zoning of CR – Regional Commercial (City of Chico 2020b). The Entler Avenue Hybrid and Crouch Avenue Alternative would traverse parcels that are not enrolled in the Williamson Act (Butte County 2021b). The remaining Entler Avenue Hybrid and Crouch Avenue Alternative alignment would remain within the public ROW. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with existing zoning for agricultural use, or a Williamson Act contract, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project Entler alignment would conflict with existing zoning for agricultural use, or a Williamson Act contract and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) (No Impact)

There are no lands zoned forest land, timberland, or timberland zoned Timberland Production within the Entler Avenue Hybrid and Crouch Avenue Alternative area. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project Entler alignment would conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use (No Impact)

A review of aerial imagery and street view indicates that there are no forest or timber resources within the Entler Avenue Hybrid and Crouch Avenue Alternative area (Google Earth 2022). Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative

would not result in the loss of forest land or conversion of forest land to non-forest use, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project Entler alignment would result in loss or conversion of forest land and no impact would occur on this criterion.

Mitigation. No mitigation required.

Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use (Less than Significant Impact)

As noted under Impact AG-4, there are no forest resources within the Entler Avenue Hybrid and Crouch Avenue Alternative area. While the Entler Avenue Hybrid and Crouch Avenue Alternative would be located primarily within the Butte County public ROW, it would be adjacent to farmlands (Google Earth 2022). Construction activities associated with this alternative have the potential to result in temporary, effects involving dust and stormwater runoff at adjacent farmlands. The Entler Avenue Hybrid and Crouch Avenue Alternative will be required to implement best practices during construction to control dust emissions and reduce stormwater runoff. The temporary effects at adjacent farmlands would cease once construction is complete. Therefore, impacts on farmlands during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would be less than significant. Operation and maintenance activities, as described in Section 2.8, associated with this alternative would not generate excessive dust or substantially increase stormwater runoff in the vicinity of farmlands due to the infrequency of these activities and no impacts on farmlands would occur.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler alignment would result in less than significant impacts on this criterion.

Mitigation. No mitigation required.

5.5.1.5 Alternatives Impact Summary

Table 5.5-1 summarizes the agriculture and forestry resources impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-1. Alternatives Impacts Summary for Agriculture and Forestry Resources

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring	NI	NI (=)	NI (=)	NI (=)	NI (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Program of the California Resources Agency, to non-agricultural use					
Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by California Government Code Section 51104(g))	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.2 Air Quality

5.5.2.1 No Project Alternative

Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no population or employment growth would be induced. Therefore, the No Project Alternative would not conflict with or obstruct implementation of the applicable air quality attainment plan, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would conflict with or obstruct implementation of an applicable air quality plan.

Mitigation. No mitigation required.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no criteria air pollutant emissions would be generated. The No Project Alternative would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard. Therefore, no impact would occur. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not result in a cumulatively considerable net increase of criteria air pollutants, while the Proposed Project would result in less-than-significant impacts on this criterion.

Mitigation. No mitigation required.

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no TAC emissions would be generated. The No Project Alternative would not expose sensitive receptors to substantial pollutant concentrations. Therefore, no impact would occur. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not expose sensitive receptors to substantial pollutant concentrations, while the Proposed Project would result in less-than-significant impacts on this criterion.

Mitigation. No mitigation required.

Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people (Less than Significant Impact)

Under the No Project Alternative, the wastewater system in Paradise would continue to consist of individual, privately owned septic tanks and leach fields with subsurface disposal systems. Septic systems, by their nature, can emit odors that are unpleasant. However, no documented odor complaints are associated with the Town's existing wastewater treatment system. Therefore, odor impacts under the No Project Alternative would be less than significant. The level of impact would be similar to that for the Proposed Project during construction of the Proposed Project. However, when compared to odor impacts during operation and maintenance of the Proposed Project, impacts from the No Project Alternative would be greater than Proposed Project. This is because the Proposed Project would improve odor through the removal of septic systems.

Mitigation. No mitigation required.

5.5.2.2 Entler Avenue Hybrid Alternative

Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan (Less than Significant Impact)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. Similar to the Proposed Project, all construction jobs

associated with the Entler Avenue Hybrid Alternative would be temporary and would be primarily filled by the current workforce within Butte County. During construction, the Entler Avenue Hybrid Alternative would not result in employment growth within the county beyond growth projections presented in the 2018 Air Quality Attainment Plan. Operation and maintenance of the Entler Avenue Hybrid Alternative could foster population and economic growth in the study area. However, any population inducement would be a regrowth and repopulation towards pre-fire levels and would be contained within the Town. About 5-10 permanent employees would serve this alternative during operation and maintenance, which may be re-assigned from existing staff within the Town or may be additional new staff. The minimal increase in employment during operation and maintenance of this alternative would be consistent with the growth projections in the 2018 Air Quality Attainment Plan. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not conflict with or obstruct implementation of the 2018 Air Quality Attainment Plan, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would have a less than significant impact on conflicting with or obstructing implementation of the 2018 Air Quality Attainment Plan.

Mitigation. No mitigation required.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would generate criteria air pollutant emissions during construction. The Entler Avenue Hybrid Alternative would generate criteria air pollutant emissions similar to those listed in Table 3.3-3, Unmitigated Construction Criteria Air Pollutant Emissions. This alternative would generate ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions that do not exceed the BCAQMD's thresholds of significance. Similar to the Proposed Project, the Entler Avenue Hybrid Alternative will implement BCAQMD's best practice measures to minimize fugitive dust during construction. Therefore, impacts from criteria air pollutant emissions during construction of the Entler Avenue Hybrid Alternative would be less than significant. Criteria air pollutant emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would have a less than significant impact on this criterion.

Mitigation. No mitigation required.

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations (Less than Significant Impact)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. The closest sensitive receptors to the Entler Avenue Hybrid Alternative are residential dwelling units along Entler Avenue, located approximately 50 feet

away (Google Earth 2022). During construction, the Entler Avenue Hybrid Alternative would generate TAC emissions from the use of diesel equipment that could affect existing sensitive receptors. However, construction activities would be temporary and short-term. Only portions of this alternative would be disturbed at a given time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location along Entler Avenue. This would allow for the dispersal of TAC emissions and would avoid continuous construction activity in the portions of the Entler Avenue Hybrid Alternative area closest to existing sensitive receptors. Similar to the Proposed Project, the Entler Avenue Hybrid Alternative will implement BCAQMD best practice measures to reduce diesel particulate matter from construction equipment. Therefore, construction of the Entler Avenue Hybrid Alternative would result in a less-than-significant impact from TAC emissions. TAC emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because sensitive receptors are located at the same distance (50 feet) from both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment. Therefore, both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative would result in a less-than-significant impact on this criterion.

Mitigation. No mitigation required.

Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people (Less than Significant Impact)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. During construction, the Entler Avenue Hybrid Alternative would result in emissions of odors in the form of diesel exhaust from construction equipment and vehicles. However, these odors would be short-term, limited in extent at any given time, and distributed throughout the Entler Avenue Hybrid Alternative area for the duration of construction. Therefore, construction of the Entler Avenue Hybrid Alternative would result in a less-than-significant impact from odor emissions. Similar to the Proposed Project, the Entler Avenue Hybrid Alternative would provide an overall odor benefit by replacing existing septic tanks that emit unpleasant odors. Odor emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less than significant impacts on this criterion.

Mitigation. No mitigation required.

5.5.2.3 Crouch Avenue Alternative

Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan (Less than Significant Impact)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. Similar to the Proposed Project, all construction jobs associated with the Crouch Avenue Alternative would be temporary and would be primarily filled by the current workforce within Butte County. During construction, the Crouch Avenue Alternative would not result in employment growth beyond growth projections presented in the 2018 Air Quality Attainment Plan. Operation and maintenance of the Crouch Avenue Alternative could foster population and economic growth in the study area. However, any population inducement would be a regrowth and repopulation towards pre-fire levels and would be contained within the Town. About 5-10 permanent employees would serve this alternative during operation and maintenance, which may be re-assigned from existing staff within the Town or may be additional new staff. The minimal increase in employment during operation and maintenance of this alternative would be consistent with the growth projections in the 2018 Air Quality Attainment Plan. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with or obstruct implementation of the 2018 Air Quality Attainment Plan, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would have a less than significant impact on the implementation of the 2018 Air Quality Attainment Plan.

Mitigation. No mitigation required.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would generate criteria air pollutant emissions during construction. The Crouch Avenue Alternative would generate criteria air pollutant emissions similar to those listed in Table 3.3-3, Unmitigated Construction Criteria Air Pollutant Emissions. This alternative would generate ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions that do not exceed the BCAQMD's thresholds of significance. Similar to the Proposed Project, the Crouch Avenue Alternative will implement BCAQMD's best practice measures to minimize fugitive dust during construction. Therefore, impacts from criteria air pollutant emissions during construction of the Crouch Avenue Alternative would be less than significant. Criteria air pollutant emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would have a less than significant impact on this criterion.

Mitigation. No mitigation required.

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations (Less than Significant Impact)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. The closest sensitive receptors to the Crouch Avenue Alternative are residential dwelling units along Crouch Avenue, located approximately 60 feet away (Google Earth 2022). During construction, the Crouch Avenue Alternative would generate TAC emissions from the use of diesel equipment that could affect existing sensitive receptors. However, construction activities would be temporary and short-term. Only portions of this alternative would be disturbed at a given time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location along Crouch Avenue. This would allow for the dispersal of TAC emissions by avoiding continuous construction activity in the portions of the Crouch Avenue Alternative area closest to existing sensitive receptors. Similar to the Proposed Project, the Crouch Avenue Alternative will implement BCAQMD best practice measures to reduce diesel particulate matter from construction equipment. Therefore, construction of the Crouch Avenue Alternative would result in less-than-significant impacts from TAC emissions. TAC emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project, except that, sensitive receptors are farther away under the Crouch Avenue Alternative (60 feet) compared to the Proposed Project (50 feet). Therefore, while both would result in a less-than-significant impact on this criterion, impacts under the Crouch Avenue Alternative would be considered slightly less than the Proposed Project Entler Avenue alignment impacts.

Mitigation. No mitigation required.

Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people (Less than Significant Impact)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. During construction, the Crouch Avenue Alternative would result in emissions of odors in the form of diesel exhaust from construction equipment and vehicles. However, these odors would be short-term, limited in extent at any given time, and distributed throughout the Crouch Avenue Alternative area for the duration of construction. Therefore, construction of the Crouch Avenue Alternative would result in a less-than-significant impact from odor emissions. Similar to the Proposed Project, the Crouch Avenue Alternative would provide an overall odor benefit by replacing existing septic tanks that emit unpleasant odors. Odor emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project alignment would result in less than significant impacts on this criterion.

Mitigation. No mitigation required.

5.5.2.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan (Less than Significant Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. Similar to the Proposed Project, all construction jobs associated with the Entler Avenue Hybrid and Crouch Avenue Alternative would be temporary and would primarily be filled by the current workforce within Butte County. During construction, the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in employment growth within the county beyond growth projections presented in the 2018 Air Quality Attainment Plan. Operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative could foster population and economic growth in the study area. However, any population inducement would be a regrowth and repopulation towards pre-fire levels and would be contained within the Town. About 5-10 permanent employees would serve this alternative during operation and maintenance, which may be re-assigned from existing staff within the Town or may be additional new staff. The minimal increase in employment during operation and maintenance of this alternative would be consistent with the growth projections in the 2018 Air Quality Attainment Plan. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with or obstruct implementation of the 2018 Air Quality Attainment Plan, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment have a less than significant impact on obstructing implementation of the 2018 Air Quality Attainment Plan.

Mitigation. No mitigation required.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would generate criteria air pollutant emissions during construction. The Entler Avenue Hybrid and Crouch Avenue Alternative would generate criteria air pollutant emissions similar to those listed in Table 3.3-3, Unmitigated Construction Criteria Air Pollutant Emissions. This alternative would generate ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions that do not exceed the BCAQMD's thresholds of significance. Similar to the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative will implement BCAQMD's best practice measures to minimize fugitive dust during construction. Therefore, impacts from criteria air pollutant emissions during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would be less than significant. Criteria air pollutant emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would have a less than significant impact on this criterion.

Mitigation. No mitigation required.

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations (Less than Significant Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. The closest sensitive receptors to the Entler Avenue Hybrid and Crouch Avenue Alternative are residential dwelling units along Entler Avenue, located approximately 50 feet away (Google Earth 2022). During construction, the Entler Avenue Hybrid and Crouch Avenue Alternative would generate TAC emissions from the use of diesel equipment that could affect existing sensitive receptors. However, construction activities would be temporary and short-term. Only portions of this alternative would be disturbed at a given time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location along Entler Avenue or Crouch Avenue. This would allow for the dispersal of TAC emissions by avoiding continuous construction activity in the portions of the Entler Avenue Hybrid and Crouch Avenue Alternative area closest to existing sensitive receptors. Similar to the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative will implement BCAQMD best practice measures to reduce diesel particulate matter from construction equipment. Therefore, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less-than-significant impact from TAC emissions. TAC emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because sensitive receptors are located at the same distance (50 feet) from both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment. Therefore, both the Proposed Project and the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less-than-significant impact on this criterion.

Mitigation. No mitigation required.

Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people (Less than Significant Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.3, Air Quality. During construction, the Entler Avenue Hybrid and Crouch Avenue Alternative would result in emissions of odors in the form of diesel exhaust from construction equipment and vehicles. However, these odors would be short-term, limited in extent at any given time, and distributed throughout the Entler Avenue Hybrid and Crouch Avenue Alternative area for the duration of construction. Therefore, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less-than-significant impact from odor emissions. Similar to the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would provide an overall

odor benefit by replacing existing septic tanks that emit unpleasant odors. Odor emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in less than significant impacts on this criterion.

Mitigation. No mitigation required.

5.5.2.5 Alternatives Impact Summary

Table 5.5-2 summarizes the air quality impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-2. Alternatives Impacts Summary for Air Quality

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations	LTS	NI (-)	LTS (=)	LTS (-)	LTS (=)
Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people	LTS	LTS (+)	LTS (=)	LTS (=)	LTS (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.3 Biological Resources

5.5.3.1 No Project Alternative

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving candidate, sensitive, or special-status species, resulting in no impact. The level of

impact would be less than that for the Proposed Project because the impacts from the Proposed Project would be less than significant with mitigation incorporated under this criterion.

Mitigation. No mitigation required.

Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving riparian habitat or other sensitive natural communities, resulting in no impact. The level of impact would be less than that for the Proposed Project because the impacts from the Proposed Project would be less than significant with mitigation incorporated under this criterion.

Mitigation. No mitigation required.

Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving state or federally protected wetlands, resulting in no impact. The level of impact would be less than that for the Proposed Project because the impacts from the Proposed Project would be less than significant with mitigation incorporated under this criterion.

Mitigation. No mitigation required.

Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites (No impact)

Under the No Project Alternative, existing conditions would remain the same, and there would be no introduction of any new impermeable barriers to the landscape or waters. Therefore, the No Project Alternative would not result in substantial adverse effects involving the movement of native resident or migratory fish or wildlife species, or migratory wildlife corridors or nursery sites, resulting in no impact. The level of impact would be the same as that for the Proposed Project because there would be no impact on the movement of species, wildlife corridors and nursery sites under the No Project Alternative and the Proposed Project.

Mitigation. No mitigation required.

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving local policies or ordinances protecting biological resources, resulting in no impact. The

level of impact would be the same as that for the Proposed Project because there would be no impact from conflicting with local policies or ordinances protecting biological resources under the No Project Alternative and the Proposed Project.

Mitigation. No mitigation required.

Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving the provisions of any Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state conservation plan, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Proposed Project nor the No Project Alternative would result in impacts on a Habitat Conservation Plan or Natural Community Conservation Plan.

Mitigation. No mitigation required.

5.5.3.2 Entler Avenue Hybrid Alternative

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.4, Biological Resources. The Entler Avenue Hybrid Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat between Butte Creek and SR 99 than the Proposed Project. Valley-foothill riparian is suitable habitat for multiple special-status species of plants and wildlife and is often utilized by wildlife as a movement corridor. During the field studies in spring 2021, the valley-foothill riparian habitat between Butte Creek and SR 99 along the Entler Avenue Hybrid Alternative could not be examined closely during due to the lack of public access to this area. However, elderberry shrubs, which are the host plant of the federally threatened valley elderberry longhorn beetle, could be present in the valley-foothill riparian habitat along this alternative. Although suitable habitat for special-status plant and wildlife species would be avoided as much as possible, construction of the Entler Avenue Hybrid Alternative may result in adverse impacts on these species should they be present in areas proposed for disturbance. This is considered a potentially significant impact. The Entler Avenue Hybrid Alternative will implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-2: Special-status Plant Surveys**, **MM-BIO-3: Special-status Plant Avoidance**, **MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-9: Mapping of Elderberry Shrubs and Section 7 Consultation**, **MM-BIO-10: No Net Loss of Elderberry Shrubs**, **MM-BIO-11: Elderberry Transplanting**, **MM-BIO-12: Avoidance Areas**, **MM-BIO-13: Chemical Use**, and **MM-BIO-14:**

Mowing), which would reduce impacts on special-status plants and wildlife species during construction to less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on special-status plant and wildlife species.

The level of impact would be the same as that for the Proposed Project, except that the Entler Avenue Hybrid Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat, which is a sensitive community, between Butte Creek and SR 99. Therefore, impacts from the Entler Avenue Hybrid Alternative would be considered greater than impacts from the Proposed Project Entler Avenue alignment on this criterion. Both Proposed Project and the Entler Avenue Hybrid Alternative would require mitigation to reduce impacts to a less than significant level.

Mitigation. To minimize potentially significant impacts on special-status plant and wildlife species during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-BIO-1** through **MM BIO-5** and **MM-BIO-9** through **MM-BIO-14** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-2: Special-status Plant Surveys (see Section 3.4, Biological Resources, for description)

MM-BIO-3: Special-status Plant Avoidance (see Section 3.4, Biological Resources, for description)

MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control (see Section 3.4, Biological Resources, for description)

MM-BIO-9: Mapping of Elderberry Shrubs and Section 7 Consultation (see Section 3.4, Biological Resources, for description)

MM-BIO-10: No Net Loss of Elderberry Shrubs (see Section 3.4, Biological Resources, for description)

MM-BIO-11: Elderberry Transplanting (see Section 3.4, Biological Resources, for description)

MM-BIO-12: Avoidance Areas (see Section 3.4, Biological Resources, for description)

MM-BIO-13: Chemical Use (see Section 3.4, Biological Resources, for description)

MM-BIO-14: Mowing (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1** through **MM BIO-5** and **MM-BIO-9** through **MM-BIO-14**, impacts on special-status plant and wildlife species during construction would be less than significant.

Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

As described under Impact BIO-1, the Entler Avenue Hybrid Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat between Butte Creek and SR 99 than the Proposed Project. Valley-foothill riparian habitat is considered a sensitive natural community. No aquatic features are present within the Entler Avenue Hybrid Alternative footprint. Although sensitive natural communities would be avoided as much as possible, construction of the Entler Avenue Hybrid Alternative may result in adverse impacts on sensitive natural communities in the area between Butte Creek and SR 99. This is considered a potentially significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-7: Sensitive Community Fencing**, and **MM-BIO-8: Dry Work Areas**), which would reduce impacts on sensitive natural communities during construction to less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on sensitive natural communities.

The level of impact would be the same as that for the Proposed Project, except that Entler Avenue Hybrid Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat, which is a sensitive community, between Butte Creek and SR 99. Therefore, impacts from the Entler Avenue Hybrid Alternative would be considered greater than impacts from the Proposed Project Entler Avenue alignment on this criterion. Both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative would require mitigation to reduce impacts to less than significant level.

Mitigation. To minimize potentially significant impacts on sensitive natural communities during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-BIO-1**, **MM-BIO-5**, **MM-BIO-7**, and **MM-BIO-8** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control (see Section 3.4, Biological Resources, for description)

MM-BIO-7: Sensitive Community Fencing (see Section 3.4, Biological Resources, for description)

MM-BIO-8: Dry Work Areas (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1**, **MM-BIO-5**, **MM-BIO-7**, and **MM-BIO-8**, impacts on sensitive natural communities during construction would be less than significant.

Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (No Impact)

Since the Entler Avenue Hybrid Alternative was not accessible during the field studies in spring 2021, a desktop review was conducted to determine if aquatic features are present within the Entler Avenue Hybrid Alternative. Based on a desktop review of aerial images and other information as described in

Section 3.4.3, Methods of Analysis, no aquatic features are present within the Entler Avenue Hybrid Alternative footprint. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would result in no impacts on state or federally protected wetlands.

The level of impact would be less than that for the Proposed Project because vernal pools were mapped within 250-feet of Skyway for the Proposed Project and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts with mitigation incorporated on federally protected wetlands.

Mitigation. No mitigation required.

Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites (No impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would not interfere with movement of any fish or wildlife species because none of the Entler Avenue Hybrid Alternative components involve the introduction of any new impermeable barriers to the landscape or waters. All new infrastructure associated with the Entler Avenue Hybrid Alternative would be placed below ground. Additionally, none of the Entler Avenue Hybrid Alternative components would impede the use of wildlife nursery sites. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would have no impact on the movement of any native resident or migratory fish or wildlife species, wildlife corridors, or wildlife nursery sites.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would impact the movement of species, wildlife corridors, or wildlife nursery sites.

Mitigation. No mitigation required.

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (No Impact)

The *Butte County General Plan 2030* (Butte County 2012), *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008), and *Chico 2030 General Plan* (City of Chico 2017) include policies to protect water resources, wetland and riparian areas, fish and wildlife habitat, wildlife movement corridors, vegetation communities, open space for the preservation of natural resources, threatened and endangered species, and aquatic habitats. Additionally, the general plans include specific measures to preserve and protect oak trees and oak woodlands. A review of the policies included in the *Butte County General Plan 2030, Town of Paradise General Plan,* and *Chico 2030 General Plan* resulted in the determination that the Entler Avenue Hybrid Alternative activities are consistent with these policies. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not conflict with any local policies or ordinances protecting biological resources, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with local policies or ordinances protecting biological resources.

Mitigation. No mitigation required.

Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (No Impact)

Consistent with the analysis for the Proposed Project, a portion of the Entler Avenue Hybrid Alternative area overlaps with BRCP, which had not been formally adopted as of summer 2021, though it was in the final phase of development. Species analyzed and discussed in this document that are covered species under the BRCP include Hoover's spurge, Butte County meadowfoam, hairy Orcutt grass, Butte County checkerbloom, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Central Valley steelhead, Central Valley spring-run Chinook salmon, giant garter snake, western pond turtle, foothill yellow-legged frog, western spadefoot, tricolored blackbird, burrowing owl, California black rail, Swainson's hawk, and white-tailed kite. Construction, operation, and maintenance of the Entler Avenue Hybrid Alternative may be covered under the Waste and Wastewater Management Facility Permanent Development Projects component of the BRCP. However, these activities do not conflict with the BRCP. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As a result, no impacts would occur.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation. No mitigation required.

5.5.3.3 Crouch Avenue Alternative

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.4, Biological Resources. The Crouch Avenue Alternative would cross valley-foothill riparian habitat along Little Chico Creek. Valley-foothill riparian habitat is suitable habitat for multiple special-status species of plants and wildlife and is often utilized by wildlife as a movement corridor. During the field studies in spring 2021, elderberry shrubs, which are the host plant of the federally threatened valley elderberry longhorn beetle, were found to be present in valley-foothill riparian habitat along the Little Chico Creek at the Crouch Avenue Alternative crossing. Although suitable habitat for special-status plant and wildlife species would be avoided as much as possible, construction of the

Crouch Avenue Alternative may result in adverse impacts on these species should they be present in areas proposed for disturbance. This is considered a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-2: Special-status Plant Surveys**, **MM-BIO-3: Special-status Plant Avoidance**, **MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-9: Mapping of Elderberry Shrubs and USFWS Section 7 Consultation**, **MM-BIO-10: No Net Loss of Elderberry Shrubs**, **MM-BIO-11: Elderberry Transplanting**, **MM-BIO-12: Avoidance Areas**, **MM-BIO-13: Chemical Use**, and **MM-BIO-14: Mowing**), which would reduce impacts on special-status plants and wildlife species during construction to less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on special-status plant and wildlife species.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less than significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant impacts on special-status plant and wildlife species during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-BIO-1** through **MM BIO-5** and **MM-BIO-9** through **MM-BIO-14** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-2: Special-status Plant Surveys (see Section 3.4, Biological Resources, for description)

MM-BIO-3: Special-status Plant Avoidance (see Section 3.4, Biological Resources, for description)

MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control (see Section 3.4, Biological Resources, for description)

MM-BIO-9: Mapping of Elderberry Shrubs and USFWS Section 7 Consultation (see Section 3.4, Biological Resources, for description)

MM-BIO-10: No Net Loss of Elderberry Shrubs (see Section 3.4, Biological Resources, for description)

MM-BIO-11: Elderberry Transplanting (see Section 3.4, Biological Resources, for description)

MM-BIO-12: Avoidance Areas (see Section 3.4, Biological Resources, for description)

MM-BIO-13: Chemical Use (see Section 3.4, Biological Resources, for description)

MM-BIO-14: Mowing (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1** through **MM BIO-5** and **MM-BIO-9** through **MM-BIO-14**, impacts on special-status plant and wildlife species during construction would be less than significant.

Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

As discussed under Impact BIO-1, the Crouch Avenue Alternative would cross valley-foothill riparian habitat along Little Chico Creek. Additionally, the Crouch Avenue Alternative area includes aquatic resources, specifically Little Chico Creek. Valley-foothill riparian habitat and aquatic resources are considered sensitive natural communities. Although sensitive natural communities would be avoided as much as possible, construction of the Crouch Avenue Alternative may result in adverse impacts on sensitive natural communities along Little Chico Creek. This is considered a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-6: No Net Loss of Aquatic Resources**, **MM-BIO-7: Sensitive Community Fencing**, and **MM-BIO-8: Dry Work Areas**), which would reduce impacts on sensitive natural communities during construction to less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on sensitive natural communities.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less than significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant impacts on sensitive natural communities during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-BIO-1** and **MM-BIO-5** through **MM-BIO-8** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control (see Section 3.4, Biological Resources, for description)

MM-BIO-6: No Net Loss of Aquatic Resources (see Section 3.4, Biological Resources, for description)

MM-BIO-7: Sensitive Community Fencing (see Section 3.4, Biological Resources, for description)

MM-BIO-8: Dry Work Areas (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1** and **MM-BIO-5** through **MM-BIO-8**, impacts on sensitive natural communities during construction would be less than significant.

Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (Less than Significant Impact with Mitigation Incorporated)

Construction of the Crouch Avenue Alternative may result in the temporary and permanent loss of state or federally protected aquatic resources, specifically Little Chico Creek. Potential temporary and permanent impacts that may occur in or near the Crouch Avenue Alternative footprint include the bridge crossing under Little Chico Creek via HDD, staging and materials storage areas, and access roads. To date, only a preliminary assessment of aquatic resources has been conducted for the Crouch Avenue Alternative due to the lack of access to areas away from the public roadway. Prior to initiation of ground disturbing activities, a more complete mapping of aquatic resources in these areas would need to be completed to support a formal jurisdictional delineation during the permitting phase. The Crouch Avenue Alternative would be designed to avoid impacts, where possible, on Little Chico Creek. Although state and federally protected wetlands would be avoided as much as possible, construction of the Crouch Avenue Alternative may result in adverse impacts on these wetlands in association with Little Chico Creek. This is considered a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-6: No Net Loss of Aquatic Resources**, **MM-BIO-7: Sensitive Community Fencing**, **MM-BIO-8: Dry Work Areas**, and **MM-BIO-26: State or Federally Protected Wetlands Mitigation**), which would reduce impacts on state or federally protected wetlands during construction to less than significant. Operation and maintenance of the Crouch Avenue Alternative would not include ground disturbing activities in or adjacent to state or federally protected wetlands.

The level of impact would be the same as that for the Proposed Project, except that vernal pools were mapped within 250-feet of Skyway under the Proposed Project, which would be consistent with the Crouch Avenue Alternative. Therefore, based on available preliminary data, impacts from the Crouch Avenue Alternative would be considered greater than impacts from the Proposed Project Entler Avenue alignment on this criterion.

Mitigation. To minimize potentially significant impacts on state or federally protected wetlands during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-BIO-1**, **MM-BIO-5** through **MM-BIO-8**, and **MM-BIO-26** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas (see Section 3.4, Biological Resources, for description)

MM-BIO-6: No Net Loss of Aquatic Resources (see Section 3.4, Biological Resources, for description)

MM-BIO-7: Sensitive Community Fencing (see Section 3.4, Biological Resources, for description)

MM-BIO-8: Dry Work Areas (see Section 3.4, Biological Resources, for description)

MM-BIO-26: State or Federally Protected Wetlands Mitigation (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1**, **MM-BIO-5** through **MM-BIO-8**, and **MM-BIO-26**, impacts on state or federally protected wetlands during construction would be less than significant.

Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites (No Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would not interfere with movement of any fish or wildlife species because none of the Crouch Avenue Alternative components involve the introduction of any new impermeable barriers to the landscape or waters. All new infrastructure associated with the Crouch Avenue Alternative would be placed below ground. Additionally, none of the Crouch Avenue Alternative components would impede the use of wildlife nursery sites. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would have no impact on the movement of any native resident or migratory fish or wildlife species, wildlife corridors, or wildlife nursery sites.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would impact the movement of species, wildlife corridors, or wildlife nursery sites.

Mitigation. No mitigation required.

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (No Impact)

The *Butte County General Plan 2030* (Butte County 2012), *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008), and *Chico 2030 General Plan* (City of Chico 2017) include policies to protect water resources, wetland and riparian areas, fish and wildlife habitat, wildlife movement corridors, vegetation communities, open space for the preservation of natural resources, threatened and endangered species, and aquatic habitats. Additionally, the general plans include specific measures to preserve and protect oak trees and oak woodlands. A review of the policies included in the *Butte County General Plan 2030, Town of Paradise General Plan,* and *Chico 2030 General Plan* resulted in the determination that the Crouch Avenue Alternative activities are consistent with these policies. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with any local policies or ordinances protecting biological resources, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with local policies or ordinances protecting biological resources.

Mitigation. No mitigation required.

Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (No Impact)

Consistent with the analysis for the Proposed Project, a portion of the Crouch Avenue Alternative area overlaps with BRCP, which had not been formally adopted as of summer 2021, though it was in the final phase of development. Species analyzed and discussed in this document that are covered species under the BRCP include Hoover's spurge, Butte County meadowfoam, hairy Orcutt grass, Butte County checkerbloom, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Central Valley steelhead, Central Valley spring-run Chinook salmon, giant garter snake, western pond turtle, foothill yellow-legged frog, western spadefoot, tricolored blackbird, burrowing owl, California black rail, Swainson's hawk, and white-tailed kite. Construction, operation, and maintenance of the Crouch Avenue Alternative may be covered under the Waste and Wastewater Management Facility Permanent Development Projects component of the BRCP. However, these activities do not conflict with the BRCP. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As a result, no impacts would occur.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation. No mitigation required.

5.5.3.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.4, Biological Resources. The Entler Avenue Hybrid and Crouch Avenue Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat between Butte Creek and SR 99 than the Proposed Project. Additionally, this alternative would cross valley-foothill riparian habitat along Little Chico Creek. Valley-foothill riparian habitat is suitable habitat for multiple special-status species of plants and wildlife and is often utilized by wildlife as a movement corridor. During the field studies in spring 2021, the valley-foothill riparian habitat between Butte Creek and SR 99 along the Entler Avenue Hybrid and Crouch Avenue Alternative could not be examined closely during due to the lack of public access to this area. However, elderberry shrubs, which are the host plant of the federally threatened valley elderberry longhorn beetle, could be present in the valley-foothill riparian habitat along this alternative. During the field studies, elderberry shrubs were found to be present in valley-foothill riparian habitat along the Little Chico Creek at the Entler Avenue Hybrid and Crouch Avenue Alternative crossing. Although suitable habitat for special-status

plant and wildlife species would be avoided as much as possible, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative may result in adverse impacts on these species should they be present in areas proposed for disturbance. This is considered a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-2: Special-status Plant Surveys**, **MM-BIO-3: Special-status Plant Avoidance**, **MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-9: Mapping of Elderberry Shrubs and USFWS Section 7 Consultation**, **MM-BIO-10: No Net Loss of Elderberry Shrubs**, **MM-BIO-11: Elderberry Transplanting**, **MM-BIO-12: Avoidance Areas**, **MM-BIO-13: Chemical Use**, and **MM-BIO-14: Mowing**), which would reduce impacts on special-status plants and wildlife species during construction to less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on special-status plant and wildlife species.

The level of impact would be the same as that for the Proposed Project, except that the Entler Avenue Hybrid and Crouch Avenue Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat, which is a sensitive community, between Butte Creek and SR 99. Therefore, impacts from the Entler Avenue Hybrid and Crouch Avenue Alternative would be considered greater than impacts from the Proposed Project Entler Avenue alignment on this criterion.

Mitigation. To minimize potentially significant impacts on special-status plant and wildlife species during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-BIO-1** through **MM BIO-5** and **MM-BIO-9** through **MM-BIO-14** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-2: Special-status Plant Surveys (see Section 3.4, Biological Resources, for description)

MM-BIO-3: Special-status Plant Avoidance (see Section 3.4, Biological Resources, for description)

MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control (see Section 3.4, Biological Resources, for description)

MM-BIO-9: Mapping of Elderberry Shrubs and USFWS Section 7 Consultation (see Section 3.4, Biological Resources, for description)

MM-BIO-10: No Net Loss of Elderberry Shrubs (see Section 3.4, Biological Resources, for description)

MM-BIO-11: Elderberry Transplanting (see Section 3.4, Biological Resources, for description)

MM-BIO-12: Avoidance Areas (see Section 3.4, Biological Resources, for description)

MM-BIO-13: Chemical Use (see Section 3.4, Biological Resources, for description)

MM-BIO-14: Mowing (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1** through **MM BIO-5** and **MM-BIO-9** through **MM-BIO-14**, impacts on special-status plant and wildlife species during construction would be less than significant.

Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS (Less than Significant Impact with Mitigation Incorporated)

As described under Impact BIO-1, the Entler Avenue Hybrid and Crouch Avenue Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat between Butte Creek and SR 99 than the Proposed Project. Additionally, the Entler Avenue Hybrid and Crouch Avenue Alternative area includes aquatic resources, specifically Little Chico Creek. Valley-foothill riparian habitat and aquatic resources are considered sensitive natural communities. Although sensitive natural communities would be avoided as much as possible, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative may result in adverse impacts on sensitive natural communities in the area between Butte Creek and SR 99 and along Little Chico Creek. This is considered a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-6: No Net Loss of Aquatic Resources**, **MM-BIO-7: Sensitive Community Fencing**, and **MM-BIO-8: Dry Work Areas**), which would reduce impacts on sensitive natural communities during construction to less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on sensitive natural communities.

The level of impact would be the same as that for the Proposed Project, except that the Entler Avenue Hybrid and Crouch Avenue Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat, which is a sensitive community, between Butte Creek and SR 99. Therefore, impacts from the Entler Avenue Hybrid and Crouch Avenue Alternative would be considered greater than impacts from the Proposed Project alignment on this criterion.

Mitigation. To minimize potentially significant impacts on sensitive natural communities during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-BIO-1** and **MM-BIO-5** through **MM-BIO-8** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control (see Section 3.4, Biological Resources, for description)

MM-BIO-6: No Net Loss of Aquatic Resources (see Section 3.4, Biological Resources, for description)

MM-BIO-7: Sensitive Community Fencing (see Section 3.4, Biological Resources, for description)

MM-BIO-8: Dry Work Areas (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1** and **MM-BIO-5** through **MM-BIO-8**, impacts on sensitive natural communities during construction would be less than significant.

Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (Less than Significant Impact with Mitigation Incorporated)

Construction of the Entler Avenue Hybrid and Crouch Avenue Alternative may result in the temporary and permanent loss of state or federally protected aquatic resources, specifically Little Chico Creek. Potential temporary and permanent impacts that may occur in or near the Entler Avenue Hybrid and Crouch Avenue Alternative footprint include the bridge crossing under Little Chico Creek via HDD, staging and materials storage areas, and access roads. To date, only a preliminary assessment of aquatic resources has been conducted for the Entler Avenue Hybrid and Crouch Avenue Alternative due to the lack of access to areas away from the public roadway. Prior to initiation of ground disturbing activities, a more complete mapping of aquatic resources in these areas would need to be completed to support a formal jurisdictional delineation during the permitting phase. The Entler Avenue Hybrid and Crouch Avenue Alternative would be designed to avoid impacts, where possible, on Little Chico Creek. Although state and federally protected wetlands would be avoided as much as possible, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative may result in adverse impacts on these wetlands in association with Little Chico Creek. This is considered a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-BIO-1: Minimize Disturbance Footprint**, **MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control**, **MM-BIO-6: No Net Loss of Aquatic Resources**, **MM-BIO-7: Sensitive Community Fencing**, **MM-BIO-8: Dry Work Areas**, and **MM-BIO-26: State or Federally Protected Wetlands Mitigation**), which would reduce impacts on state or federally protected wetlands during construction to less than significant. Operation and maintenance of the Crouch Avenue Alternative would not include ground disturbing activities in or adjacent to state or federally protected wetlands.

The level of impact would be the same as that for the Proposed Project, except that vernal pools were mapped within 250-feet of Skyway under the Proposed Project, which would also be consistent with this alternative. Therefore, based on available preliminary data, impacts from the Entler Avenue Hybrid and Crouch Avenue Alternative would be considered greater than impacts from the Proposed Project alignment on this criterion.

Mitigation. To minimize potentially significant impacts on state or federally protected wetlands during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-BIO-1**, **MM-BIO-5** through **MM-BIO-8**, and **MM-BIO-26** will be implemented.

MM-BIO-1: Minimize Disturbance Footprint (see Section 3.4, Biological Resources, for description)

MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control (see Section 3.4, Biological Resources, for description)

MM-BIO-6: No Net Loss of Aquatic Resources (see Section 3.4, Biological Resources, for description)

MM-BIO-7: Sensitive Community Fencing (see Section 3.4, Biological Resources, for description)

MM-BIO-8: Dry Work Areas (see Section 3.4, Biological Resources, for description)

MM-BIO-26: State or Federally Protected Wetlands Mitigation (see Section 3.4, Biological Resources, for description)

Significance after Mitigation. With the implementation of **MM-BIO-1**, **MM-BIO-5** through **MM-BIO-8**, and **MM-BIO-26**, impacts on state or federally protected wetlands during construction would be less than significant.

Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would not interfere with movement of any fish or wildlife species because none of the Entler Avenue Hybrid and Crouch Avenue Alternative components involve the introduction of any new impermeable barriers to the landscape or waters. All new infrastructure associated with the Entler Avenue Hybrid and Crouch Avenue Alternative would be placed below ground. Additionally, none of the Entler Avenue Hybrid and Crouch Avenue Alternative components would impede the use of wildlife nursery sites. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would have no impact on the movement of any native resident or migratory fish or wildlife species, wildlife corridors, or wildlife nursery sites.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would impact the movement of species, wildlife corridors, or wildlife nursery sites.

Mitigation. No mitigation required.

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (No Impact)

The *Butte County General Plan 2030* (Butte County 2012), *Town of Paradise General Plan* (Quad Consultants 2008), and *Chico 2030 General Plan* (City of Chico 2017) include policies to protect water resources, wetland and riparian areas, fish and wildlife habitat, wildlife movement corridors, vegetation communities, open space for the preservation of natural resources, threatened and endangered species, and aquatic habitats. Additionally, the general plans include specific measures to preserve and protect oak trees and oak woodlands. A review of the policies included in the *Butte County General Plan 2030, Town of Paradise General Plan,* and *Chico 2030 General Plan* resulted in the determination that the Entler Avenue Hybrid and Crouch Avenue Alternative activities are consistent with these policies. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch

Avenue Alternative would not conflict with any local policies or ordinances protecting biological resources, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with local policies or ordinances protecting biological resources.

Mitigation. No mitigation required.

Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (No Impact)

Consistent with the analysis for the Proposed Project, a portion of the Entler Avenue Hybrid and Crouch Avenue Alternative area overlaps with BRCP, which had not been formally adopted as of summer 2021, though it was in the final phase of development. Species analyzed and discussed in this document that are covered species under the BRCP include Hoover's spurge, Butte County meadowfoam, hairy Orcutt grass, Butte County checkerbloom, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Central Valley steelhead, Central Valley spring-run Chinook salmon, giant garter snake, western pond turtle, foothill yellow-legged frog, western spadefoot, tricolored blackbird, burrowing owl, California black rail, Swainson's hawk, and white-tailed kite. Construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative may be covered under the Waste and Wastewater Management Facility Permanent Development Projects component of the BRCP. However, these activities do not conflict with the BRCP. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As a result, no impacts would occur.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation. No mitigation required.

5.5.3.5 Alternatives Impact Summary

Table 5.5-3 summarizes the biological resources impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-3. Alternatives Impacts Summary for Biological Resources

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS	S/M	NI (-)	S/M (+)	S/M (=)	S/M (+)
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	S/M	NI (-)	S/M (+)	S/M (=)	S/M (+)
Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands	S/M	NI (-)	NI (-)	S/M (+)	S/M (+)
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	NI	NI (=)	NI (=)	NI (=)	NI (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.4 Cultural Resources

5.5.4.1 No Project Alternative

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5 (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground-disturbance would occur. Therefore, there would be no impacts on the significance of a historical resource under the No Project Alternative. The level of impact would be less than that for the Proposed

Project because the Proposed Project would have a less-than-significant impact on a historical resource.

Mitigation. No mitigation required.

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5. (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground-disturbance would occur. Therefore, there would be no impacts on the significance of an archaeological resource under the No Project Alternative. The level of impact would be less than that for the Proposed Project because the Proposed Project would have a less-than-significant impact on archaeological resources with mitigation incorporated.

Mitigation. No mitigation required.

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries. (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground-disturbance would occur. Therefore, there would be no impacts on any human remains, including those interred outside of formal cemeteries, under the No Project Alternative. The level of impact would be less than that for the Proposed Project because the Proposed Project would have a less-than-significant impact on human remains.

Mitigation. No mitigation required.

5.5.4.2 Entler Avenue Hybrid Alternative

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5 (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative could impact historical resources during construction. Excavation and ground disturbing activities during construction of the Entler Avenue Hybrid Alternative have the potential to impact previously recorded, newly identified, and previously unknown cultural resources in the study area. As with the Proposed Project, there are no cultural resources located within the Entler Avenue Hybrid Alternative that meet the significance criteria for listing on the CRHR. Therefore, impacts on historical resources from construction of the Entler Avenue Hybrid Alternative would be less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on historical resources.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would have a less-than-significant impact on a historical resource.

Mitigation. No mitigation required.

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.5, Cultural Resources. Although no “unique” or “historic” cultural resources (as per CEQA definitions) have been documented in the study area, there is a potential that unrecorded cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities associated with the Entler Avenue Hybrid Alternative. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative is located in a region where significant prehistoric and historic-era cultural resources have been documented. Subsurface disturbances during construction of the Entler Avenue Hybrid Alternative could destroy or damage undiscovered prehistoric or historic cultural resources. If these resources were determined to be “unique” or “historic” (as per CEQA definitions), a significant impact would occur. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-CUL-1: Targeted Archaeological Monitoring** and **MM-CUL-2: Follow Inadvertent Discovery Procedures**), which would reduce impacts on archaeological resources during construction to a less than significant level. Operation and maintenance of the Entler Avenue Hybrid Alternative would not include ground disturbing activities and would result in no impacts on archeological resources.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would have a less-than-significant impact on archaeological resources with mitigation incorporated.

Mitigation. To minimize potentially significant impacts related to unrecorded cultural resources (including archeological resources) during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-CUL-1** and **MM-CUL-2** will be implemented.

MM-CUL-1: Targeted Archaeological Monitoring (see Section 3.5, Cultural Resources, for description)

MM-CUL-2: Follow Inadvertent Discovery Procedures (see Section 3.5, Cultural Resources, for description)

Significance after Mitigation. With the implementation of **MM-CUL-1** and **MM-CUL-2**, impacts resulting from inadvertent damage or destruction of unknown cultural resources during construction would be less than significant.

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries (Less than Significant Impact)

The Entler Avenue Hybrid Alternative would not impact any known locations of human remains, including those interred outside of formal cemeteries. Although much of the study area has been previously disturbed by previous development, it is possible that previously unknown buried human remains could be unearthed and damaged or destroyed during grading and excavation activities associated with construction of the Entler Avenue Hybrid Alternative. In the event of an inadvertent discovery of human remains, both the Proposed Project and the Entler Avenue Hybrid Alternative would adhere to the same protocol prescribed by existing laws and regulations required under the

California Health and Safety Code Sections 7050.5 and 7052, PRC Section 5097.98, and CEQA Section 15064.5. By adhering to existing laws and regulations, construction of the Entler Avenue Hybrid Alternative would have a less than significant impact on human remains, including those interred outside of formal cemeteries. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on human remains.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would have a less-than-significant impact on human remains.

Mitigation. No mitigation required.

5.5.4.3 Crouch Avenue Alternative

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5 (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative could impact historical resources during construction. Excavation and ground disturbing activities during construction of the Crouch Avenue Alternative have the potential to impact previously recorded, newly identified, and previously unknown cultural resources in the study area. As with the Proposed Project, there are no cultural resources located within the Crouch Avenue Alternative that meet the significance criteria for listing on the CRHR. Therefore, impacts on historical resources from construction of the Crouch Avenue Alternative would be less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on historical resources.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would have a less-than-significant impact on a historical resource.

Mitigation. No mitigation required.

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 (Less than Significant Impact with Mitigation Incorporated)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.5, Cultural Resources. Although no “unique” or “historic” cultural resources (as per CEQA definitions) have been documented in the study area, there is a potential that unrecorded cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities associated with the Crouch Avenue Alternative. Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative is located in a region where significant prehistoric and historic-era cultural resources have been documented. Subsurface disturbances during construction of the Crouch Avenue Alternative could destroy or damage undiscovered prehistoric or historic cultural resources. If these resources were determined to be “unique” or “historic” (as per CEQA definitions), a significant impact would occur. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-CUL-1: Targeted Archaeological Monitoring** and **MM-CUL-2: Follow Inadvertent Discovery Procedures**), which would reduce

impacts on archaeological resources during construction to a less than significant level. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on archeological resources.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would have a less-than-significant impact on archaeological resources with mitigation incorporated.

Mitigation. To minimize potentially significant impacts related to unrecorded cultural resources (including archeological resources) during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-CUL-1** and **MM-CUL-2** will be implemented.

MM-CUL-1: Targeted Archaeological Monitoring (see Section 3.5, Cultural Resources, for description)

MM-CUL-2: Follow Inadvertent Discovery Procedures (see Section 3.5, Cultural Resources, for description)

Significance after Mitigation. With the implementation of **MM-CUL-1** and **MM-CUL-2**, impacts resulting from inadvertent damage or destruction of unknown cultural resources during construction would be less than significant.

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries (Less than Significant Impact)

The Crouch Avenue Alternative would not impact any known locations of human remains, including those interred outside of formal cemeteries. Although much of the study area has been previously disturbed by previous development, it is possible that previously unknown buried human remains could be unearthed and damaged or destroyed during grading and excavation activities associated with construction of the Crouch Avenue Alternative. In the event of an inadvertent discovery of human remains, both the Proposed Project and the Crouch Avenue Alternative would adhere to the same protocol prescribed by existing laws and regulations required under the California Health and Safety Code Sections 7050.5 and 7052, PRC Section 5097.98, and CEQA Section 15064.5. By adhering to existing laws and regulations, construction of the Crouch Avenue Alternative would have a less than significant impact on human remains, including those interred outside of formal cemeteries. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on human remains.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would have a less-than-significant impact on human remains.

Mitigation. No mitigation required.

5.5.4.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5 (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative could impact historical resources during construction. Excavation and ground disturbing activities during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative have the potential to impact previously recorded, newly identified, and previously unknown cultural resources in the study area. As with the Proposed Project, there are no cultural resources located within the Entler Avenue Hybrid and Crouch Avenue Alternative that meet the significance criteria for listing on the CRHR. Therefore, impacts on historical resources from construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would be less than significant. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on historical resources.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would have a less-than-significant impact on a historical resource.

Mitigation. No mitigation required.

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.5, Cultural Resources. Although no “unique” or “historic” cultural resources (as per CEQA definitions) have been documented in the study area, there is a potential that unrecorded cultural resources could be unearthed or otherwise discovered during ground-disturbing and construction activities associated with the Entler Avenue Hybrid and Crouch Avenue Alternative. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative is located in a region where significant prehistoric and historic-era cultural resources have been documented. Subsurface disturbances during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative could destroy or damage undiscovered prehistoric or historic cultural resources. If these resources were determined to be “unique” or “historic” (as per CEQA definitions), a significant impact would occur. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-CUL-1: Targeted Archaeological Monitoring** and **MM-CUL-2: Follow Inadvertent Discovery Procedures**), which would reduce impacts on archaeological resources during construction to a less than significant level. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on archeological resources.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would have a less-than-significant impact on archaeological resources with mitigation incorporated.

Mitigation. To minimize potentially significant impacts related to unrecorded cultural resources (including archeological resources) during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-CUL-1** and **MM-CUL-2** will be implemented.

MM-CUL-1: Targeted Archaeological Monitoring (see Section 3.5, Cultural Resources, for description)

MM-CUL-2: Follow Inadvertent Discovery Procedures (see Section 3.5, Cultural Resources, for description)

Significance after Mitigation. With the implementation of **MM-CUL-1** and **MM-CUL-2**, impacts resulting from inadvertent damage or destruction of unknown cultural resources during construction would be less than significant.

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries (Less than Significant Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would not impact any known locations of human remains, including those interred outside of formal cemeteries. Although much of the study area has been previously disturbed by previous development, it is possible that previously unknown buried human remains could be unearthed and damaged or destroyed during grading and excavation activities associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative. In the event of an inadvertent discovery of human remains, both the Proposed Project and the Entler Avenue Hybrid and Crouch Avenue Alternative would adhere to the same protocol prescribed by existing laws and regulations required under the California Health and Safety Code Sections 7050.5 and 7052, PRC Section 5097.98, and CEQA Section 15064.5. By adhering to existing laws and regulations, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would have a less than significant impact on human remains, including those interred outside of formal cemeteries. Operation and maintenance of this alternative would not include ground disturbing activities and would result in no impacts on human remains.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would have a less-than-significant impact on human remains.

Mitigation. No mitigation required.

5.5.4.5 Alternatives Impact Summary

Table 5.5-4 summarizes the cultural resources impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-4. Alternatives Impacts Summary for Cultural Resources

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.5 Energy

5.5.5.1 No Project Alternative

Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project, construction, operation, or maintenance (No Impact)

Under the No Project Alternative, the Town would not make a regional connection to the Chico WPCP and would continue to rely on septic tanks for wastewater management. No new infrastructure would be required, and there would be no increase in energy demand within the study area. Therefore, no impact would occur. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not result in an increase in energy demand, while the Proposed Project would result in less than significant impacts from the increase in energy demand.

Mitigation. No mitigation required.

Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (No Impact)

Under the No Project Alternative, existing conditions would remain the same. The No Project Alternative would not result in an increase in energy demand. The No Project Alternative would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, no impact would occur. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Mitigation. No mitigation required.

5.5.5.2 Entler Avenue Hybrid Alternative

Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance (Less than Significant Impact)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.6, Energy. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would consume energy in the form of transportation fuel (gasoline and diesel) and electricity during construction. Statewide regulations, such as AB 1493 and Advanced Clean Cars Program, are aimed at improving on-road vehicle fuel efficiency, resulting in reduced fuel consumption. Although the In-Use Off-Road Diesel-Fueled Fleets Regulation is aimed at reducing emissions from off-road diesel vehicles, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling. Refer to Section 3.6.2 for a discussion of statewide legislation aimed at reducing transportation fuel demand. Conformance of vehicles and equipment to these statewide regulations is required and would avoid wasteful, inefficient, or unnecessary consumption of transportation fuel during construction. Many construction activities associated with the Entler Avenue Hybrid Alternative would occur concurrently, resulting in an increase in electricity demand in the study area. This increase in electricity consumption would be temporary as it would be limited to the construction duration and small in comparison to the total energy demand in Butte County, which was 1,385 million kWh in 2020. During operation and maintenance, the Entler Avenue Hybrid Alternative would provide a beneficial reduction of impacts on diesel fuel consumption in the area by eliminating the use of diesel-powered septage hauling trucks. Similar to the Proposed Project, pump stations associated with this alternative would consume 601,000 kWh per year of electrical energy. This increase in electricity consumption would represent only 0.04 percent of the total energy demand in Butte County. While this alternative would increase the amount of energy needed to treat wastewater at the Chico WPCP, it would be well within the current capacity and would not result in an inefficient use of energy. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not result in the wasteful, inefficient, or unnecessary consumption of energy, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because impacts on energy resources would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. No mitigation required.

Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would result in an increase in energy demand during its construction, operation, and maintenance. A multitude of state regulations and legislative acts are aimed at improving vehicle fuel efficiency, energy efficiency, and enhancing energy conservation, such as AB 1493, Advanced Clean Cars Program, In-Use Off-Road Diesel-Fueled Fleets Regulation, SB 100, and the 2017 Scoping Plan. This alternative would be required to comply with these adopted regulations. Therefore, construction, operation, and

maintenance of the Entler Avenue Hybrid Alternative would not conflict with a state or local plan for renewable energy or energy efficiency, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with a state or local plan for renewable energy or energy efficiency.

Mitigation. No mitigation required.

5.5.5.3 Crouch Avenue Alternative

Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance (Less than Significant Impact)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.6, Energy. Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would consume energy in the form of transportation fuel (gasoline and diesel) and electricity during construction. Statewide regulations, such as AB 1493 and Advanced Clean Cars Program, are aimed at improving on-road vehicle fuel efficiency, resulting in reduced fuel consumption. Although the In-Use Off-Road Diesel-Fueled Fleets Regulation is aimed at reducing emissions from off-road diesel vehicles, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling. Refer to Section 3.6.2 for a discussion of statewide legislation aimed at reducing transportation fuel demand. Conformance of vehicles and equipment to these statewide regulations is required and would avoid wasteful, inefficient, or unnecessary consumption of transportation fuel during construction. Many construction activities associated with the Crouch Avenue Alternative would occur concurrently, resulting in an increase in electricity demand in the study area. This increase in electricity consumption would be temporary as it would be limited to the construction duration and small in comparison to the total energy demand in Butte County, which was 1,385 million kWh in 2020. During operation and maintenance, the Crouch Avenue Alternative would provide a beneficial reduction of impacts on diesel fuel consumption in the area by eliminating the use of diesel-powered septage hauling trucks. Similar to the Proposed Project, pump stations associated with this alternative would consume 601,000 kWh per year of electrical energy. This increase in electricity consumption would represent only 0.04 percent of the total energy demand in Butte County. While this alternative would increase the amount of energy needed to treat wastewater at the Chico WPCP, it would be well within the current capacity and would not result in an inefficient use of energy. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not result in the wasteful, inefficient, or unnecessary consumption of energy, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because impacts on energy resources would be less than significant for both the Proposed Project Entler alignment and the Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (No Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would result in an increase in energy demand during its construction, operation, and maintenance. A multitude of state regulations and legislative acts are aimed at improving vehicle fuel efficiency, energy efficiency, and enhancing energy conservation, such as AB 1493, Advanced Clean Cars Program, In-Use Off-Road Diesel-Fueled Fleets Regulation, SB 100, and the 2017 Scoping Plan. This alternative would be required to comply with these adopted regulations. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with a state or local plan for renewable energy or energy efficiency, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with a state or local plan for renewable energy or energy efficiency.

Mitigation. No mitigation required.

5.5.5.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation (Less than Significant Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.6, Energy. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would consume energy in the form of transportation fuel (gasoline and diesel) and electricity during construction. Statewide regulations, such as AB 1493 and Advanced Clean Cars Program, are aimed at improving on-road vehicle fuel efficiency, resulting in reduced fuel consumption. Although the In-Use Off-Road Diesel-Fueled Fleets Regulation is aimed at reducing emissions from off-road diesel vehicles, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling. Refer to Section 3.6.2 for a discussion of statewide legislation aimed at reducing transportation fuel demand. Conformance of vehicles and equipment to these statewide regulations is required and would avoid wasteful, inefficient, or unnecessary consumption of transportation fuel during construction. Many construction activities associated with the Entler Avenue Hybrid and Crouch Avenue Alternative would occur concurrently, resulting in an increase in electricity demand in the study area. This increase in electricity consumption would be temporary as it would be limited to the construction duration and small in comparison to the total energy demand in Butte County, which was 1,385 million kWh in 2020. During operation and maintenance, the Entler Avenue Hybrid and Crouch Avenue Alternative would provide a beneficial reduction of impacts on diesel fuel consumption in the area by eliminating the use of diesel-powered septage hauling trucks. Similar to the Proposed Project, pump stations associated with this alternative would consume 601,000 kWh per year of electrical energy. This increase in electricity consumption would represent only 0.04 percent of the total energy demand in Butte County. While this alternative would increase the amount of energy needed to treat wastewater at the Chico WPCP, it would be well within the current capacity and would not result in an inefficient use of energy.

Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in the wasteful, inefficient, or unnecessary consumption of energy, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because impacts on energy resources would be less than significant for both the Proposed Project alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would result in an increase in energy demand during its construction, operation, and maintenance. A multitude of state regulations and legislative acts are aimed at improving vehicle fuel efficiency, energy efficiency, and enhancing energy conservation, such as AB 1493, Advanced Clean Cars Program, In-Use Off-Road Diesel-Fueled Fleets Regulation, SB 100, and the 2017 Scoping Plan. This alternative would be required to comply with these adopted regulations. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with a state or local plan for renewable energy or energy efficiency, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would conflict with a state or local plan for renewable energy or energy efficiency.

Mitigation. No mitigation required.

5.5.5.5 Alternatives Impact Summary

Table 5.5-5 summarizes the energy impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-5. Alternatives Impacts Summary for Energy

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation, or maintenance	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	NI	NI (=)	NI (=)	NI (=)	NI (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.6 Geology, Soils, and Paleontological Resources

5.5.6.1 No Project Alternative

Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving rupture of a known earthquake fault, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would result in impacts from this criterion.

Mitigation. No mitigation required.

(b) Strong seismic ground shaking (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving strong seismic ground shaking, resulting in no impact. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in less-than-significant impacts with mitigation incorporated from strong seismic ground shaking.

Mitigation. No mitigation required.

(c) Seismic-related ground failure, including liquefaction (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving seismic-related ground failure, including liquefaction, resulting in no impact. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in less-than-significant impacts with mitigation incorporated from seismic-related ground failure, including liquefaction.

Mitigation. No mitigation required.

(d) Landslides (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial adverse effects involving landslides, resulting in no impact. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in less-than-significant impacts with mitigation incorporated from landslides.

Mitigation. No mitigation required.

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in substantial soil erosion or the loss of topsoil, resulting in no impact. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in less-than-significant impacts from soil erosion and loss of topsoil.

Mitigation. No mitigation required.

Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, resulting in no impact. The level of impact would be less than that of the Proposed Project because the Proposed Project would result in less-than-significant impacts with mitigation incorporated from unstable soils.

Mitigation. No mitigation required.

Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not create any substantial direct or indirect risk to life or property because of expansive soils, resulting in no impact. The level of impact would be less than that of the Proposed Project because the Proposed Project would result in less-than-significant impacts with mitigation incorporated from expansive soils.

Mitigation. No mitigation required.

Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (Significant and Unavoidable Impact)

Under the No Project Alternative, the wastewater system in Paradise would continue to consist of individual, privately owned septic tanks and leach fields with subsurface disposal systems. According to the 2017 Report, high-density septic systems and leach fields in Paradise have resulted in the continual exceedance of soil capacities to absorb and treat wastewater, causing degradation of the groundwater below the septic systems, which is characteristic of failed or failing septic systems (Bennett Engineering Services 2017). Therefore, under the No Project Alternative, soils would become incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, resulting in a significant and unavoidable impact. The level of impact would be greater than that for the Proposed Project because the Proposed Project would result in no impact from soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.

Mitigation. No available mitigation.

Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance would occur. Therefore, the No Project Alternative would not destroy a paleontological resource or site or unique geologic feature, resulting in no impact. The level of impact would be less than that for the Proposed Project because there is potential that paleontological resources would be inadvertently disturbed during construction of the Proposed Project, resulting in less-than-significant impacts with mitigation incorporated.

Mitigation. No mitigation required.

5.5.6.2 Entler Avenue Hybrid Alternative

Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(e) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (No Impact)

The Entler Avenue Hybrid Alternative is not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2019a). No known active faults traverse the Entler Avenue Hybrid Alternative. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not result in substantial adverse effects involving rupture of a known earthquake fault, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment are located within a fault zone and no impact would occur under this criterion.

Mitigation. No mitigation required.

(f) Strong seismic ground shaking (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate ground shaking in the Entler Avenue Hybrid Alternative area, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to ground shaking during construction to less than significant. Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate ground shaking. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would not result in substantial adverse effects involving ground shaking, resulting in a less than significant impact. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving ground shaking during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to ground shaking during construction would be less than significant.

(g) Seismic-related ground failure, including liquefaction (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate liquefaction in the Entler Avenue Hybrid Alternative area, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to liquefaction during construction to less than significant. Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate liquefaction. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would not result in substantial adverse effects involving liquefaction, resulting in a less than significant impact. The level of

impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving liquefaction during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to liquefaction during construction would be less than significant.

(h) Landslides (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate landslides in the Entler Avenue Hybrid Alternative area, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to landslides during construction to less than significant. Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate landslides. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would not result in substantial adverse effects involving landslides, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving landslides during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to landslides during construction would be less than significant.

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil (Less than Significant Impact)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.7, Geology, Soils, and Paleontological Resources. The Entler Avenue Hybrid Avenue Alternative would expose and disturb soil during construction. Exposed and disturbed soils are vulnerable to erosion. As part of the Entler Avenue Hybrid Alternative, the Town of Paradise will be required to prepare a SWPPP to comply with the SWRCB's CGP. The SWPPP will identify BMPs to be implemented on-site to minimize soil erosion during construction, including sediment and erosion control measures and other measures to control chemical contaminants. In addition, this alternative will be required to comply with the grading permit requirements of the Paradise, Butte County, and Chico. The grading permit process would ensure that erosion control measures are incorporated into the plans and implemented during construction. Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities that could expose or disturb soil. Therefore, impacts related to soil erosion or loss of topsoil from the Entler Avenue Hybrid Alternative would be less than significant. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts from soil erosion and loss of topsoil.

Mitigation. No mitigation required.

Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse in the Entler Avenue Hybrid Alternative area, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during operation and maintenance of the Entler Avenue Hybrid Alternative would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction would be less than significant.

Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate risks associated with expansive soils in the Entler Avenue Hybrid Alternative area, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to expansive soils during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate risks associated with expansive soils. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to expansive soils during operation and maintenance of the Entler Avenue Hybrid Alternative would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts associated with expansive soils during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to expansive soils during construction would be less than significant.

Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (No Impact)

Similar to the Proposed Project, the Entler Avenue Hybrid Alternative would replace individualized septic systems within the Paradise sewer service area with a sewer system. No portion of this alternative incorporates septic tanks or alternative wastewater disposal systems. Consistent with the analysis for the Proposed Project, there would be a beneficial impact on soils by replacing existing failed or failing septic systems with a wastewater treatment solution. Therefore, the Entler Avenue Hybrid Alternative would not locate septic tanks or alternative wastewater disposal systems on soils incapable of adequate support, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would result in impacts under this criterion.

Mitigation. No mitigation required.

Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would involve ground disturbing activities during construction. Ground disturbance during construction could disturb unknown paleontological resources within the Entler Avenue Hybrid Alternative, resulting in a potentially significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-2: Inadvertent Discovery Protocol**), which would reduce impacts on paleontological resources during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact paleontological resources. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts on paleontological resources during operation and maintenance of the Entler Avenue Hybrid Alternative would be less than significant.

Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts on paleontological resources during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-GEO-2** will be implemented.

MM-GEO-2: Inadvertent Discovery Protocol (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-2**, impacts on paleontological resources during construction would be less than significant.

5.5.6.3 Crouch Avenue Alternative

Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (No Impact)

The Crouch Avenue Alternative is not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2019a). No known active faults traverse the Crouch Avenue Alternative. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not result in substantial adverse effects involving rupture of a known earthquake fault, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment are located within a fault zone and no impact would occur under this criterion.

Mitigation. No mitigation required.

(j) Strong seismic ground shaking (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate ground shaking in the Crouch Avenue Alternative area, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to ground shaking during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate ground shaking. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Crouch Avenue Alternative would not result in substantial adverse effects involving ground shaking, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving ground shaking during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to ground shaking during construction would be less than significant.

(k) Seismic-related ground failure, including liquefaction (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would include use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate liquefaction in the Crouch Avenue Alternative area, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to liquefaction during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate liquefaction. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Crouch Avenue Alternative would not result in substantial adverse effects involving liquefaction, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving liquefaction during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to liquefaction during construction would be less than significant.

(l) Landslides (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment

may exacerbate landslides in the Crouch Avenue Alternative area, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to landslides during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate landslides. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Crouch Avenue Alternative would not result in substantial adverse effects involving landslides, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving landslides during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to landslides during construction would be less than significant.

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil (Less than Significant Impact)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.7, Geology, Soils, and Paleontological Resources. The Crouch Avenue Alternative would expose and disturb soil during construction. Exposed and disturbed soils are vulnerable to erosion. As part of the Crouch Avenue Alternative, the Town of Paradise will be required to prepare a SWPPP to comply with the SWRCB's CGP. The SWPPP will identify BMPs to be implemented on-site to minimize soil erosion during construction, including sediment and erosion control measures and other measures to control chemical contaminants. In addition, this alternative will be required to comply with the grading permit requirements of the Paradise, Butte County, and Chico. The grading permit process would ensure that erosion control measures are incorporated into the plans and implemented during construction. Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities that could expose or disturb soil. Therefore, impacts related to soil erosion or loss of topsoil from the Crouch Avenue Alternative would be less than significant. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts from soil erosion and loss of topsoil.

Mitigation. No mitigation required.

Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse in the Crouch Avenue Alternative area, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during operation and maintenance of the Crouch Avenue Alternative would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction would be less than significant.

Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate risks associated with expansive soils in the Crouch Avenue Alternative area, resulting

in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to expansive soils during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate risks associated with expansive soils. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to expansive soils during operation and maintenance of the Crouch Avenue Alternative would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts associated with expansive soils during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to expansive soils during construction would be less than significant.

Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (No Impact)

Similar to the Proposed Project, the Crouch Avenue Alternative would replace individualized septic systems within the Paradise sewer service area with a sewer system. No portion of this alternative incorporates septic tanks or alternative wastewater disposal systems. Consistent with the analysis for the Proposed Project, there would be a beneficial impact on soils by replacing existing failed or failing septic systems with a wastewater treatment solution. Therefore, the Crouch Avenue Alternative would not locate septic tanks or alternative wastewater disposal systems on soils incapable of adequate support, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would result in impacts under this criterion.

Mitigation. No mitigation required.

Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would involve ground disturbing activities during construction. Ground disturbance during construction could disturb

unknown paleontological resources within the Crouch Avenue Alternative, resulting in a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-2: Inadvertent Discovery Protocol**), which would reduce impacts on paleontological resources during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact paleontological resources. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts on paleontological resources during operation and maintenance of the Proposed Project would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts on paleontological resources during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-2** will be implemented.

MM-GEO-2: Inadvertent Discovery Protocol (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-2**, impacts on paleontological resources during construction would be less than significant.

5.5.6.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (No Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative is not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2019a). No known active faults traverse the Entler Avenue Hybrid and Crouch Avenue Alternative. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in substantial adverse effects involving rupture of a known earthquake fault, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment are located within a fault zone and no impact would occur under this criterion.

Mitigation. No mitigation required.

(b) Strong seismic ground shaking (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate ground shaking in the Entler Avenue Hybrid and Crouch Avenue Alternative area, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to ground shaking during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate ground shaking. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in substantial adverse effects involving ground shaking, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving ground shaking during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to ground shaking during construction would be less than significant.

(c) Seismic-related ground failure, including liquefaction (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate liquefaction in the Entler Avenue Hybrid and Crouch Avenue Alternative area, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to liquefaction during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation

and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate liquefaction. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in substantial adverse effects involving liquefaction, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving liquefaction during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to liquefaction during construction would be less than significant.

(d) Landslides (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate landslides in the Entler Avenue Hybrid and Crouch Avenue Alternative area, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to landslides during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate landslides. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in substantial adverse effects involving landslides, resulting in a less than significant impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts involving landslides during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to landslides during construction would be less than significant.

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil (Less than Significant Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.7, Geology, Soils, and Paleontological Resources. The Entler Avenue Hybrid and Crouch Avenue Alternative would expose and disturb soil during construction. Exposed and disturbed soils are vulnerable to erosion. As part of the Entler Avenue Hybrid and Crouch Avenue Alternative, the Town of Paradise will be required to prepare a SWPPP to comply with the SWRCB's CGP. The SWPPP will identify BMPs to be implemented on-site to minimize soil erosion during construction, including sediment and erosion control measures and other measures to control chemical contaminants. In addition, this alternative will be required to comply with the grading permit requirements of the Paradise, Butte County, and Chico. The grading permit process would ensure that erosion control measures are incorporated into the plans and implemented during construction. Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities that could expose or disturb soil. Therefore, impacts related to soil erosion or loss of topsoil from the Entler Avenue Hybrid and Crouch Avenue Alternative would be less than significant. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in less-than-significant impacts from soil erosion and loss of topsoil.

Mitigation. No mitigation required.

Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse in the Entler Avenue Hybrid and Crouch Avenue Alternative area, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate on- or off-site landslide, lateral spreading, subsidence,

liquefaction, or collapse. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse during construction would be less than significant.

Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include the use of vibration-generating equipment during construction. The use of vibration-generating equipment may exacerbate risks associated with expansive soils in the Entler Avenue Hybrid and Crouch Avenue Alternative area, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts related to expansive soils during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to exacerbate risks associated with expansive soils. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts related to expansive soils during operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts associated with expansive soils during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-1** will be implemented.

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-1**, impacts related to expansive soils during construction would be less than significant.

Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (No Impact)

Similar to the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would replace individualized septic systems within the Paradise sewer service area with a sewer system. No portion of this alternative incorporates septic tanks or alternative wastewater disposal systems. Consistent with the analysis for the Proposed Project, there would be a beneficial impact on soils by replacing existing failed or failing septic systems with a wastewater treatment solution. Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative would not locate septic tanks or alternative wastewater disposal systems on soils incapable of adequate support, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would result in impacts under this criterion.

Mitigation. No mitigation required.

Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would involve ground disturbing activities during construction. Ground disturbance during construction could disturb unknown paleontological resources within the Entler Avenue Hybrid and Crouch Avenue Alternative, resulting in a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-GEO-2: Inadvertent Discovery Protocol**), which would reduce impacts on paleontological resources during construction to less than significant.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact paleontological resources. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, impacts on paleontological resources during operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would be less than significant.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts on paleontological resources during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-GEO-2** will be implemented.

MM-GEO-2: Inadvertent Discovery Protocol (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-GEO-2**, impacts on paleontological resources during construction would be less than significant.

5.5.6.5 Alternatives Impact Summary

Table 5.5-6 summarizes the geology, soils, and paleontological resources impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-6. Alternatives Impacts Summary for Geology, Soils, and Paleontological Resources

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact GEO-1(a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	NI	SU (+)	NI (=)	NI (=)	NI (=)
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.7 Greenhouse Gas Emissions

5.5.7.1 No Project Alternative

Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no GHG emissions would be generated. The No Project Alternative would not generate GHG emissions that have a significant impact on the environment. Therefore, no impact would occur. The level of impact would be less than that of the Proposed Project because the No Project Alternative would not generate GHG emissions, while the Proposed Project would have a less-than-significant impact from the generation of GHG emissions.

Mitigation. No mitigation required.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no GHG emissions would be generated. The No Project Alternative would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, no impact would occur. The level of impact would be the same as that for the Proposed

Project because neither the No Project Alternative nor the Proposed Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Mitigation. No mitigation required.

5.5.7.2 Entler Avenue Hybrid Alternative

Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would generate GHG emissions during construction. The Entler Avenue Hybrid Alternative would generate GHG emissions similar to those listed in Table 3.8-1, Unmitigated Construction GHG Emissions. The amortized construction GHG emissions from this alternative would not exceed SMAQMD's threshold of 1,100 MT CO_2e per year. Therefore, construction of the Entler Avenue Hybrid Alternative would result in a less-than-significant impact from GHG emissions. GHG emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because impacts from GHG emissions would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. No mitigation required.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (No Impact)

SB 32 is the current legislation to reduce GHG emissions within California. As discussed under Impact GHG-1, construction of the Entler Avenue Hybrid Alternative would generate GHG emissions that do not exceed SMAQMD's threshold of significance of 1,100 MT CO_2e per year. SMAQMD's threshold is consistent with GHG emissions reduction goals set forth by SB 32, which mandates a GHG emissions target of 40 percent below 1990 levels by 2030. Since the construction GHG emissions generated by the Entler Avenue Hybrid Alternative are below SMAQMD's threshold of significance, it would not conflict with SB 32 GHG emissions reduction goals. GHG emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not conflict with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Mitigation. No mitigation required.

5.5.7.3 Crouch Avenue Alternative

Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would generate GHG emissions during construction. The Crouch Avenue Alternative would generate GHG emissions similar to those listed in Table 3.8-1, Unmitigated Construction GHG Emissions. The amortized construction GHG emissions from this alternative would not exceed SMAQMD's threshold of 1,100 MT CO_2e per year. Therefore, construction of the Crouch Avenue Alternative would result in a less-than-significant impact from GHG emissions. GHG emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because impacts from GHG emissions would be less than significant for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (No Impact)

SB 32 is the current legislation to reduce GHG emissions within California. As discussed under Impact GHG-1, construction of the Crouch Avenue Alternative would generate GHG emissions that do not exceed SMAQMD's threshold of significance of 1,100 MT CO_2e per year. SMAQMD's threshold is consistent with GHG emissions reduction goals set forth by SB 32, which mandates a GHG emissions target of 40 percent below 1990 levels by 2030. Since the construction GHG emissions generated by the Crouch Avenue Alternative are below SMAQMD's threshold of significance, it would not conflict with SB 32 GHG emissions reduction goals. GHG emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Mitigation. No mitigation required.

5.5.7.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would generate GHG emissions during construction. The Entler Avenue Hybrid and Crouch

Avenue Alternative would generate GHG emissions similar to those listed in Table 3.8-1, Unmitigated Construction GHG Emissions. The amortized construction GHG emissions from this alternative would not exceed SMAQMD's threshold of 1,100 MT CO_2e per year. Therefore, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less-than-significant impact from GHG emissions. GHG emissions during operation and maintenance activities of this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because impacts from GHG emissions would be less than significant for both the Proposed Project alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (No Impact)

SB 32 is the current legislation to reduce GHG emissions within California. As discussed under Impact GHG-1, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would generate GHG emissions that do not exceed SMAQMD's thresholds of 1,100 MT CO_2e per year. SMAQMD's threshold is consistent with GHG emissions reduction goals set forth by SB 32, which mandates a GHG emissions target of 40 percent below 1990 levels by 2030. Since the construction GHG emissions generated by the Entler Avenue Hybrid and Crouch Avenue Alternative are below SMAQMD's threshold of significance, it would not conflict with SB 32 GHG emissions reduction goals. GHG emissions during operation and maintenance activities would be minimal and immeasurable due to the infrequency of these activities. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions, resulting in no impact.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Mitigation. No mitigation required.

5.5.7.5 Alternatives Impact Summary

Table 5.5-7 summarizes the GHG emissions impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-7. Alternatives Impacts Summary for GHG Emissions

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions	NI	NI (=)	NI (=)	NI (=)	NI (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.8 Hazards and Hazardous Materials

5.5.8.1 No Project Alternative

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no potential for construction related hazardous materials use, transportation, or disposal would occur beyond that of existing conditions. The No Project Alternative would not pose a threat from hazards or hazardous materials that would have a significant impact on the environment. Therefore, no impact would occur. The level of impact would be less than that of the Proposed Project because the No Project Alternative would not use construction related hazardous materials, while the Proposed Project would have a less-than-significant impact from the use, transportation, or disposal of construction related hazardous materials.

Mitigation. No mitigation required.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no potential for the possible release of construction related hazardous materials would occur beyond that of existing conditions. The No Project Alternative would not pose a threat from hazards or hazardous materials that would have a significant impact on the environment. Therefore, no impact would occur. The level of impact would be less than that of the Proposed Project because the No Project Alternative would not use construction related hazardous materials, while the Proposed Project would have a less-than-significant impact from the possible release of construction related hazardous materials.

Mitigation. No mitigation required.

Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no potential for the emission of construction related hazardous materials near a school

would occur beyond that of existing conditions. Therefore, no impact would occur. The level of impact would be less than that of the Proposed Project because the No Project Alternative would not use construction related hazardous materials, while the Proposed Project would have a less-than-significant impact from the possible emission of construction related hazardous materials.

Mitigation. No mitigation required.

Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no potential for construction at a listed site would occur. Therefore, no impact would occur. The level of impact would be less than that of the Proposed Project because the No Project Alternative would not construct any infrastructure, while the Proposed Project would have a less-than-significant impact from construction at a listed site.

Mitigation. No mitigation required.

Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no potential for airport noise hazards would occur. Therefore, no impact would occur. The level of impact would be the same as that of the Proposed Project because the No Project Alternative would not have potential to encounter airport noise hazards, and the Proposed Project would also have no impact because there are no public airports within 2 miles of the study area.

Mitigation. No mitigation required.

Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no potential for emergency response or evacuation interruptions would occur. Therefore, no impact would occur. The level of impact would be less than that of the Proposed Project because the No Project Alternative have no potential for emergency response or evacuation interruptions, while the Proposed Project would have a less-than-significant impact from minor construction interruptions to emergency response or evacuation.

Mitigation. No mitigation required.

Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no increase potential for wildland fires would occur. Therefore, no impact would occur. The level of impact would be less than that of the Proposed Project because the No Project Alternative have no increased potential for wildland fires, while the Proposed Project would have a less-than-significant impact from wildland fires.

Mitigation. No mitigation required.

5.5.8.2 Entler Avenue Hybrid Alternative

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would include the use, transportation, and disposal of construction or inspection related hazardous materials, such as vehicle fuels, grease, asphalt, concrete, lubricants, and drilling fluids which could pose a threat as hazardous materials. Using these materials, including their routine transport and disposal, carries the potential for an accidental release into the local environment, including near the waterbodies that are the locations of the proposed trenchless crossings. The alternative would require the implementation of a SWPPP and coverage under the NPDES construction general permit for discharges of storm water associated with construction and land disturbance activities. The SWPPP would include measures to safely use and store such hazardous materials to reduce impacts However, with vehicle and equipment use comes the potential for spills during maintenance and refueling which would be a significant impact. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would result in a significant impact from the use, transportation, and generation of hazardous materials. The Entler Avenue Hybrid location would implement the same mitigation measure as the Proposed Project (**MM-HAZ-1: Vehicle and Equipment Access and Fueling),** which would reduce impacts to a less than significant level during construction, operation and maintenance. The level of impact would be the same as that for the Proposed Project because impacts from the use, transportation, or disposal of hazardous materials would be reduced to a less than significant level for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative after mitigation is incorporated.

Mitigation. To minimize significant impacts from the routine transport, use, or disposal of hazardous materials associated with the construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-1** will be implemented.

MM-HAZ-1: Vehicle and Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, impacts on the routine transport, use or disposal of hazardous materials would be less than significant.

Mitigation. No mitigation required.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would include the possible release of construction or inspection related hazardous materials. However, the Proposed Project would be required to implement a SWPPP with best management practices to reduce the likelihood and severity of the release of construction related pollutants like fuel and grease. Any contaminated soils or groundwater encountered by the project would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would result in a less-than-significant impact from the possible release of hazardous materials. The level of impact would be the same as that for the Proposed Project because impacts from the possible release of hazardous materials would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. No mitigation required.

Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative has the potential to emit hazardous materials or substances through the use of common construction materials. However, the risk of release would be reduced through implementation of the Project SWPPP. Additionally, the alternative would implement BCAQMD best practice measures (listed in Section 3.3 Air Quality) to reduce diesel particulate matter. Therefore, with implementation of a Project SWPPP, BCAQMD best practice measures, and consistency with hazardous materials handling and air quality district requirements, impacts from construction within one-quarter mile of an existing school would be less than significant. The level of impact would be the same as that for the Proposed Project because impacts from the emission of hazardous materials would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. No mitigation required.

Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative could include construction or inspection at a listed site. However, any contaminated soils encountered by the alternative would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit thus reducing impacts. Additionally, any hazardous materials encountered, including contaminated soils and groundwater, would be managed and disposed of in accordance with

California Department of Toxic Substances Control regulations. Further, the alternative would have to comply with regional, state, and federal requirements for the transport, use, and disposal of hazardous materials. However, while unlikely, the potential remains to encounter contaminated soils and impacts would be significant. The Entler Avenue Hybrid Alternative location would implement the same mitigation measure as the Proposed Project (**MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan),** which would reduce impacts to a less than significant level during construction, operation, and maintenance. The level of impact would be the same as that for the Proposed Project because impacts from being located at a listed site would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts from being located on a hazardous materials site associated with construction, operation, and maintenance of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-2** will be implemented.

MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-2**, impacts from being located on a hazardous materials site would be less than significant.

Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would not be located within 2 miles of a public airport. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would result in no impact from noise from being located within 2 miles of a public airport. The level of impact would be the same as that for the Proposed Project because neither the Proposed Project nor the Enter Avenue Hybrid Alternative would be located within 2 miles of a public airport.

Mitigation. No mitigation required.

Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative could include the potential for minor interruptions to emergency response or evacuation routes due to full or partial road closures during construction. Interruptions would be temporary during construction. However, installation of the Export Pipeline System would occur along Skyway, which is an evacuation route in Paradise. Therefore, the construction area for the Export Pipeline System along Skyway could potentially interfere with the flow of evacuation traffic. As a result, the impact on an emergency response or emergency evacuation plan would be significant during construction. The Entler Avenue Hybrid Alternative location would implement the same mitigation measures as the Proposed Project

(**MM-HAZ-3: Road Closure Restrictions, MM-HAZ-HAZ-4: Rapid Demobilization Plan, MM-HAZ-5: Evacuation Warning Procedures,** and **MM-HAZ-6: Traffic Management Plan),** which would reduce impacts to a less than significant level during construction. There would be no interruptions from operation and maintenance activities. The level of impact would be the same as that for the Proposed Project because impacts from interruptions to emergency response or evacuation routes would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative after the implementation of mitigation.

Mitigation. To minimize significant impacts on an emergency response and emergency evacuation plan associated with construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6** will be implemented.

MM-HAZ-3: Road Closure Restrictions (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-HAZ-4: Rapid Demobilization Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-5: Evacuation Warning Procedures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6**, impacts on an emergency response plan or emergency evacuation plan would be less than significant.

Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative could include the potential exposing workers to wildland fires during construction. The study area is located in a Local Responsibility Area Very High Fire Hazard Severity Zone in Paradise. The export pipeline passes through State or Federal Responsibility Area Very High, High, and Moderate Fire Hazard Severity Zones (Cal Fire 2008). Project construction and routine maintenance would temporarily expose workers to hazards associated with being in areas with high wildfire danger. Therefore, impacts would be significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures,** and **MM-HAZ-9: Wildland Fire Area),** which would reduce impacts to a less than significant level during construction, operation and maintenance. The level of impact would be the same as that for the Proposed Project because impacts from wildland fire exposure would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative after mitigation is incorporated.

Mitigation. To minimize significant impacts from wildfire risk associated with construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9: Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts for exposing people or structures to significant risk of loss, injury, or death involving wildland fires would be less than significant.

5.5.8.3 Crouch Avenue Alternative

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would include the use, transportation, and disposal of construction or inspection related hazardous materials. The alternative would require the implementation of a SWPPP and coverage under the NPDES construction general permit for discharges of storm water associated with construction and land disturbance activities. The SWPPP would include measures to safely use and store such hazardous materials to reduce impacts. However, with vehicle and equipment use comes the potential for spills during maintenance and refueling which would be a significant impact. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would result in a significant impact from the use, transportation, and generation of hazardous materials. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-1: Vehicle and Equipment Access and Fueling**), which would reduce impacts during construction, operation and maintenance to a less than significant level). The level of impact would be the same as that for the Proposed Project because impacts from the use, transportation, or disposal of hazardous materials would be reduced to a less than significant level for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative after mitigation is incorporated.

Mitigation. To minimize significant impacts from the routine transport, use, or disposal of hazardous materials associated with the construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-1** will be implemented.

MM-HAZ-1: Vehicle and Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, impacts on the routine transport, use or disposal of hazardous materials would be less than significant.

Mitigation. No mitigation required.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would include the possible release of construction or inspection related hazardous materials. However, the Proposed Project would be required to implement a SWPPP with best management practices to reduce the likelihood and severity of the release of construction related pollutants like fuel and grease. Any contaminated soils or groundwater encountered by the project would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would result in a less-than-significant impact from the possible release of hazardous materials. The level of impact would be the same as that for the Proposed Project because impacts from the possible release of hazardous materials would be less than significant for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative has the potential to emit hazardous materials or substances through the use of common construction materials. However, the risk of release would be reduced through implementation of the Project SWPPP. Additionally, the alternative would implement BCAQMD best practice measures (listed in Section 3.3 Air Quality) to reduce diesel particulate matter. Therefore, with implementation of a Project SWPPP, BCAQMD best practice measures, and consistency with hazardous materials handling and air quality district requirements, impacts from construction within one-quarter mile of an existing school would be less than significant. The level of impact would be the same as that for the Proposed Project because impacts from the emission of hazardous materials would be less than significant for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative could include construction or inspection at a listed site. However, any contaminated soils encountered by the

alternative would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit thus reducing impacts. Additionally, any hazardous materials encountered, including contaminated soils and groundwater, would be managed and disposed of in accordance with California Department of Toxic Substances Control regulations. Further, the alternative would have to comply with regional, state, and federal requirements for the transport, use, and disposal of hazardous materials. However, while unlikely, the potential remains to encounter contaminated soils and impacts would be significant. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project **MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan),** which would reduce impacts during construction, operation and maintenance to a less than significant level. The level of impact would be the same as that for the Proposed Project because impacts from being located at a listed site would be less than significant for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts from being located on a hazardous materials site associated with construction, operation, and maintenance of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-2** will be implemented.

MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-2**, impacts from being located on a hazardous materials site would be less than significant level.

Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area (No Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would not be located within 2 miles of a public airport. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would result in no impact from noise from being located within 2 miles of a public airport. The level of impact would be the same as that for the Proposed Project because neither the Proposed Project Entler alignment nor the Crouch Avenue Alternative would be located within 2 miles of a public airport.

Mitigation. No mitigation required.

Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative could include the potential for minor interruptions to emergency response or evacuation routes due to full or partial road closures during construction. Interruptions would be temporary during construction. However, installation of the Export Pipeline System would occur along Skyway, which is an evacuation route in Paradise. Therefore, the construction area for the Export Pipeline System along Skyway could potentially interfere with the flow of evacuation traffic. As a result, the impact on an emergency

response or emergency evacuation plan would be significant during construction. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-3: Road Closure Restrictions, MM-HAZ-4: Rapid Demobilization Plan, MM-HAZ-5: Evacuation Warning Procedures,** and **MM-HAZ-6: Traffic Management Plan),** which would reduce impacts to a less than significant level during construction.

There would be no interruptions from operation and maintenance activities. The level of impact would be the same as that for the Proposed Project because impacts from interruptions to emergency response or evacuation routes would be less than significant for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative after the implementation of mitigation.

Mitigation. To minimize significant impacts on an emergency response and emergency evacuation plan associated with construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6** will be implemented.

MM-HAZ-3: Road Closure Restrictions (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-4: Rapid Demobilization Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-5: Evacuation Warning Procedures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6**, impacts on an emergency response plan or emergency evacuation plan would be less than significant.

Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative could include the potential exposing workers to wildland fires during construction. The study area is located in a Local Responsibility Area Very High Fire Hazard Severity Zone in Paradise. The export pipeline passes through State or Federal Responsibility Area Very High, High, and Moderate Fire Hazard Severity Zones (Cal Fire 2008). Project construction and routine maintenance would temporarily expose workers to hazards associated with being in areas with high wildfire danger. Therefore, impacts would be significant. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures,** and **MM-HAZ-9: Wildland Fire Area),** which would reduce impacts to a less than significant level. The level of impact would be the same as that for the Proposed Project because impacts from wildland fire exposure would

be less than significant for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative after mitigation is incorporated.

Mitigation. To minimize significant impacts from wildfire risk associated with construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9: Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)**.**

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts for exposing people or structures to significant risk of loss, injury, or death involving wildland fires would be less than significant.

5.5.8.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include the use, transportation, and disposal of construction or inspection related hazardous materials. The alternative would require the implementation of a SWPPP and coverage under the NPDES construction general permit for discharges of storm water associated with construction and land disturbance activities. The SWPPP would include measures to safely use and store such hazardous materials to reduce impacts However, with vehicle and equipment use comes the potential for spills during maintenance and refueling which would be a significant impact. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would result in a significant impact from the use, transportation, and generation of hazardous materials. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ:1: Vehicle and Equipment Access and Fueling),** which would reduce impacts during construction, operation and maintenance to a less than significant level. The level of impact would be the same as that for the Proposed Project because impacts from the use, transportation, or disposal of hazardous materials would be reduced to a less than significant level for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative after mitigation is incorporated.

Mitigation. To minimize significant impacts from the routine transport, use, or disposal of hazardous materials associated with the construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-1** will be implemented.

MM-HAZ:1: Vehicle and Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, impacts on the routine transport, use or disposal of hazardous materials would be less than significant.

Mitigation. No mitigation required.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include the possible release of construction or inspection related hazardous materials. However, the Proposed Project would be required to implement a SWPPP with best management practices to reduce the likelihood and severity of the release of construction related pollutants like fuel and grease. Any contaminated soils or groundwater encountered by the project would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less-than-significant impact from the possible release of hazardous materials. The level of impact would be the same as that for the Proposed Project because impacts from the possible release of hazardous materials would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative has the potential to emit hazardous materials or substances through the use of common construction materials. However, the risk of release would be reduced through implementation of the Project SWPPP. Additionally, the alternative would implement BCAQMD best practice measures (listed in Section 3.3 Air Quality) to reduce diesel particulate matter. Therefore, with implementation of a Project SWPPP, BCAQMD best practice measures, and consistency with hazardous materials handling and air quality district requirements, impacts from construction within one-quarter mile of an existing school would be less than significant. The level of impact would be the same as that for the Proposed Project because impacts from the emission of hazardous materials would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. No mitigation required.

Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative could include construction or inspection at a listed site. However, any contaminated soils encountered by the alternative would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES permit thus reducing impacts. Additionally, any hazardous materials encountered, including contaminated soils and groundwater, would be managed and disposed of in accordance with California Department of Toxic Substances Control regulations. Further, the alternative would have to comply with regional, state, and federal requirements for the transport, use, and disposal of hazardous materials. However, while unlikely, the potential remains to encounter contaminated soils and impacts would be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan**), which would reduce impacts to a less than significant level during construction, operation and maintenance. The level of impact would be the same as that for the Proposed Project because impacts from being located at a listed site would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts from being located on a hazardous materials site associated with construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-2** will be implemented.

MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-2**, impacts from being located on a hazardous materials site would be less than significant.

Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would not be located within 2 miles of a public airport. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would result in no impact from noise from being located within 2 miles of a public airport. The level of impact would be the same as that for the Proposed Project because neither the Proposed Project Entler alignment nor the Entler Avenue Hybrid and Crouch Avenue Alternative would be located within 2 miles of a public airport.

Mitigation. No mitigation required.

Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative could include the potential for minor interruptions to emergency response or evacuation routes due to full or partial road closures during construction. Interruptions would be temporary during construction. However, installation of the Export Pipeline System would occur along Skyway, which is an evacuation route in Paradise. Therefore, the construction area for the Export Pipeline System along Skyway could potentially interfere with the flow of evacuation traffic. As a result, the impact on an emergency response or emergency evacuation plan would be significant during construction. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-3: Road Closure Restrictions, MM-HAZ-4: Rapid Demobilization Plan, MM-HAZ-5: Evacuation Warning Procedures,** and **MM-HAZ-6: Traffic Management Plan),** which would reduce significant impacts to a less than significant level during construction.

There would be no interruptions from operation and maintenance activities. The level of impact would be the same as that for the Proposed Project because impacts from interruptions to emergency response or evacuation routes would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative after the implementation of mitigation.

Mitigation. To minimize significant impacts on an emergency response and emergency evacuation plan associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6** will be implemented.

MM-HAZ-3: Road Closure Restrictions (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-4: Rapid Demobilization Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-5: Evacuation Warning Procedures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6**, impacts on an emergency response plan or emergency evacuation plan would be less than significant.

Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative could include the potential exposing workers to wildland fires during construction. The study area is located in a Local Responsibility Area Very High Fire Hazard Severity Zone in Paradise. The export pipeline passes through State or Federal Responsibility Area Very High, High, and Moderate Fire Hazard Severity Zones (Cal Fire 2008). Project construction and routine maintenance would temporarily expose workers to hazards associated with being in areas with high wildfire danger. Therefore, impacts would be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures,** and **MM-HAZ-9: Wildland Fire Area),** which would reduce impacts to a less than significant level during construction, operation and maintenance. The level of impact would be the same as that for the Proposed Project because impacts from wildland fire exposure would be less than significant for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative after mitigation is incorporated.

Mitigation. To minimize significant impacts from wildfire risk associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling, (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9: Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts for exposing people or structures to significant risk of loss, injury, or death involving wildland fires would be less than significant.

5.5.8.5 Alternatives Impact Summary

Table 5.5-8 summarizes the hazards and hazardous materials impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-8. Alternatives Impacts Summary for Hazards and Hazardous Materials

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.9 Hydrology and Water Quality

5.5.9.1 No Project Alternative

Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (Significant and Unavoidable Impact)

Under the No Project Alternative, the wastewater system in Paradise would continue to consist of individual, privately owned septic tanks and leach fields with subsurface disposal systems. As a result, impacts on groundwater and surface water quality would persist and worsen. As discussed in Section 3.9, Hydrology and Water Quality, as a result of historical use of high-density septic systems and leach fields in Paradise include microbial contaminants, inorganic contaminants, and organic chemical contaminants. High levels of fecal coliform and septic system effluent have also degraded water quality as a result of septic system usage in the study area (Montgomery 1983). Under the No Project Alternative, septic systems and leach fields would continue to degrade surface and groundwater quality, resulting in significant and unavoidable impacts. The level of impact would be greater than that for the Proposed Project because the Proposed Project would result in beneficial water quality impacts once operational. As discussed in Section 2.3.2, removing septic systems in areas where specific systems have failed, or are projected to fail would directly respond to the goals and priorities identified in SWECB's Strategic Plan. The document also describes SWRCB's Strategic Priority Actions, and in a discussion on wastewater infrastructure and sustainability, states:

> *The need for updated and new infrastructure is particularly critical for small communities with very limited resources. The State Water Board will emphasize a renewed focus on small community wastewater projects and make it a priority to help ensure that small and/or disadvantaged communities have the resources needed to protect water quality and public health related to wastewater (SWRCB 2010).*

Mitigation. No mitigation required.

Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (No Impact)

The No Project Alternative would not result in changes to groundwater usage in the study area. The permeability of the soils study area would also not change from current conditions, and groundwater recharge would not be affected. Therefore, no impact would occur. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in less-than-significant groundwater impacts.

Mitigation. No mitigation required.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(a) Result in substantial erosion or siltation on- or off-site (No Impact)

The No Project Alternative would be consistent with current conditions, would not alter the course of any streams or rivers, and does not include construction activities or additional impervious surfaces. No structures would be built in or around waterbodies under the No Project Alternative. Therefore, there would be no impact on erosion, siltation, surface runoff, or flooding. Additionally, there would be no impact on impeding or redirecting flows and additional sources of polluted runoff. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in a less-than-significant impact under Impact HYD-3 (a) through (d).

Mitigation. No mitigation required.

(b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site (No Impact)

See discussion under Impact HYD-3 (a).

Mitigation. No mitigation required.

(c) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff (No Impact)

See discussion under Impact HYD-3 (a).

Mitigation. No mitigation required.

(d) Impede or redirect flood flows (No Impact)

See discussion under Impact HYD-3 (a).

Mitigation. No mitigation required.

Impact HYD-4: In flood hazard zones, risk release of pollutants due to Project inundation (Significant and Unavoidable Impact)

As discussed in Section 3.10, there are Special Flood Hazard Areas (areas susceptible to a 100-year flood) in the study area. Under the No Project Alternative, groundwater and surface water quality could continue to be degraded as a result of high-density septic system usage and leach fields. If the study area were to be inundated during a flood, there is a risk that pollutants would be released and dispersed into nearby surface waterbodies or further infiltrate into groundwater resources, resulting in a significant and unavoidable impact. The level of impact would be greater than that for the Proposed Project because the Proposed Project would result in less than significant impacts from being located within a flood hazard zone.

Mitigation. No available mitigation.

Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Significant and Unavoidable Impact)

As discussed in Section 3.10, the study area would be covered by the *Water Quality Control Plan for the Central Valley Region* (RWQCB 2018). The Butte County Groundwater Conservation Ordinance also applies to the study area. The Butte County Groundwater Conservation Ordinance addresses groundwater extractions that harm the Butte Basin Aquifer. No groundwater extractions would occur under the No Project Alternative. However, as discussed in Impact HYD-1, under the No Project Alternative significant impacts on groundwater and surface water quality could occur through continued use of septic systems and leach fields. This continued degradation of surface and groundwater quality would conflict with the *Water Quality Control Plan for the Central Valley Region*, resulting in significant and unavoidable impacts. The level of impact would be greater than that for the Proposed Project because the Proposed Project would have no impact under this criterion and would result in beneficial impacts to surface and groundwater quality.

Mitigation. No available mitigation.

5.5.9.2 Entler Avenue Hybrid Alternative

Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (Less than Significant Impact with Mitigation Incorporated)

The impact analysis for the Entler Avenue Hybrid Alternative would be similar to the analysis for the Proposed Project. As discussed for the Proposed Project, the Entler Avenue Hybrid Alternative would improve surface and groundwater quality in the study area through the removal of septic systems and implementation of an improved sewer system. The Entler Avenue Hybrid Alternative would require trenchless crossings of Butte Creek. Launching and receiving pits used for trenchless crossings would be set back to avoid riparian vegetation, which would also minimize effects to surface water quality. Ground disturbance and work near waterbodies during implementation of the Export Pipeline System could impact water quality. Consistent with the Proposed Project, the Entler Avenue Hybrid Alternative would include implementation of a construction SWPPP which would require BMPs to minimize potential short-term increases in sediment transport caused by construction. The Entler Avenue Hybrid Alternative would also require regulatory permits from USACE (Section 404 and Section 408), the Regional Board (Section 401), and CDFW (Streambed Alteration Agreement). This alternative would also require a CGP and Small MS4 permit. Compliance with these permitting requirements would protect water quality during construction. However, there is still potential for adverse water quality impacts during construction. If implementation of the project were to cause adverse water quality impacts, this would result in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle and Equipment Access and Fueling, MM-HYD-1: Stormwater Management and Treatment Plan, MM-HYD-2: Construction Best Management Practices,** and **MM-BIO-15: Frac-Out-Plan),** which would reduce impacts to a less than significant level during construction.

In the event of a sewer main break during operations, the Town Wastewater Department will develop an Operations Response Plan as part of its overall operations and maintenance processes that will

provide direction for handling such an occurrence. The Department will also have on-hand the equipment and spare parts necessary to rapidly implement a repair.

The Entler Avenue Hybrid Alternative would add an additional 0.5 mgd of wastewater to be treated at Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). The additional 0.5 mgd of wastewater is within the permitted allowance.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in beneficial water quality impacts once operational and would require mitigation to reduce impacts to a less than significant level during construction.

Mitigation. To minimize potentially significant impacts on water quality associated with construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HYD-1**, **MM-HYD-2**, and **MM-BIO-15** will be implemented.

MM-HAZ-1: Vehicle and Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-2: Construction Best Management Practices (see Section 3.10, Hydrology and Water Quality, for description)

MM-BIO-15: Frac-Out-Plan (see Section 3.4 Biological Resources, for description)**.**

Significance after Mitigation. With implementation of **MM-HAZ-1**, **MM-HYD-1**, **MM-HYD-2**, and **MM-BIO-15**, impacts to water quality would be less than significant.

Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would not involve the use of groundwater during construction; however, groundwater could be encountered during ground disturbance for construction of the Export Pipeline System. This alternative would require pit excavations for trenchless crossings, and any water encountered during excavations would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Any localized lowering of the groundwater table as a result of excavations and trenchless crossings would be anticipated to recover quickly and would not cause a net deficit in aquifer volume or a lowering of the groundwater table. Additionally, this alternative would not introduce impervious surfaces that would impede groundwater recharge because the right of way or other area disturbed during construction would be restored. Impacts on groundwater would be less than significant, and no mitigation would be required. The level of impact would be the same as that for the Proposed Project because both the Entler

Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on groundwater supplies or groundwater recharge.

Mitigation. No mitigation required.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(a) Result in substantial erosion or siltation on- or off-site (Less than Significant Impact with Mitigation Incorporated)

This alternative would require trenchless crossings under Butte Creek. Temporary water quality impacts could result from sediment discharge from areas of disturbance and construction near water resources. The crossings would be required to have a minimum depth of 20 feet below the waterbody with a launching and receiving pit on either end of the crossing. As discussed in Section 2.5.2 Export Pipeline System, and shown in Figure 2-12 Typical HDD Installation, there would be an approximate 10- by 5-foot launching and receiving pit and additional protected space on either end of the waterbody.

Prior to construction and ground disturbing activities, Town would require that the contractor comply with the State Water Resources Control Board CGP, which requires the preparation and implementation of a SWPPP. In addition to the CGP, the alternative would require a Small MS4 Permit. The alternative would comply with mandates set forth in these permits. Potential still exists for construction activities to result in erosion or siltation. Therefore, Impacts would be significant during construction. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan**), which would reduce impacts to a less than significant level during construction. No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. Therefore, the alternative would not alter the drainage patters of the Sacramento River or create additional erosion or siltation. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on erosion and siltation after the implementation of mitigation.

Mitigation. To minimize potentially significant impacts on erosion or siltation associated with construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HYD-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, impacts on erosion and siltation would be less than significant.

(b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site (Less than Significant Impact with Mitigation Incorporated)

Construction of the Entler Avenue Hybrid Alternative would occur largely within the existing public ROW and below ground; and would only arise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP Connection. Disturbed areas would be restored to pre-construction conditions once construction is complete. Additional impervious surfaces are not proposed, and runoff conditions would be similar to existing conditions. There would be no additional runoff to a FEMA floodplain. As discussed, the Town will require that the contractor comply with SWRCB's CGP, which requires the preparation and implementation of a SWPPP. However, the potential for on- or off-site flooding still exists during construction and impacts would be considered significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan** and **MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on surface runoff and flooding after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts on flooding associated with construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HYD-1** and **MM-HYD-3** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1** and **MM-HYD-3**, impacts on flooding on- or off-site would be less than significant.

(c) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff (Less than Significant Impact with Mitigation Incorporated)

As discussed in Impact HYD-3 (b), the Entler Avenue Hybrid Alternative would not increase the amount of surface water runoff in the study area, and polluted runoff during construction would be controlled through the implementation of a Construction SWPPP. Compliance with the CGP and Small MS4 Permit would help prevent runoff from nearby existing drainage systems. However, the potential for polluted runoff still exists during construction. Impacts would therefore be significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan** and **MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

Similar to the analysis for the Proposed Project, no impacts would occur during operations, and treated wastewater would continue to be discharged to the Sacramento River in accordance with NPDES permitting.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on runoff water and polluted runoff after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts on polluted runoff associated with construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HYD-1** and **MM-HYD-3** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1** and **MM-HYD-3** , impacts on polluted runoff would be less than significant.

(d) Impede or redirect flood flows (Less than Significant Impact)

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. The Export Pipeline System would require work near waterbodies; however, construction would not occur within any waterbodies. The alternative would involve trenchless crossings using HDD methods at Butte Creek at depths of at least 20 feet below the creek bed. Waters within Butte Creek would therefore not be redirected or impeded. Additionally, compliance with applicable permits, impacts from impeding or redirecting flood flows would be less than significant, and no mitigation would be required. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on impeding and redirecting flows.

Mitigation. No mitigation required.

Impact HYD-4: In flood hazard zones, risk release of pollutants due to Project inundation (Less than Significant Impact with Mitigation Incorporated)

Most of the Entler Avenue Hybrid Alternative is located in a minimal flood hazard zone. Portions of the study area are also located within Moderate Flood Hazard Areas and Special Flood Hazard Areas (FEMA 2020, Butte County 2021e). The alternative would comply with Section 408 permitting requirements and would be designed in accordance with USACE standards. As discussed in Section 3.10.2, Regulatory Setting, Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project. Impacts on the Butte Creek Diversion Channel would be avoided under this alternative. However, because there is a possibility that the study area could experience flooding, this impact would be significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project

(**MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. Therefore, impacts would be considered less than significant, and no mitigation is required. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment because both the Proposed Project and the Entler Avenue Hybrid Alternative would result in less-than-significant impacts from being located within a flood zone after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts from the release of pollutants due to Entler Avenue Hybrid Alternative inundation to a less than significant level, mitigation measure **MM-HYD-3** will be implemented.

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-3**, impacts from the release of pollutants due to Entler Avenue Hybrid Alternative inundation would be less than significant.

Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than Significant Impact with Mitigation Incorporated)

As discussed under Impact HYD-1, the Entler Avenue Hybrid Alternative would improve surface water and groundwater quality in the study area by implementing an improved sewer system connecting to the Chico WPCP. The alternative would align with the California Water Board's Strategic Plan Summary to increase water supplies and improve groundwater quality. Consistent with the Proposed Project, implementation of a Construction SWPPP and compliance with permitting requirements would protect water quality during construction.

The Entler Avenue Hybrid Alternative would not include the use of groundwater. As discussed under the Proposed Project, construction of the Export Pipeline System would not result in permanent reductions in groundwater levels adjacent to construction areas. Therefore, there would be no impact on a sustainable groundwater management plan or ordinance.

As discussed under Impact HYD-1, the Entler Avenue Hybrid Alternative would add an additional 0.5 mgd of wastewater to be treated at Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). The additional 0.5 mgd of wastewater is within the permitted allowance. As such, there would be no impact on the *Water Quality Control Plan for the Central Valley Region*. However, there is potential that water quality impacts could occur during construction. Impacts would therefore be significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan),** which would reduce impacts to a less than significant level during construction**.**

The level of impact would be the same as that for the Proposed Project because the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less than

significant impacts on a water quality control plan or sustainable groundwater management plan with mitigation incorporated, and groundwater and surface water quality would improve once operational.

Mitigation. To minimize potentially significant impacts on a water quality control plan or sustainable groundwater management plan associated with construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HYD-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, impacts on a water quality control plan or sustainable groundwater management plan would be less than significant.

5.5.9.3 Crouch Avenue Alternative

Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (Less than Significant Impact with Mitigation Incorporated)

The impact analysis for the Crouch Avenue Alternative would be similar to the analysis for the Proposed Project. As discussed for the Proposed Project, the Crouch Avenue Alternative would improve surface and groundwater quality in the study area through the removal of septic systems and implementation of an improved sewer system. The Crouch Avenue Alternative would require trenchless crossings of Little Chico Creek. Launching and receiving pits used for trenchless crossings would be set back to avoid riparian vegetation, which would also minimize effects to surface water quality. Ground disturbance and work near waterbodies during implementation of the Export Pipeline System could impact water quality. Consistent with the Proposed Project, the Crouch Avenue Alternative would include implementation of a construction SWPPP which would require BMPs to minimize potential short-term increases in sediment transport caused by construction. The Crouch Avenue Alternative would also require regulatory permits from USACE (Section 404 and Section 408), the Regional Board (Section 401), and CDFW (Streambed Alteration Agreement). This alternative would also require a CGP and Small MS4 permit. Compliance with these permitting requirements would protect water quality during construction. However, there is still potential for adverse water quality impacts during construction. If implementation of the project were to cause adverse water quality impacts, this would result in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle and Equipment Access and Fueling, MM-HYD-2: Construction Best Management Practices, MM-BIO-15: Frac-Out-Plan,** and **MM-HYD-1: Stormwater Management and Treatment Plan),** which would reduce impacts to a less than significant level during construction.

In the event of a sewer main break during operations, the Town Wastewater Department will develop an Operations Response Plan as part of its overall operations and maintenance processes that will provide direction for handling such an occurrence. The Department will also have on-hand the equipment and spare parts necessary to rapidly implement a repair.

The Crouch Avenue Alternative would add an additional 0.5 mgd of wastewater to be treated at Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). The additional 0.5 mgd of wastewater is within the permitted allowance.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in beneficial water quality impacts once operational and would require mitigation to reduce impacts to a less than significant level during construction.

Mitigation. To minimize potentially significant impacts on water quality associated with construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HYD-1**, **MM-HYD-2**, and **MM-BIO-15** will be implemented.

MM-HAZ-1: Vehicle and Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-2: Construction Best Management Practices (see Section 3.10, Hydrology and Water Quality, for description)

MM-BIO-15: Frac-Out-Plan (see Section 3.4 Biological Resources, for description).

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HYD-1**, **MM-HYD-2**, and **MM-BIO-15**, impacts to water quality would be less than significant .

Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would not involve the use of groundwater during construction; however, groundwater could be encountered during ground disturbance for construction of the Export Pipeline System. This alternative would require pit excavations for trenchless crossings, and any water encountered during excavations would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Any localized lowering of the groundwater table as a result of excavations and trenchless crossings would be anticipated to recover quickly and would not cause a net deficit in aquifer volume or a lowering of the groundwater table. Additionally, this alternative would not introduce impervious surfaces that would impede groundwater recharge because the right of way or other area disturbed during construction would be restored. Impacts on groundwater would be less than significant, and no mitigation would be required. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on groundwater supplies or groundwater recharge.

Mitigation. No mitigation required.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(a) Result in substantial erosion or siltation on- or off-site (Less than Significant Impact with Mitigation Incorporated)

This alternative would require trenchless crossings under Little Chico Creek. Temporary water quality impacts could result from sediment discharge from areas of disturbance and construction near water resources. The crossings would be required to have a minimum depth of 20 feet below the waterbody with a launching and receiving pit on either end of the crossing. As discussed in Section 2.5.2 Export Pipeline System, and shown in Figure 2-12 Typical HDD Installation, there would be an approximate 10- by 5- foot launching and receiving pit and additional protected space on either end of the waterbody.

Prior to construction and ground disturbing activities, Town would require that the contractor comply with the State Water Resources Control Board CGP, which requires the preparation and implementation of a SWPPP. In addition to the CGP, the alternative would require a Small MS4 Permit. The alternative would comply with mandates set forth in these permits. Potential still exists for construction activities to result in erosion or siltation. Therefore, Impacts would be significant during construction. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan),** which would reduce impacts to a less than significant level during construction.

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on erosion and siltation after the implementation of mitigation.

Mitigation. To minimize potentially significant impacts on erosion or siltation associated with construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HYD-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, impacts on erosion and siltation would be less than significant.

(b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site (Less than Significant Impact with Mitigation Incorporated)

Construction of the Crouch Avenue Alternative would occur largely within the existing public ROW and below ground; and would only arise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP Connection. Disturbed

areas would be restored to pre-construction conditions once construction is complete. Additional impervious surfaces are not proposed, and runoff conditions would be similar to existing conditions. There would be no additional runoff to a FEMA floodplain. As discussed, the Town will require that the contractor comply with SWRCB's CGP, which requires the preparation and implementation of a SWPPP. However, the potential for on- or off-site flooding still exists during construction and impacts would be considered significant. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan** and **MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on surface runoff and flooding after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts on flooding associated with construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HYD-1** and **MM-HYD-3** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)**.**

Significance after mitigation. With the implementation of **MM-HYD-1** and **MM-HYD-3**, impacts on flooding on- or off-site would be less than significant.

(c) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff (Less than Significant Impact with Mitigation Incorporated)

As discussed in Impact HYD-3 (b), the Crouch Avenue Alternative would not increase the amount of surface water runoff in the study area. The alternative would not introduce new impervious surfaces because the ROW or other area disturbed during construction would be restored. Polluted runoff during construction would be controlled through the implementation of a Construction SWPPP. Compliance with the CGP and Small MS4 Permit would help prevent runoff from nearby existing drainage systems. However, the potential for polluted runoff still exists during construction. Impacts would therefore be significant. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan** and **MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

Similar to the analysis for the Proposed Project, no impacts would occur during operations, and treated wastewater would continue to be discharged to the Sacramento River in accordance with NPDES permitting.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on runoff water and polluted runoff after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts on polluted runoff associated with construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HYD-1** and **MM-HYD-3** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)**.**

Significance after Mitigation. With the implementation of **MM-HYD-1** and **MM-HYD-3**, impacts on polluted runoff would be less than significant.

(d) Impede or redirect flood flows (Less than Significant Impact)

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. The Export Pipeline System would require work near waterbodies; however, construction would not occur within any waterbodies. The alternative would involve trenchless crossings using HDD methods at Little Chico Creek at depths of at least 20 feet below the creek bed. Waters within Little Chico Creek would therefore not be redirected or impeded. Levees located along Little Chico Creek are locally constructed, operated and maintained (USACE 2016). Additionally, compliance with applicable permits, impacts from impeding or redirecting flood flows would be less than significant, and no mitigation would be required. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on impeding and redirecting flows.

Mitigation. No mitigation required.

Impact HYD-4: In flood hazard zones, risk release of pollutants due to Project inundation (Less than Significant Impact with Mitigation Incorporated)

Most of the Crouch Avenue Alternative is located in a minimal flood hazard zone. Portions of the study area are also located within Moderate Flood Hazard Areas and Special Flood Hazard Areas (FEMA 2020, Butte County 2021e). The alternative would comply with Section 408 permitting requirements and would be designed in accordance with USACE standards. Impacts on the Butte Creek Diversion Channel would be avoided under this alternative. Levees located along Little Chico Creek are locally constructed, operated and maintained (USACE 2016). However, because there is a possibility that the study area could experience flooding, this impact would be significant. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. Therefore, impacts would be considered less than significant, and

no mitigation is required. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment because both the Proposed Project and the Crouch Avenue Alternative would result in less-than-significant impacts from being located within a flood zone after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts from the release of pollutants due to Crouch Avenue Alternative inundation to a less than significant level, mitigation measure **MM-HYD-3** will be implemented.

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-3**, impacts from the release of pollutants due to Crouch Avenue Alternative inundation would be less than significant.

Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than Significant Impact with Mitigation Incorporated)

As discussed under Impact HYD-1, the Crouch Avenue Alternative would improve surface water and groundwater quality in the study area by implementing an improved sewer system connecting to the Chico WPCP. The alternative would align with the California Water Board's Strategic Plan Summary to increase water supplies and improve groundwater quality. Consistent with the Proposed Project, implementation of a Construction SWPPP and compliance with permitting requirements would protect water quality during construction.

The Crouch Avenue Alternative would not include the use of groundwater. As discussed under the Proposed Project, construction of the Export Pipeline System would not result in permanent reductions in groundwater levels adjacent to construction areas. Therefore, there would be no impact on a sustainable groundwater management plan or ordinance.

As discussed under Impact HYD-1, the Crouch Avenue Alternative would add an additional 0.5 mgd of wastewater to be treated at Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). The additional 0.5 mgd of wastewater is within the permitted allowance. As such, there would be no impact on the *Water Quality Control Plan for the Central Valley Region*. However, there is potential that water quality impacts could occur during construction. Impacts would therefore be significant. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan),** which would reduce impacts to a less than significant level during construction.

The level of impact would be the same as that for the Proposed Project because the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less than significant impacts on a water quality control plan or sustainable groundwater management plan with mitigation incorporated, and groundwater and surface water quality would improve once operational.

Mitigation. To minimize potentially significant impacts on a water quality control plan or sustainable groundwater management plan associated with construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HYD-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description).

Significance after Mitigation. With the implementation of **MM-HYD-1**, impacts on a water quality control plan or sustainable groundwater management plan would be less than significant.

5.5.9.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (Less than Significant Impact with Mitigation Incorporated)

The impact analysis for the Entler Avenue Hybrid and Crouch Avenue Alternative would be similar to the analysis for the Proposed Project. As discussed for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would improve surface and groundwater quality in the study area through the removal of septic systems and implementation of an improved sewer system. The Entler Avenue Hybrid and Crouch Avenue Alternative would require trenchless crossings of Little Chico Creek and Butte Creek. Launching and receiving pits used for trenchless crossings would be set back to avoid riparian vegetation, which would also minimize effects to surface water quality. Ground disturbance and work near waterbodies during implementation of the Export Pipeline System could impact water quality. Consistent with the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would include implementation of a construction SWPPP which would require BMPs to minimize potential short-term increases in sediment transport caused by construction. The Entler Avenue Hybrid and Crouch Avenue Alternative would also require regulatory permits from USACE (Section 404 and Section 408), the Regional Board (Section 401), and CDFW (Streambed Alteration Agreement). This alternative would also require a CGP and Small MS4 permit. Compliance with these permitting requirements would protect water quality during construction. However, there is still potential for adverse water quality impacts during construction. If implementation of the project were to cause adverse water quality impacts, this would result in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle and Equipment Access and Fueling, MM-HYD-1: Stormwater Management and Treatment Plan, MM-HYD-2: Construction Best Management Practices,** and **MM-BIO-15: Frac-Out-Plan),** which would reduce impacts to a less than significant level during construction.

In the event of a sewer main break during operations, the Town Wastewater Department will develop an Operations Response Plan as part of its overall operations and maintenance processes that will provide direction for handling such an occurrence. The Department will also have on-hand the equipment and spare parts necessary to rapidly implement a repair.

The Entler Avenue Hybrid and Crouch Avenue Alternative would add an additional 0.5 mgd of wastewater to be treated at Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). The additional 0.5 mgd of wastewater is within the permitted allowance. Operations and maintenance would therefore result in no impact.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in beneficial water quality impacts once operational and would require mitigation to reduce impacts to a less than significant level during construction.

Mitigation. To minimize potentially significant impacts on water quality associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HYD-1**, **MM-HYD-2**, and **MM-BIO-15** will be implemented.

MM-HAZ-1: Vehicle and Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-2: Construction Best Management Practices (see Section 3.10, Hydrology and Water Quality, for description)

MM-BIO-15: Frac-Out-Plan (see Section 3.4 Biological Resources, for description)**.**

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HYD-1**, **MM-HYD-2**, and **MM-BIO-15**, impacts to water quality would be less than significant.

Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would not involve the use of groundwater during construction; however, groundwater could be encountered during ground disturbance for construction of the Export Pipeline System. This alternative would require pit excavations for trenchless crossings, and any water encountered during excavations would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Any localized lowering of the groundwater table as a result of excavations and trenchless crossings would be anticipated to recover quickly and would not cause a net deficit in aquifer volume or a lowering of the groundwater table. Additionally, this alternative would not introduce impervious surfaces that would impede groundwater recharge because the right of way or other area disturbed during construction would be restored. Impacts on groundwater would be less than significant, and no mitigation would be required. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on groundwater supplies or groundwater recharge.

Mitigation. No mitigation required.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(a) Result in substantial erosion or siltation on- or off-site (Less than Significant Impact with Mitigation Incorporated)

This alternative would require trenchless crossings under Little Chico Creek and Butte Creek. Temporary water quality impacts could result from sediment discharge from areas of disturbance and construction near water resources. As discussed in Section 2.5.2 Export Pipeline System, and shown in Figure 2-12 Typical HDD Installation, there would be an approximate 10- by 5- foot launching and receiving pit and additional protected space on either end of the waterbody.

Prior to construction and ground disturbing activities, Town would require that the contractor comply with the State Water Resources Control Board CGP, which requires the preparation and implementation of a SWPPP. In addition to the CGP, the alternative would require a Small MS4 Permit. The alternative would comply with mandates set forth in these permits. Potential still exists for construction activities to result in erosion or siltation. Therefore, Impacts would be significant during construction. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan),** which would reduce impacts to a less than significant level during construction.

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on erosion and siltation after the implementation of mitigation.

Mitigation. To minimize potentially significant impacts on erosion or siltation associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HYD-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, impacts on erosion and siltation would be less than significant.

(b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site (Less than Significant Impact with Mitigation Incorporated)

Construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would occur largely within the existing public ROW and below ground; and would only arise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP Connection. Disturbed areas would be restored to pre-construction conditions once construction is complete. Additional impervious surfaces are not proposed, and runoff conditions would be similar to

existing conditions. There would be no additional runoff to a FEMA floodplain. As discussed, the Town will require that the contractor comply with SWRCB's CGP, which requires the preparation and implementation of a SWPPP. However, the potential for on- or off-site flooding still exists during construction and impacts would be considered significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan** and **MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on surface runoff and flooding after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts on flooding associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HYD-1** and **MM-HYD-3** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)**.**

Significance after mitigation. With the implementation of **MM-HYD-1** and **MM-HYD-3**, impacts on flooding on- or off-site would be less than significant.

(c) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff (Less than Significant Impact with Mitigation Incorporated)

As discussed in Impact HYD-3 (b), the Entler Avenue Hybrid and Crouch Avenue Alternative would not increase the amount of surface water runoff in the study area. The alternative would not introduce new impervious surfaces because the ROW or other area disturbed during construction would be restored. Polluted runoff during construction would be controlled through the implementation of a Construction SWPPP. Compliance with the CGP and Small MS4 Permit would help prevent runoff from nearby existing drainage systems. However, the potential for polluted runoff still exists during construction. Impacts would therefore be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan** and **MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction

Similar to the analysis for the Proposed Project, no impacts would occur during operations, and treated wastewater would continue to be discharged to the Sacramento River in accordance with NPDES permitting.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment

would result in less-than-significant impacts on runoff water and polluted runoff after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts on polluted runoff associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HYD-1** and **MM-HYD-3** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)**.**

Significance after Mitigation. With the implementation of **MM-HYD-1** and **MM-HYD-3** , impacts on polluted runoff would be less than significant.

(d) Impede or redirect flood flows (Less than Significant Impact)

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. The Export Pipeline System would require work near waterbodies; however, construction would not occur within any waterbodies. Levees traverse the study area along Little Chico Creek, which is locally operated and maintained, and Butte Creek Diversion Channel, which is a federal levee. The alternative would involve trenchless crossings using HDD methods at Butte Creek and Little Chico Creek at depths of at least 20 feet below the creek bed. Waters within Butte Creek and Little Chico Creek would therefore not be redirected or impeded. Additionally, compliance with applicable permits, impacts from impeding or redirecting flood flows would be less than significant, and no mitigation would be required. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on impeding and redirecting flows.

Mitigation. No mitigation required.

Impact HYD-4: In flood hazard zones, risk release of pollutants due to Project inundation (Less than Significant Impact with Mitigation Incorporated)

Most of the Crouch Avenue Alternative is located in a minimal flood hazard zone. Portions of the study area are also located within Moderate Flood Hazard Areas and Special Flood Hazard Areas (FEMA 2020, Butte County 2021e). Levees traverse the study area along Little Chico Creek, which is locally operated and maintained, and Butte Creek Diversion Channel, which is a federal levee. The alternative would comply with Section 408 permitting requirements and would be designed in accordance with USACE standards. Impacts on the Butte Creek Diversion Channel would be avoided under this alternative. However, because there is a possibility that the study area could experience flooding, this impact would be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-3: Flood Protection Plan),** which would reduce impacts to a less than significant level during construction.

No impacts would occur during operations because treated wastewater would continue to be discharged to the Sacramento River. Therefore, impacts would be considered less than significant, and no mitigation is required. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment because both the Proposed Project and the Crouch Avenue Alternative would result in less-than-significant impacts from being located within a flood zone after mitigation is incorporated.

Mitigation. To minimize potentially significant impacts from the release of pollutants due to Entler Avenue Hybrid and Crouch Avenue Alternative inundation to a less than significant level, mitigation measure **MM-HYD-3** will be implemented.

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-3**, impacts from the release of pollutants due to Entler Avenue Hybrid and Crouch Avenue Alternative inundation would be less than significant.

Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than Significant Impact with Mitigation Incorporated)

As discussed under Impact HYD-1, the Entler Avenue Hybrid and Crouch Avenue Alternative would improve surface water and groundwater quality in the study area by implementing an improved sewer system connecting to the Chico WPCP. The alternative would align with the California Water Board's Strategic Plan Summary to increase water supplies and improve groundwater quality. Consistent with the Proposed Project, implementation of a Construction SWPPP and compliance with permitting requirements would protect water quality during construction.

The Entler Avenue Hybrid and Crouch Avenue Alternative would not include the use of groundwater. As discussed under the Proposed Project, construction of the Export Pipeline System would not result in permanent reductions in groundwater levels adjacent to construction areas. Therefore, there would be no impact on a sustainable groundwater management plan or ordinance. However, there is potential that water quality impacts could occur during construction. Impacts would therefore be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan),** which would reduce impacts to a less than significant level during construction.

As discussed under Impact HYD-1, the Entler Avenue Hybrid and Crouch Avenue Alternative would add an additional 0.5 mgd of wastewater to be treated at Chico WPCP and discharged to the Sacramento River through a submerged outfall diffuser regulated in accordance with NPDES Permit No. CA0079081 (Order No. R5-2016-0023). The additional 0.5 mgd of wastewater is within the permitted allowance. As such, there would be no impact on the *Water Quality Control Plan for the Central Valley Region*.

The level of impact would be the same as that for the Proposed Project because the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less than significant impacts on a water quality control plan or sustainable groundwater management

plan with mitigation incorporated, and groundwater and surface water quality would improve once operational.

Mitigation. To minimize potentially significant impacts on a water quality control plan or sustainable groundwater management plan associated with construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HYD-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, impacts on a water quality control plan or sustainable groundwater management plan would be less than significant.

5.5.9.5 Alternatives Impact Summary

Table 5.5-9 summarizes the hydrology and water quality impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-9. Alternatives Impacts Summary for Hydrology and Water Quality

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HYD-3 (a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or off-site	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-3 (b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-3 (c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff					
Impact HYD-3 (d): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HYD-4: In flood hazard zones, risk release of pollutants due to Project inundation	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.10 Land Use and Planning

5.5.10.1 No Project Alternative

Impact LU-1: Physically divide an established community (No Impact)

Under the No Project Alternative, there would be no new construction and no division of established communities; therefore, there would be no impact on land use. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would divide an established community.

Mitigation. No mitigation required.

Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (No Impact)

Under the No Project Alternative, all land use designation would remain the same, and there would be no impact on any existing land use conditions. There would be no conflict with land use plan, policy, or regulation. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would conflict with any land use plan, policy, or regulation.

Mitigation. No mitigation required.

5.5.10.2 Entler Avenue Hybrid Alternative

Impact LU-1: Physically divide an established community (No Impact)

According to the *Town of Paradise 2022-2030 Housing Element Update*, a Sewer Service Overlay zone was established to allow increased densities up to 30 dwelling units per acre in the sewer service area (Town of Paradise 2022a). The Entler Avenue Hybrid Alternative is consistent with the goals and policies in the *Town of Paradise 2022-2030 Housing Element Update* as it would serve most businesses in the Town of Paradise and provide for future development of more multi-family residences, which is currently limited because of septic system constraints. Further, the Entler Avenue Hybrid Alternative assists the Town in meeting the goals presented in the *Town of Paradise 2022–2030 Housing Element* Update as it provides the sewage capacity for the increase in densities per acre to occur.

The Entler Avenue Hybrid Alternative would occur within the same designated sewer service area and provide the same connection to the Chico WPCP as the Proposed Project. All construction and construction methodology would also be the same as the Proposed Project in that the Entler Avenue Hybrid Alternative would primarily be constructed below the surface within the public ROW and would only arise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP Connection. All exposed ground would be restored back to existing conditions. Under this alternative, the export pipeline would traverse private property and require a permanent easement from the property owners. Above ground structures including pump stations, the transition chamber and the flow control and metering structure would also be in the public ROW and would not segment or divide an established community.

Therefore, there would be no physical division of an established community, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would divide an established community.

Mitigation. No mitigation required.

Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (No Impact)

The Town of Paradise will be updating its General Plan in response to the 2018 Camp Fire, and will include updates to its land use, circulation, conservation, noise, open space, and air quality elements. This is anticipated to be a minimum 3-year process (S. Hartman, personal communication, November 19, 2021). The Entler Avenue Hybrid Alternative is also consistent with the goals and policies planned to be included in the *Town of Paradise General Plan* updates (S. Hartman, personal communication, November 19, 2021). Table 3.11-1 in Section 3.11, Land Use and Planning, provides a consistency analysis of applicable land use goals, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would not conflict with any land use plan, policy, or regulation. Therefore, there would be no impact. The level of impact would be the same as that for the Proposed Project

because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with any land use plan, policy, or regulation.

Mitigation. No mitigation required.

5.5.10.3 Crouch Avenue Alternative

Impact LU-1: Physically divide an established community (No Impact)

According to the *Town of Paradise 2022-2030 Housing Element Update*, a Sewer Service Overlay zone was established to allow increased densities up to 30 dwelling units per acre in the sewer service area (Town of Paradise 2022a). The Crouch Avenue Alternative is consistent with the goals and policies in the *Town of Paradise 2022-2030 Housing Element Update* as it would serve most businesses in the Town of Paradise and provide for future development of more multi-family residences, which is currently limited because of septic system constraints. Further, the Crouch Avenue Alternative assists the Town in meeting the goals presented in the *Town of Paradise 2022–2030 Housing Element* Update as it provides the sewage capacity for the increase in densities per acre to occur.

The Crouch Avenue Alternative would occur within the same designated sewer service area and provide the same connection to the Chico WPCP as the Proposed Project. All construction and construction methodology would also be the same as the Proposed Project in that the Crouch Avenue Alternative would primarily be constructed below the surface within the public ROW and would only arise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP Connection. All exposed ground would be restored back to existing conditions. The export pipeline alignment under this alternative would involve a trenchless crossing at Little Chico Creek, below ground, which would not cause any physical disruption on the existing land or land uses.

Therefore, there would be no physical division of an established community, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would divide an established community.

Mitigation. No mitigation required.

Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (No Impact)

The Town of Paradise will be updating its General Plan in response to the 2018 Camp Fire, and will include updates to its land use, circulation, conservation, noise, open space, and air quality elements. This is anticipated to be a minimum 3-year process (S. Hartman, personal communication, November 19, 2021). The Crouch Avenue Alternative is also consistent with the goals and policies planned to be included in the *Town of Paradise General Plan* updates (S. Hartman, personal communication, November 19, 2021). Table 3.11-1 in Section 3.11, Land Use and Planning, provides a consistency analysis of applicable land use goals, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would not conflict with any land use plan, policy, or regulation. Therefore, there

would be no impact. The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with any land use plan, policy, or regulation.

Mitigation. No mitigation required.

5.5.10.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact LU-1: Physically divide an established community (No Impact)

According to the *Town of Paradise 2022-2030 Housing Element Update*, a Sewer Service Overlay zone was established to allow increased densities up to 30 dwelling units per acre in the sewer service area (Town of Paradise 2022a). The Entler Avenue Hybrid and Crouch Avenue Alternative is consistent with the goals and policies in the *Town of Paradise 2022-2030 Housing Element Update* as it would serve most businesses in the Town of Paradise and provide for future development of more multi-family residences, which is currently limited because of septic system constraints. Further, the Entler Avenue Hybrid and Crouch Avenue Alternative assists the Town in meeting the goals presented in the *Town of Paradise 2022–2030 Housing Element* Update as it provides the sewage capacity for the increase in densities per acre to occur.

The Entler Avenue Hybrid and Crouch Avenue Alternative would occur within the same designated sewer service area and provide the same connection to the Chico WPCP as the Proposed Project. All construction and construction methodology would also be the same as the Proposed Project in that the Entler Avenue Hybrid and Crouch Avenue Alternative would primarily be constructed below the surface within the public ROW and would only arise to the surface for parcel connections, at pump station locations within the Core and Extended Collection System areas, and at the Chico WPCP Connection. All exposed ground would be restored back to existing conditions. Under this alternative, the export pipeline would traverse private property and require a permanent easement from the property owners. The export pipeline alignment under this alternative would also involve trenchless crossings at Little Chico Creek and Butte Creek, below ground, which would not cause any physical disruption on the existing land or land uses.

Therefore, there would be no physical division of an established community, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would divide an established community.

Mitigation. No mitigation required.

Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (No Impact)

The Town of Paradise will be updating its General Plan in response to the 2018 Camp Fire, and will include updates to its land use, circulation, conservation, noise, open space, and air quality elements. This is anticipated to be a minimum 3-year process (S. Hartman, personal communication, November 19, 2021). The Entler Avenue Hybrid and Crouch Avenue Alternative is also consistent with the goals

and policies planned to be included in the *Town of Paradise General Plan* updates (S. Hartman, personal communication, November 19, 2021). Table 3.11-1 in Section 3.11, Land Use and Planning, provides a consistency analysis of applicable land use goals, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with any land use plan, policy, or regulation. Therefore, there would be no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with any land use plan, policy, or regulation.

Mitigation. No mitigation required.

5.5.10.5 Alternatives Impact Summary

Table 5.5-10 summarizes the land use and planning impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-10. Alternatives Impacts Summary for Land Use and Planning

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact LU-1: Physically divide an established community	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	NI	NI (=)	NI (=)	NI (=)	NI (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.11 Noise and Groundborne Vibration

5.5.11.1 No Project Alternative

Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no noise would be generated. The No Project Alternative would not result in a temporary or permanent increase in ambient noise levels near the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies. As a result, no impact would occur. The level of impact would be less than that for the Proposed Project because the Proposed Project would generate a temporary increase in ambient noise, resulting in less-than-significant impacts with mitigation incorporated.

Mitigation. No mitigation required.

Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no groundborne vibration would be generated. The No Project Alternative would not generate excessive groundborne vibration or groundborne noise levels, resulting in no impact. The level of impact would be less than that for the Proposed Project because the Proposed Project would temporarily generate groundborne vibration or groundborne noise levels during construction, resulting in a less-than-significant impact with mitigation incorporated.

Mitigation. No mitigation required.

Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels (No Impact)

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no noise would be generated. Therefore, the No Project Alternative would not expose people residing or working in the Project area to excessive noise levels, resulting in no impact. The level of impact would be less than that for the Proposed Project because the Proposed Project is located within 2 miles of a private airport and impacts from the Proposed Project would be less than significant.

Mitigation. No mitigation required.

5.5.11.2 Entler Avenue Hybrid Alternative

Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.12, Noise and Groundborne Vibration. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would generate noise during construction. During construction, the Entler Avenue Hybrid Alternative would require use of heavy construction equipment that generate noise levels of up to 85 dBA at 50 feet from the equipment. The closest sensitive receptors to the Entler Avenue Hybrid Alternative are residential dwelling units along Entler Avenue, located approximately 50 feet away. Thus, the nearest sensitive receptors to this alternative would be exposed to noise levels of up to 85 dBA from construction equipment. Noise levels from the Entler Avenue Hybrid Alternative would temporarily exceed the daytime noise limits within the applicable jurisdictions during construction, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-NSE-1: Minimize Construction Noise**), which would reduce impacts on noise levels during construction to less than significant. Noise levels during operation and maintenance activities would be minimal and

immeasurable due to the infrequency of these activities. Therefore, no impacts on noise would occur during operation and maintenance of the Entler Avenue Hybrid Alternative.

The level of impact would be the same as that for the Proposed Project because sensitive receptors are located at the same distance (50 feet) from both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment. Therefore, both the Proposed Project and the Entler Avenue Hybrid Alternative would result in a less-than-significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant noise impacts during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise (see Section 3.12, Noise and Groundborne Vibration, for description)

Significance after Mitigation. With the implementation of **MM-NSE-1**, noise impacts during construction would be less than significant.

Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.12, Noise and Groundborne Vibration. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would generate groundborne vibration during construction. The closest sensitive receptors to the Entler Avenue Hybrid Alternative are residential dwelling units along Entler Avenue, located approximately 50 feet away. Similar to the Proposed Project, the highest reference PPV at 25 feet from construction equipment for this alternative would be 0.21 in/sec. Construction vibration related to building damage is assessed using the following equation: $PPV_{Equipment} = PPV_{Ref} (25/D)^{1.5}$. At 50 feet, construction vibration levels from the Entler Avenue Hybrid Alternative would be 0.07 in/sec. This level is much lower than the 0.12 in/sec threshold for buildings extremely susceptible to vibration damage. Similar to the Proposed Project, the highest reference L_V at 25 feet from construction equipment for this alternative would be 94 VdB. Annoyance or interference associated with vibration-sensitive activities is assessed using the following equation: $L_{V,distance} = L_{V,reference} – 30 \log (D/25)$. At 50 feet, the groundborne vibration level from the Entler Avenue Hybrid Alternative would be 85 VdB. This level exceeds the daytime annoyance threshold of 78 VdB for residential uses, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-NSE-1: Minimize Construction Noise**), which would reduce impacts related to groundborne vibration during construction to less than significant. Operation and maintenance activities do not include the use of vibration-generating equipment. Therefore, no impacts on groundborne vibration would occur during operation and maintenance of the Entler Avenue Hybrid Alternative.

The level of impact would be the same as that for the Proposed Project because sensitive receptors are located at the same distance (50 feet) from both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment.

Mitigation. To minimize potentially significant groundborne vibration impacts during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise (see Section 3.12, Noise and Groundborne Vibration, for description)

Significance after Mitigation. With the implementation of **MM-NSE-1**, groundborne vibration impacts during construction would be less than significant.

Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels (No Impact)

The nearest airport to the Entler Avenue Hybrid Alternative is the privately owned Ranchaero Airport, which is located approximately 4.1 miles away. The Entler Avenue Hybrid Alternative is not located within an airport land use plan or within 2 miles of a public or private airport. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would result in no impacts from being located in the vicinity of an airport.

The level of impact would be less than that for the Proposed Project because the Proposed Project Entler Avenue alignment is located within 2 miles of a private airport, resulting in a less than significant impact.

Mitigation. No mitigation required.

5.5.11.3 Crouch Avenue Alternative

Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies (Less than Significant Impact with Mitigation Incorporated)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.12, Noise and Groundborne Vibration. Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would generate noise during construction. During construction, the Crouch Avenue Alternative would require use of heavy construction equipment that generate noise levels of up to 85 dBA at 50 feet from the equipment. The closest sensitive receptors to the Crouch Avenue Alternative are residential dwelling units along Crouch Avenue, located approximately 60 feet away. Construction equipment noise levels decrease by approximately 6 dBA per doubling of distance from the source. Thus, the nearest sensitive receptors to this alternative would be exposed to noise levels of up to 83 dBA from construction equipment. Noise levels from the Crouch Avenue Alternative would temporarily exceed the daytime noise limits within the applicable jurisdictions during construction, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-NSE-1: Minimize Construction Noise**), which would reduce impacts on noise levels during construction to less than significant. Noise levels during operation and maintenance activities would be minimal and immeasurable due to the

infrequency of these activities. Therefore, no impacts on noise would occur during operation and maintenance of the Crouch Avenue Alternative.

The level of impact would be the same as that for the Proposed Project, except that sensitive receptors are located father away from the Crouch Avenue Alternative (60 feet) compared to the Proposed Project (50 feet). Therefore, impacts would be considered slightly less for the Crouch Avenue Alternative when compared to the Proposed Project Entler Avenue alignment under this criterion.

Mitigation. To minimize potentially significant noise impacts during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise (see Section 3.12, Noise and Groundborne Vibration, for description)

Significance after Mitigation. With the implementation of **MM-NSE-1**, noise impacts during construction would be less than significant.

Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels (Less than Significant Impact with Mitigation Incorporated)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.12, Noise and Groundborne Vibration. Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would generate groundborne vibration during construction. The closest sensitive receptors to the Crouch Avenue Alternative are residential dwelling units along Crouch Avenue, located approximately 60 feet away. Similar to the Proposed Project, the highest reference PPV at 25 feet from construction equipment for this alternative would be 0.21 in/sec. Construction vibration related to building damage is assessed using the following equation: $PPV_{Equipment} = PPV_{Ref} (25/D)^{1.5}$. At 60 feet, the construction vibration levels from the Crouch Avenue Alternative would be 0.06 in/sec. This level is much lower than the 0.12 in/sec threshold for buildings extremely susceptible to vibration damage. Similar to the Proposed Project, the highest reference L_V at 25 feet from construction equipment for this alternative would be 94 VdB. Annoyance or interference with vibration-sensitive activities is assessed using the following equation: $L_{V,distance} = L_{V,reference} – 30 \log (D/25)$. At 60 feet, the groundborne vibration level from the Crouch Avenue Alternative would be 83 VdB. This level exceeds the daytime annoyance threshold of 78 VdB for residential uses, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-NSE-1: Minimize Construction Noise**), which would reduce impacts related to groundborne vibration during construction to less than significant. Operation and maintenance activities do not include the use of vibration-generating equipment. Therefore, no impacts on groundborne vibration would occur during operation and maintenance of the Crouch Avenue Alternative.

The level of impact would be the same as that for the Proposed Project, except that sensitive receptors are located father away from the Crouch Avenue Alternative (60 feet) compared to the Proposed Project (50 feet). Therefore, impacts would be considered slightly lesser under the Crouch Avenue Alternative when compared to the Proposed Project Entler Avenue alignment under this criterion.

Mitigation. To minimize potentially significant groundborne vibration impacts during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise (see Section 3.12, Noise and Groundborne Vibration, for description)

Significance after Mitigation. With the implementation of **MM-NSE-1**, noise impacts during construction would be less than significant.

Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels (Less than Significant Impact)

The nearest airport to the Crouch Avenue Alternative is the privately owned Ranchaero Airport, which is located approximately 1 mile away. However, the Crouch Avenue Alternative is located within the low noise impact zone for Ranchaero Airport (Butte County Airport Land Use Commission 2017). Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would result in less than significant impacts from being located in the vicinity of an airport.

The level of impact would be the same as that for the Proposed Project, except that the Crouch Avenue Alternative is located within 1 mile of the Ranchaero Airport and the Proposed Project is located within 1.5 mile of the Ranchaero Airport. Both the Crouch Avenue Alternative and Proposed Project are located within the low noise impact zone for the airport. Therefore, impacts would be considered slightly greater under the Crouch Avenue Alternative when compared to the Proposed Project Entler Avenue alignment.

Mitigation. No mitigation required.

5.5.11.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.12, Noise and Groundborne Vibration. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would generate noise during construction. During construction, the Entler Avenue Hybrid and Crouch Avenue Alternative would require use of heavy construction equipment that generate noise levels of up to 85 dBA at 50 feet from the equipment. The closest sensitive receptors to the Entler Avenue Hybrid and Crouch Avenue Alternative are residential dwelling units along Entler Avenue, located approximately 50 feet away. Thus, the nearest sensitive receptors to this alternative would be exposed to noise levels of up to 85 dBA from construction equipment. Noise levels from the Entler Avenue Hybrid and Crouch Avenue Alternative would temporarily exceed the daytime noise limits within the applicable jurisdictions

during construction, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-NSE-1: Minimize Construction Noise**), which would reduce impacts on noise levels during construction to less than significant. Noise levels during operation and maintenance activities would be minimal and immeasurable due to the infrequency of these activities. Therefore, no impacts on noise would occur during operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative.

The level of impact would be the same as that for the Proposed Project because sensitive receptors are located at the same distance (50 feet) from both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment. Therefore, both the Proposed Project and the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less-than-significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant noise impacts during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise (see Section 3.12, Noise and Groundborne Vibration, for description)

Significance after Mitigation. With the implementation of **MM-NSE-1**, noise impacts during construction would be less than significant.

Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.12, Noise and Groundborne Vibration. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would generate groundborne vibration during construction. The closest sensitive receptors to the Entler Avenue Hybrid and Crouch Avenue Alternative are residential dwelling units along Entler Avenue, located approximately 50 feet away. Similar to the Proposed Project, the highest reference PPV at 25 feet from construction equipment for this alternative would be 0.21 in/sec. Construction vibration related to building damage is assessed using the following equation: $PPV_{Equipment} = PPV_{Ref} (25/D)^{1.5}$. At 50 feet, construction vibration levels from the Entler Avenue Hybrid and Crouch Avenue Alternative would be 0.07 in/sec. This level is much lower than the 0.12 in/sec threshold for buildings extremely susceptible to vibration damage. Similar to the Proposed Project, the highest reference L_V at 25 feet from construction equipment for this alternative would be 94 VdB. Annoyance or interference associated with vibration-sensitive activities is assessed using the following equation: $L_{V,distance} = L_{V,reference} - 30 \log (D/25)$. At 50 feet, the groundborne vibration level from the Entler Avenue Hybrid and Crouch Avenue Alternative would be 85 VdB. This level exceeds the daytime annoyance threshold of 78 VdB for residential uses, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-NSE-1: Minimize Construction Noise**), which would reduce impacts related to groundborne vibration during construction to less than significant. Operation and maintenance activities do not include the use of

vibration-generating equipment. Therefore, no impacts on groundborne vibration would occur during operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative.

The level of impact would be the same as that for the Proposed Project because sensitive receptors are located at the same distance (50 feet) from both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment. Therefore, both the Proposed Project and the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less-than-significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant groundborne vibration impacts during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-NSE-1** will be implemented.

MM-NSE-1: Minimize Construction Noise (see Section 3.12, Noise and Groundborne Vibration, for description)

Significance after Mitigation. With the implementation of **MM-NSE-1**, groundborne vibration impacts during construction would be less than significant.

Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels (Less than Significant)

The nearest airport to the Entler Avenue Hybrid and Crouch Avenue Alternative is the privately owned Ranchaero Airport, which is located approximately 1 mile away. However, the Entler Avenue Hybrid and Crouch Avenue Alternative is located within the low noise impact zone for Ranchaero Airport (Butte County Airport Land Use Commission 2017). Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would result in less than significant impacts from being located in the vicinity of an airport

The level of impact would be the same as that for the Proposed Project, except that the Entler Avenue Hybrid and Crouch Avenue Alternative is located within 1 mile of the Ranchaero Airport and the Proposed Project is located within 1.5 mile of the Ranchaero Airport. Both the Entler Avenue Hybrid and Crouch Avenue Alternative and Proposed Project are located within the low noise impact zone for the airport. Therefore, impacts would be considered slightly greater under the Entler Avenue Hybrid and Crouch Avenue Alternative when compared to the Proposed Project alignment.

Mitigation. No mitigation required.

5.5.11.5 Alternatives Impact Summary

Table 5.5-11 summarizes the noise and groundborne vibration impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-11. Alternatives Impacts Summary for Noise and Groundborne Vibration

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	S/M	NI (-)	S/M (=)	S/M (-)	S/M (=)
Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels	S/M	NI (-)	S/M (=)	S/M (-)	S/M (=)
Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels	LTS	NI (-)	NI (-)	LTS (+)	LTS (+)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.12 Population and Housing

5.5.12.1 No Project Alternative

Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) (No Impact)

Under the No Project Alternative, the Town would not make a regional connection to the Chico WPCP and would continue to rely on existing wastewater management. All population and housing trends and characteristics would remain the same as existing conditions. Paradise population and housing would continue to recover from the 2018 Camp Fire. Therefore, the No Project Alternative would have no impact on population growth in the area. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in less-than-significant impacts on population growth.

Mitigation. No mitigation required.

Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (No Impact)

Under the No Project Alternative, the Town would not make a regional connection to the Chico WPCP and would continue to rely on existing wastewater management. All population and housing trends and

characteristics would remain the same as existing conditions. The Paradise population and housing would continue to recover from the 2018 Camp Fire. Therefore, the No Project Alternative would have no impact on housing. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would displace people or housing.

Mitigation. No mitigation required.

5.5.12.2 Entler Avenue Hybrid Alternative

Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) (Less than Significant Impact)

Consistent with the Proposed Project analysis in Section 3.13, Population and Housing, all construction jobs associated with the Entler Avenue Hybrid Alternative would be temporary and construction workers could be drawn from the existing workforce within the county rather than relocating to the study area. However, it is likely that some would be migrant workers from outside of the County that follow construction jobs from location to location, and there may be others that relocate to the Town for the work and decide to stay. Workers that become permanent residents would be part of the Town's population recovery. Consequently, construction of the Entler Avenue Hybrid Alternative would not result in substantial or unplanned population growth and would not necessitate the construction of new roads, additional housing or business services that would be inconsistent with regrowth planned and presented in the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) and *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008). Therefore, construction of the Entler Avenue Hybrid Alternative would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact.

Similar to the Proposed Project, about 5-10 permanent employees would be required to the serve the Entler Avenue Hybrid Alternative. The increase in permanent employees would be minimal because they may be re-assigned from existing staff within the Town or may be additional new staff. The minimal increase in permanent jobs would not result in substantial or unplanned population growth and would not necessitate the construction of additional housing or business services beyond planned regrowth. Although implementation of the Entler Avenue Hybrid Alternative would foster population growth, it is primarily regrowth that would be expected as part of the historic population levels in the Paradise area. Therefore, the Entler Avenue Hybrid Alternative would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on population growth.

Mitigation. No mitigation required.

Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (No Impact)

The Entler Avenue Hybrid Avenue Alternative would not acquire or take any residential-zoned land in the area. While some of the Entler Avenue Hybrid Alternative would be conducted on private parcels,

work would primarily be done within public ROW, which would not cause displacement of existing residents or housing. Work that would occur on private parcels, including connecting properties to the new sewer system or installing the Export Pipeline System would be completed under easements and would not displace existing housing. Therefore, the Entler Avenue Hybrid Alternative would not displace a substantial number of existing people or housing, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would displace people or housing.

Mitigation. No mitigation required.

5.5.12.3 Crouch Avenue Alternative

Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) (Less than Significant Impact)

Consistent with the Proposed Project analysis in Section 3.13, Population and Housing, all construction jobs associated with the Crouch Avenue Alternative would be temporary and construction workers could be drawn from the existing workforce within the county. However, it is likely that some would be migrant workers from outside of the County that follow construction jobs from location to location, and there may be others that relocate to the Town for the work and decide to stay. Workers that become permanent residents would be part of the Town's population recovery. Consequently, construction of the Crouch Avenue Alternative would not result in substantial or unplanned population growth and would not necessitate the construction of new roads, additional housing or business services that would be inconsistent with regrowth planned and presented in the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) and *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008). Therefore, construction of the Crouch Avenue Alternative would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact.

Similar to the Proposed Project, about 5-10 permanent employees would be required to the serve the Crouch Avenue Alternative. The increase in permanent employees would be minimal because they may be re-assigned from existing staff within the Town or may be additional new staff. Therefore, the Crouch Avenue Alternative would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on population growth.

Mitigation. No mitigation required.

Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (No Impact)

The Crouch Avenue Alternative would not acquire or take any residential-zoned land in the area. While some of the Crouch Avenue Alternative would be conducted on private parcels, work would be primarily be done within public ROW, which would not cause displacement of existing residents or housing. Work that would occur on private parcels, including connecting properties to the new sewer system or installing the Export Pipeline System would be completed under easements and would not displace

existing housing. Therefore, the Crouch Avenue Alternative would not displace a substantial number of existing people or housing, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would displace people or housing.

Mitigation. No mitigation required.

5.5.12.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure (Less Than Significant Impact)

Consistent with the Proposed Project analysis in Section 3.13, Population and Housing, all construction jobs associated with the Entler Avenue Hybrid and Crouch Avenue Alternative would be temporary and construction workers could be drawn from the existing workforce within the county. However, it is likely that some would be migrant workers from outside of the County that follow construction jobs from location to location, and there may be others that relocate to the Town for the work and decide to stay. Workers that become permanent residents would be part of the Town's population recovery. Consequently, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in substantial or unplanned population growth and would not necessitate the construction of new roads, additional housing or business services that would be inconsistent with regrowth planned and presented in the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a) and *Town of Paradise General Plan* (Town of Paradise and Quad Consultants 2008). Therefore, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact.

Similar to the Proposed Project, about 5 to 10 permanent employees would be required to the serve the Entler Avenue Hybrid and Crouch Avenue Alternative. The increase in permanent employees would be minimal because they may be re-assigned from existing staff within the Town or may be additional new staff. Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative would not induce substantial unplanned population growth in the study area, resulting in a less-than-significant impact. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler alignment would result in less-than-significant impacts on population growth.

Mitigation. No mitigation required.

Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (No Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would not acquire or take any residential-zoned land in the area. While some of the Entler Avenue Hybrid and Crouch Avenue Alternative would be conducted on private parcels, work would primarily be done within public ROW, which would not cause displacement of existing residents or housing. Work that would occur on private parcels, including connecting properties to the new sewer system or installing the Export Pipeline System would be completed under easements and would not displace existing housing. Therefore, the Entler Avenue

Hybrid and Crouch Avenue Alternative would not displace a substantial number of existing people or housing, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project Entler alignment would displace people or housing.

Mitigation. No mitigation required.

5.5.12.5 Alternatives Impact Summary

Table 5.5-12 summarizes the population and housing impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-12. Alternatives Impacts Summary for Population and Housing

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	NI	NI (=)	NI (=)	NI (=)	NI (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.13 Public Services

5.5.13.1 No Project Alternative

Impact PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

(a) Fire Protection (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, there would be no impact from an increased demand for fire protection services. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not impact fire protection services, while the Proposed Project would result in less-than-significant impacts with mitigation incorporated.

Mitigation. No mitigation required.

(b) Police Protection (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, there would be no impact from an increased demand for police protection services. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not impact police protection services, while the Proposed Project would result in less-than-significant impacts with mitigation incorporated.

Mitigation. No mitigation required.

(c) Schools (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, there would be no impact from an increased demand for schools. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not impact schools, while the Proposed Project would result in less-than-significant impacts with mitigation incorporated.

Mitigation. No mitigation required.

(d) Other Public Facilities (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, there would be no impact from an increased demand for other public facilities. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not impact other public facilities, while the Proposed Project would result in less-than-significant impacts with mitigation incorporated.

Mitigation. No mitigation required.

5.5.13.2 Entler Avenue Hybrid Alternative

Impact PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

(a) Fire Protection (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for fire protection services. No fire stations would be directly impacted during construction of the Entler Avenue Hybrid Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local

roads, resulting in a potentially significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid Alternative would not result in any permanent impacts to the fire stations within the study area. No home or businesses are proposed that could result in an increased demand for fire protection services. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for fire protection services. Consistent with the Proposed Project, the Entler Avenue Hybrid Alternative may induce population within Paradise town limits, which could eventually result in an increased need for fire protection services. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would have a less-than-significant impact on fire protection services.

The level of impact would be the same as that for the Proposed Project because both the Enter Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on fire protection services.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Enter Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(b) Police Protection (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for police protection services. No police stations would be directly impacted during construction of the Entler Avenue Hybrid Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid Alternative would not result in any permanent impacts to the police stations within the study area. No home or businesses are proposed that could result in an increased demand for police protection services. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for police protection services. Consistent with the Proposed Project, the Entler Avenue Hybrid Alternative may induce population within Paradise town limits, which could eventually

result in an increased need for police protection services. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would have a less-than-significant impact on police protection services.

The level of impact would be the same as that for the Proposed Project because both the Enter Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on police protection services.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Enter Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(c) Schools (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for schools. No schools would be directly impacted during construction of the Entler Avenue Hybrid Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid Alternative would not result in any permanent impacts to the schools within the study area. No home or businesses are proposed that could result in an increased demand for schools. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for schools. Consistent with the Proposed Project, the Entler Avenue Hybrid Alternative may induce population within Paradise town limits, which could eventually result in an increased need for schools. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would have a less-than-significant impact on schools.

The level of impact would be the same as that for the Proposed Project because both the Enter Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on schools.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Enter Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(d) Other Public Facilities (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for other public facilities. Other public facilities, such as libraries, would not be directly impacted during construction of the Entler Avenue Hybrid Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid Alternative would not result in any permanent impacts to the other public facilities, such as libraries, within the study area. No home or businesses are proposed that could result in an increased demand for other public facilities. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for other public facilities. Consistent with the Proposed Project, the Entler Avenue Hybrid Alternative may induce population within Paradise town limits, which could eventually result in an increased need for other public facilities. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would have a less-than-significant impact on other public facilities.

The level of impact would be the same as that for the Proposed Project because both the Enter Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on other public facilities.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Enter Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

5.5.13.3 Crouch Avenue Alternative

Impact PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

(a) Fire Protection (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for fire protection services. No fire stations would be directly impacted during construction of the Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Crouch Avenue Alternative would not result in any permanent impacts to the fire stations within the study area. No home or businesses are proposed that could result in an increased demand for fire protection services. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for fire protection services. Consistent with the Proposed Project, the Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for fire protection services. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Crouch Avenue Alternative would have a less-than-significant impact on fire protection services.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on fire protection services.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(b) Police Protection (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for police protection services. No police stations would be directly impacted during construction of the Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Crouch Avenue Alternative would not result in any permanent impacts to the police stations within the study area. No home or businesses are proposed that could result in an increased demand for police protection services. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for police protection services. Consistent with the Proposed Project, the Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for police protection services. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Crouch Avenue Alternative would have a less-than-significant impact on police protection services.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on police protection services.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(c) Schools (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for schools. No schools would be directly impacted during construction of the Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed

Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Crouch Avenue Alternative would not result in any permanent impacts to the schools within the study area. No home or businesses are proposed that could result in an increased demand for schools. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for schools. Consistent with the Proposed Project, the Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for schools. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Crouch Avenue Alternative would have a less-than-significant impact on schools.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on schools.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(d) Other Public Facilities (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for other public facilities. Other public facilities, such as libraries, would not be directly impacted during construction of the Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Crouch Avenue Alternative would not result in any permanent impacts to the other public facilities, such as libraries, within the study area. No home or businesses are proposed that could result in an increased demand for other public facilities. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for other public facilities. Consistent with the Proposed Project, the Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for other public facilities. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation

and maintenance of the Crouch Avenue Alternative would have a less-than-significant impact on other public facilities.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on other public facilities.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

5.5.13.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

(a) Fire Protection (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid and Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for fire protection services. No fire stations would be directly impacted during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in any permanent impacts to the fire stations within the study area. No home or businesses are proposed that could result in an increased demand for fire protection services. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for fire protection services. Consistent with the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for fire protection services. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation

and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would have a less-than-significant impact on fire protection services.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated on fire protection services.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(b) Police Protection (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid and Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for police protection services. No police stations would be directly impacted during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in any permanent impacts to the police stations within the study area. No home or businesses are proposed that could result in an increased demand for police protection services. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for police protection services. Consistent with the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for police protection services. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would have a less-than-significant impact on police protection services.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated on police protection services.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(c) Schools (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid and Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for schools. No schools would be directly impacted during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in any permanent impacts to the schools within the study area. No home or businesses are proposed that could result in an increased demand for schools. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for schools. Consistent with the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for schools. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would have a less-than-significant impact on schools.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated on schools.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

(d) Other Public Facilities (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project analysis, construction workers for the Entler Avenue Hybrid and Crouch Avenue Alternative would likely be drawn from the existing workforce within Butte County rather than relocating to the study area. The increase in employment during construction of this alternative would be temporary and would not result in an increased demand for other public facilities. Other public facilities, such as libraries, would not be directly impacted during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative. However, indirect impacts may occur related to emergency vehicle access that may be impeded during construction due to nearby temporary lane closures and movement of construction equipment on local roads, resulting in a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency vehicle access during construction to less than significant. During operation and maintenance, the Entler Avenue Hybrid and Crouch Avenue Alternative would not result in any permanent impacts to the other public facilities, such as libraries, within the study area. No home or businesses are proposed that could result in an increased demand for other public facilities. The new employees required during operation and maintenance of this alternative would be minimal and would not result in an increased demand for other public facilities. Consistent with the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative may induce population within Paradise town limits, which could eventually result in an increased need for other public facilities. However, any population inducement would be regrowth and repopulation toward pre-fire levels and would be contained within Paradise. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would have a less-than-significant impact on other public facilities.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated on other public facilities.

Mitigation. To minimize potentially significant impacts related to emergency vehicle access during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency vehicle access during construction would be less than significant.

5.5.13.5 Alternatives Impact Summary

Table 5.5-13 summarizes the public services impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-13. Alternatives Impacts Summary for Public Services

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(b): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.14 Recreation

5.5.14.1 No Project Alternative

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, there would be no impact from an increase in the use of existing neighborhood and regional parks or other recreational facilities. The level of impact would be less than that for the Proposed Project because the No Project Alternative would not increase the use of parks and recreational facilities, while the Proposed Project would result in less-than-significant impacts.

Mitigation. No mitigation required.

Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment (No Impact)

The No Project Alternative would not include recreational facilities. Additionally, there would be no increase in population or damage to existing recreational facilities that would necessitate the expansion of recreational facilities. Therefore, there would be no impact. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would require the construction or expansion of recreational facilities.

Mitigation. No mitigation required.

5.5.14.2 Entler Avenue Hybrid Alternative

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (Less than Significant Impact)

Recreational zonings and the Tuscan Ridge Club adjoin the Entler Avenue Hybrid Alternative. Within the study area there is a bike trail along Midway, and Hegan Lane is also considered a bicycle friendly road. Similar to the Proposed Project, no water-based recreation would be affected by the Entler Avenue Hybrid Alternative and staging areas would not be located within a 2-mile radius of recreational areas.

Construction would occur primarily within the existing ROW on previously disturbed land. Given that most work would occur in the public ROW, there is potential for bike paths or access to recreation to be temporarily closed or impeded during construction. Full road closures would not occur except during movement of large equipment; single lane, temporary closures are proposed. Any road and bike path closures would also be temporary. Minor increases in recreational use at other available facilities may occur on a short-term basis, but substantial physical deterioration of these facilities is not expected to occur or be accelerated. Operation and maintenance activities associated with the Entler Avenue Hybrid Alternative would have no influence on the use of parks and recreational facilities in the study

area. Consistent with the Proposed Project analysis, increases in population supported by the Entler Avenue Hybrid Alternative would primarily consist of regrowth and repopulation toward pre-fire levels. However, recreational facilities within the Town were sized to meet the pre-fire demand for services by the Town and would be anticipated to rebuild to previous conditions on par with the returning population. Further, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, the Entler Avenue Hybrid Alternative would result in a less than significant on the increase in use of an existing neighborhood or regional park or other recreational facility. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative because both would result in a less than significant impact on this criterion.

Mitigation. No mitigation required.

Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment (Less than Significant Impact)

New recreational facilities are not proposed under the Entler Avenue Hybrid Alternative, nor would construction of the Entler Avenue Hybrid Alternative cause construction or expansion of existing recreational facilities where it might have an adverse physical effect on the environment. Operation and maintenance activities associated with the Entler Avenue Hybrid Alternative would have no influence on the use of parks and recreational facilities in the study area. Consistent with the Proposed Project analysis, increases in population supported by the Entler Avenue Hybrid Alternative would primarily consist of regrowth and repopulation toward pre-fire levels. However, recreational facilities within the Town were sized to meet the pre-fire demand for services by the Town and would be anticipated to rebuild to previous conditions on par with the returning population. Further, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, the Entler Avenue Hybrid Alternative would result in a less than significant on the construction or expansion of recreational facilities. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative because both would result in a less than significant impact on this criterion.

Mitigation. No mitigation required.

5.5.14.3 Crouch Avenue Alternative

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (Less than Significant Impact)

Recreational zonings and the Tuscan Ridge Club adjoin the Crouch Avenue Alternative. Within the study area there is a bike trail along Midway, and Hegan Lane is also considered a bicycle friendly road. Similar to the Proposed Project, no water-based recreation would be affected by the Crouch Avenue Alternative and staging areas would not be located within a 2-mile radius of recreational areas.

Construction would occur primarily within the existing ROW on previously disturbed land. Given that most work would occur in the public ROW, there is potential for bike paths or access to recreation to be

temporarily closed or impeded during construction. Full road closures would not occur except during movement of large equipment; single lane, temporary closures are proposed. Any road and bike path closures would also be temporary. Minor increases in recreational use at other available facilities may occur on a short-term basis, but substantial physical deterioration of these facilities is not expected to occur or be accelerated. Operation and maintenance activities associated with the Crouch Avenue Alternative would have no influence on the use of parks and recreational facilities in the study area. Consistent with the Proposed Project analysis, increases in population supported by the Crouch Avenue Alternative would primarily consist of regrowth and repopulation toward pre-fire levels. However, recreational facilities within the Town were sized to meet the pre-fire demand for services by the Town and would be anticipated to rebuild to previous conditions on par with the returning population. Further, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008).Therefore, the Crouch Avenue Alternative would result in a less than significant on the increase in use of an existing neighborhood or regional park or other recreational facility. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative because both would result in a less than significant impact on this criterion.

Mitigation. No mitigation required.

Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment (Less than Significant Impact)

New recreational facilities are not proposed under the Crouch Avenue Alternative, nor would construction of the Crouch Avenue Alternative cause construction or expansion of existing recreational facilities where it might have an adverse physical effect on the environment. Operation and maintenance activities associated with the Crouch Avenue Alternative would have no influence on the use of parks and recreational facilities in the study area. Consistent with the Proposed Project analysis, increases in population supported by the Crouch Avenue Alternative would primarily consist of regrowth and repopulation toward pre-fire levels. However, recreational facilities within the Town were sized to meet the pre-fire demand for services by the Town and would be anticipated to rebuild to previous conditions on par with the returning population. Further, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, the Crouch Avenue Alternative would result in a less than significant on the construction or expansion of recreational facilities. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative because both would result in a less than significant impact on this criterion.

Mitigation. No mitigation required.

5.5.14.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (Less than Significant Impact)

Recreational zonings and the Tuscan Ridge Club adjoin the Entler Avenue Hybrid and Crouch Avenue Alternative. Within the study area there is a bike trail along Midway, and Hegan Lane is also considered a bicycle friendly road. Similar to the Proposed Project, no water-based recreation would be affected by the Entler Avenue Hybrid and Crouch Avenue Alternative and staging areas would not be located within a 2-mile radius of recreational areas.

Construction would occur primarily within the existing ROW on previously disturbed land. Given that most work would occur in the public ROW, there is potential for bike paths or access to recreation to be temporarily closed or impeded during construction. Full road closures would not occur except during movement of large equipment; single lane, temporary closures are proposed. Any road and bike path closures would also be temporary. Minor increases in recreational use at other available facilities may occur on a short-term basis, but substantial physical deterioration of these facilities is not expected to occur or be accelerated. Operation and maintenance activities associated with the Entler Avenue Hybrid and Crouch Avenue Alternative would have no influence on the use of parks and recreational facilities in the study area. Consistent with the Proposed Project analysis, increases in population supported by the Entler Avenue Hybrid and Crouch Avenue Alternative would primarily consist of regrowth and repopulation toward pre-fire levels. However, recreational facilities within the Town were sized to meet the pre-fire demand for services by the Town and would be anticipated to rebuild to previous conditions on par with the returning population. Further, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less than significant on the increase in use of an existing neighborhood or regional park or other recreational facility. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative because both would result in a less than significant impact on this criterion.

Mitigation. No mitigation required.

Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment (Less than Significant Impact)

New recreational facilities are not proposed under the Entler Avenue Hybrid and Crouch Avenue Alternative, nor would construction of the Entler Avenue Hybrid and Crouch Avenue Alternative cause construction or expansion of existing recreational facilities where it might have an adverse physical effect on the environment. Operation and maintenance activities associated with the Entler Avenue Hybrid and Crouch Avenue Alternative would have no influence on the use of parks and recreational facilities in the study area. Consistent with the Proposed Project analysis, increases in population supported by the Entler Avenue Hybrid and Crouch Avenue Alternative would primarily consist of regrowth and repopulation toward pre-fire levels. However, recreational facilities within the Town were

sized to meet the pre-fire demand for services by the Town and would be anticipated to rebuild to previous conditions on par with the returning population. Further, growth beyond pre-fire conditions would be in alignment with the *Town of Paradise General Plan* assumptions for future growth (Town of Paradise and Quad Consultants 2008). Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less than significant on the construction or expansion of recreational facilities. The level of impact would be the same as that for the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative because both would result in a less than significant impact on this criterion.

Mitigation. No mitigation required.

5.5.14.5 Alternatives Impact Summary

Table 5.5-14 summarizes the recreation impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-14. Alternatives Impacts Summary for Recreation

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.15 Transportation

5.5.15.1 No Project Alternative

Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed Therefore, the No Project Alternative would not conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. As a result, no impacts would occur. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in a less than significant impact with mitigation incorporated on this criterion.

Mitigation. No mitigation required.

Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, the No Project Alternative would not conflict with CEQA Guidelines Section 15064.3, subdivision (b), and no impact would occur. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in a less-than-significant impact on this criterion.

Mitigation. No mitigation required.

Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, the No Project Alternative would not increase hazards due to a geometric design feature, and no impact would occur. The level of impact would be the same as that for the proposed Project because neither the No Project Alternative nor the Proposed Project would substantially increase hazards due to a geometric design feature.

Mitigation. No mitigation required.

Impact TRA-4: Result in inadequate emergency access (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, the No Project Alternative would not result in inadequate emergency access, and no impact would occur. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in a less-than-significant impact on this criterion.

Mitigation. No mitigation required.

5.5.15.2 Entler Avenue Hybrid Alternative

Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.16, Transportation. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would generate an increase in traffic volumes on roadway segments during construction. The Entler Avenue Hybrid Alternative would generate vehicle trip volumes similar to those listed in Table 3.16-4, 2026 No Construction and Construction Traffic Volumes. However, the additional construction trips would be minimal compared to the typical volume and would not cause a degradation of LOS. As a result, the roadway segments would operate at an acceptable LOS with addition of construction traffic associated with the Entler Avenue Hybrid Alternative. Construction of this alternative within or across streets would require temporary lane closures, which

could obstruct access and cause delays for pedestrians, bicyclists, and transit buses. Therefore, the Entler Avenue Hybrid Alternative would conflict with a program, plan, ordinance, or policy addressing the circulation system, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts on pedestrian, bicycle, and transit facilities during construction to less than significant. Relative to existing traffic volumes on roadways in the study area, the addition of traffic associated with operation and maintenance of the Entler Avenue Hybrid Alternative would not affect roadway operations. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant impacts on pedestrian, bicycle, and transit facilities during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9 Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts on pedestrian, bicycle, and transit facilities during construction would be less than significant.

Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would cause a temporary increase in VMT during construction. The Entler Avenue Hybrid Alternative would generate VMT similar to those listed in Table 3.16-5, Butte County VMT. The percentage increase in VMT due to construction trips associated with the Entler Avenue Hybrid Alternative would be 2.3 percent of Butte County's VMT. While the construction traffic would cause an increase in VMT, this increase would be temporary and short-term. Operation and maintenance activities would not cause a long-term increase in VMT in the study area due to the infrequency of these activities Therefore, the Entler Avenue Hybrid Alternative would not conflict with CEQA Guidelines Section 15064.3(b), resulting in a less-than-significant impact. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on CEQA Guidelines Section 15064.3(b).

Mitigation. No mitigation required.

Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would not change geometric design features or require incompatible uses. All street legal trucks and vehicles would use the existing roadways to access the Entler Avenue Hybrid Alternative area. Therefore, the Entler Avenue Hybrid Alternative would not increase hazards due to a geometric design feature or incompatible uses, resulting in no impact. The level of impact would be the same as that for the

Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would increase traffic hazards.

Mitigation. No mitigation required.

Impact TRA-4: Result in inadequate emergency access (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative would require temporary closure of traffic lanes on public roadways. Construction traffic associated with the Entler Avenue Hybrid Alternative could interfere with emergency response to the Entler Avenue Hybrid Alternative area or evacuation procedures in the event of an emergency. Therefore, the Entler Avenue Hybrid Alternative could result in inadequate emergency access, resulting in a significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency access during construction to less than significant. The increase in vehicle trips during operation and maintenance activities associated with this alternative would be minimal and immeasurable due to the infrequency of these activities, resulting in no impact. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts related to emergency access during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9 Hazards and Hazardous Materials for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency access during construction would be less than significant.

5.5.15.3 Crouch Avenue Alternative

Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (Less than Significant Impact with Mitigation Incorporated)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.16, Transportation. Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would generate an increase in traffic volumes on roadway segments during construction. The Crouch Avenue Alternative would generate vehicle trip volumes similar to those listed in Table 3.16-4, 2026 No Construction and Construction Traffic Volumes. However, the additional construction trips would be minimal compared to the typical volume and would not cause a degradation of LOS. As a result, the roadway segments would operate at an acceptable LOS with addition of construction traffic associated with the Crouch Avenue Alternative. Construction of this alternative within or across streets would require temporary lane closures, which could obstruct access and cause

delays for pedestrians, bicyclists, and transit buses. Therefore, the Crouch Avenue Alternative would conflict with a program, plan, ordinance, or policy addressing the circulation system, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts on pedestrian, bicycle, and transit facilities during construction to less than significant. Operation and maintenance activities, as described in Section 2.8, would result in increased traffic volumes on the roadways in the study area. Relative to existing traffic volumes on roadways in the study area, the addition of traffic associated with operation and maintenance of the Crouch Avenue Alternative would not affect roadway operations. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant impacts on pedestrian, bicycle, and transit facilities during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9 Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts on pedestrian, bicycle, and transit facilities during construction would be less than significant.

Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would cause a temporary increase in VMT during construction. The Crouch Avenue Alternative would generate VMT similar to those listed in Table 3.16-5, Butte County VMT. The percentage increase in VMT due to construction trips associated with the Crouch Avenue Alternative would be 2.3 percent of Butte County's VMT. While the construction traffic would cause an increase in VMT, this increase would be temporary and short-term. Operation and maintenance activities, as described in Section 2.8, would not cause an increase in VMT in the study area due to the infrequency of these activities. Therefore, the Crouch Avenue Alternative would not conflict with CEQA Guidelines Section 15064.3(b), resulting in a less-than-significant impact. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on CEQA Guidelines Section 15064.3(b).

Mitigation. No mitigation required.

Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (No Impact)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would not change geometric design features or require incompatible uses. All street legal trucks and vehicles would use the existing roadways to access the Crouch Avenue Alternative area. Therefore, the Crouch Avenue Alternative would not increase hazards due to a geometric design feature or incompatible uses, resulting in no impact. The level of impact would be the same as that for the Proposed Project because

neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would increase traffic hazards.

Mitigation. No mitigation required.

Impact TRA-4: Result in inadequate emergency access (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative would require temporary closure of traffic lanes on public roadways. Construction traffic associated with the Crouch Avenue Alternative could interfere with emergency response to the Crouch Avenue Alternative area or evacuation procedures in the event of an emergency. Therefore, the Crouch Avenue Alternative could result in inadequate emergency access, resulting in a significant impact. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency access during construction to less than significant. Operation and maintenance activities, as described in Section 2.8, would result in increased traffic volumes on the roadways in the study area. Relative to existing traffic volumes on roadways in the study area, the addition of traffic associated with operation and maintenance of the Crouch Avenue Alternative would not affect roadway operations in the study area. The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts related to emergency access during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9 Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency access during construction would be less than significant.

5.5.15.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.16, Transportation. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would generate an increase in traffic volumes on roadway segments during construction. The Entler Avenue Hybrid and Crouch Avenue Alternative would generate vehicle trip volumes similar to those listed in Table 3.16-4, 2026 No Construction and Construction Traffic Volumes. However, the additional construction trips would be minimal compared to the typical volume and would not cause a degradation of LOS. As a result, the roadway segments would operate at an acceptable LOS with addition of construction traffic

associated with the Entler Avenue Hybrid and Crouch Avenue Alternative. Construction of this alternative within or across streets would require temporary lane closures, which could obstruct access and cause delays for pedestrians, bicyclists, and transit buses. Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative would conflict with a program, plan, ordinance, or policy addressing the circulation system, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts on pedestrian, bicycle, and transit facilities during construction to less than significant. Operation and maintenance activities, as described in Section 2.8, would result in increased traffic volumes on the roadways in the study area. Relative to existing traffic volumes on roadways in the study area, the addition of traffic associated with operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not affect roadway operations. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on this criterion.

Mitigation. To minimize potentially significant impacts on pedestrian, bicycle, and transit facilities during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9 Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts on pedestrian, bicycle, and transit facilities during construction would be less than significant.

Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Less than Significant Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would cause a temporary increase in VMT during construction. The Entler Avenue Hybrid and Crouch Avenue Alternative would generate VMT similar to those listed in Table 3.16-5, Butte County VMT. The percentage increase in VMT due to construction trips associated with the Entler Avenue Hybrid and Crouch Avenue Alternative would be 2.3 percent of Butte County's VMT. While the construction traffic would cause an increase in VMT, this increase would be temporary and short-term. Operation and maintenance activities, as described in Section 2.8, would not cause an increase in VMT in the study area due to the infrequency of these activities. Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with CEQA Guidelines Section 15064.3(b), resulting in a less-than-significant impact. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts on CEQA Guidelines Section 15064.3(b).

Mitigation. No mitigation required.

Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (No Impact)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would not change geometric design features or require incompatible uses. All street legal trucks and vehicles would use the existing roadways to access the Entler Avenue Hybrid and Crouch Avenue Alternative area. Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative would not increase hazards due to a geometric design feature or incompatible uses, resulting in no impact. The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would increase traffic hazards.

Mitigation. No mitigation required.

Impact TRA-4: Result in inadequate emergency access (Less than Significant Impact with Mitigation Incorporated)

Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative would require temporary closure of traffic lanes on public roadways. Construction traffic associated with the Entler Avenue Hybrid and Crouch Avenue Alternative could interfere with emergency response to the Entler Avenue Hybrid and Crouch Avenue Alternative area or evacuation procedures in the event of an emergency. Therefore, the Entler Avenue Hybrid and Crouch Avenue Alternative could result in inadequate emergency access, resulting in a significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-HAZ-6: Traffic Management Plan**), which would reduce impacts related to emergency access during construction to less than significant. Operation and maintenance activities, as described in Section 2.8, would result in increased traffic volumes on the roadways in the study area. Relative to existing traffic volumes on roadways in the study area, the addition of traffic associated with operation and maintenance of the Proposed Project would not affect roadway operations in the study area. The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated under this criterion.

Mitigation. To minimize potentially significant impacts related to emergency access during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-HAZ-6** will be implemented.

MM-HAZ-6: Traffic Management Plan (see Section 3.9 Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-6**, impacts related to emergency access during construction would be less than significant.

5.5.15.5 Alternatives Impact Summary

Table 5.5-15 summarizes the transportation impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-15. Alternatives Impacts Summary for Transportation

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact TRA-4: Result in inadequate emergency access	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.16 Tribal Cultural Resources

5.5.16.1 No Project Alternative

Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe (No Impact)**

Under the No Project Alternative, the Town would not construct the Core or Extended Collection Systems or an Export Pipeline System and would continue to rely on individualized septic systems for wastewater management. Under the No Project Alternative, existing conditions would remain the same, and no ground disturbance or disturbance of landscape or viewshed would occur as a result of implementation of the Proposed Project. Therefore, there would be no impacts on the significance of a TCR under the No Project Alternative. The level of impact would be less than that for the Proposed

Project because the Proposed Project would result in less-than-significant impacts with mitigation incorporated on TCRs.

5.5.16.2 Entler Avenue Hybrid Alternative

Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe (Less than Significant Impact with Mitigation Incorporated)**

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.17, Tribal Cultural Resources. Consistent with the analysis for the Proposed Project, no CRHR-eligible TCRs have been identified within the Entler Avenue Hybrid Alternative area. Excavation and ground disturbing activities during construction of the Entler Avenue Hybrid Alternative have the potential to impact unknown TCRs in the Entler Avenue Hybrid Alternative area, resulting in a potentially significant impact. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe** and **MM-TCR-2: Tribal Cultural Monitoring**), which would reduce impacts on TCRs during construction to a less than significant level.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact TCRs. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would result in a less than significant impact on TCRs.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts with mitigation incorporated on TCRs.

Mitigation. To minimize potentially significant impacts on TCRs during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-TCR-1** and **MM-TCR-2** will be implemented.

MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe (see Section 3.17, Tribal Cultural Resources, for description)

MM-TCR-2: Tribal Cultural Monitoring (see Section 3.17, Tribal Cultural Resources, for description)

Significance after Mitigation. With the implementation of **MM-TCR-1** and **MM-TCR-2**, impacts resulting from inadvertent damage or destruction of unknown TCRs during construction would be less than significant.

5.5.16.3 Crouch Avenue Alternative

Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe (Less than Significant Impact with Mitigation Incorporated)**

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.17, Tribal Cultural Resources. Consistent with the analysis for the Proposed Project, no CRHR-eligible TCRs have been identified within the Crouch Avenue Alternative area. Excavation and ground disturbing activities during construction of the Crouch Avenue Alternative have the potential to impact unknown TCRs in the Crouch Avenue Alternative area, resulting in a potentially significant impact. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe** and **MM-TCR-2: Tribal Cultural Monitoring**), which would reduce impacts on TCRs during construction to a less than significant level.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact TCRs. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Crouch Avenue Alternative would result in a less than significant impact on TCRs.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in less-than-significant impacts with mitigation incorporated on TCRs.

Mitigation. To minimize potentially significant impacts on TCRs during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-TCR-1** and **MM-TCR-2** will be implemented.

MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe (see Section 3.17, Tribal Cultural Resources, for description)

MM-TCR-2: Tribal Cultural Monitoring (see Section 3.17, Tribal Cultural Resources, for description)

Significance after Mitigation. With the implementation of **MM-TCR-1** and **MM-TCR-2**, impacts resulting from inadvertent damage or destruction of unknown TCRs during construction would be less than significant.

5.5.16.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe (Less than Significant Impact with Mitigation Incorporated)**

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.17, Tribal Cultural Resources. Consistent with the analysis for the Proposed Project, no CRHR-eligible TCRs have been identified within the Entler Avenue Hybrid and Crouch Avenue Alternative area. Excavation and ground disturbing activities during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative have the potential to impact unknown TCRs in the Entler Avenue Hybrid and Crouch Avenue Alternative area, resulting in a potentially significant impact. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe** and **MM-TCR-2: Tribal Cultural Monitoring**), which would reduce impacts on TCRs during construction to a less than significant level.

Operation and maintenance activities, as described in Section 2.8, would not include ground disturbing activities except if there were a pipe break and a section of pipeline needed to be replaced. Operation and maintenance activities would mostly occur in previously disturbed areas (within paved roads), resulting in no potential to impact TCRs. In the case of a pipe break, the section would be repaired and returned to previous conditions as expeditiously as possible so as to limit impacts to the public and sewer service. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would result in a less than significant impact on TCRs.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in less-than-significant impacts with mitigation incorporated on TCRs.

Mitigation. To minimize potentially significant impacts on TCRs during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-TCR-1** and **MM-TCR-2** will be implemented.

MM-TCR-1: Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe (see Section 3.17, Tribal Cultural Resources, for description)

MM-TCR-2: Tribal Cultural Monitoring (see Section 3.17, Tribal Cultural Resources, for description)

Significance after Mitigation. With the implementation of **MM-TCR-1** and **MM-TCR-2**, impacts resulting from inadvertent damage or destruction of unknown TCRs during construction would be less than significant.

5.5.16.5 Alternatives Impact Summary

Table 5.5-16 summarizes the tribal cultural resources impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-16. Alternatives Impacts Summary for Tribal Cultural Resources

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Public Resources code section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe					

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.5.17 Utilities and Service Systems

5.5.17.1 No Project Alternative

Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects (No Impact)

Under the No Project Alternative, the Town would not make a regional connection to the Chico WPCP and would continue to rely on existing wastewater management. No new utility infrastructure would be required, and none would require relocation. All existing utilities would remain the same, and there would be no impact on any utilities in Paradise and the regional area. Therefore, no impact on utilities would occur, and no mitigation is required. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would require or result in the relocation or construction of new utility infrastructure.

Mitigation. No mitigation required.

Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years (No Impact)

Under the No Project Alternative, the Town would not make a regional connection to the Chico WPCP and would continue to rely on existing wastewater management. The use of water supply would not be required under the No Project Alternative. Therefore, no impact on water supply would occur, and no mitigation is required. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would impact water supplies.

Mitigation. No mitigation required.

Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments? (No Impact)

Under the No Project Alternative, the Town would not make a regional connection to the Chico WPCP and would continue to rely on existing wastewater management. Therefore, no impact on wastewater treatment providers would occur, and no mitigation is required. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would impact existing wastewater commitments.

Mitigation. No mitigation required.

Impact UTIL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (No Impact)

Under the No Project Alternative, no construction, ground disturbance, or other waste generating activities would be proposed. Therefore, there would be no impact from solid waste generation, and no mitigation is needed. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure.

Mitigation. No mitigation required.

Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (No Impact)

Under the No Project Alternative, no construction, ground disturbance, or other waste generating activities would be proposed. Therefore, there would be no impact from conflicts with federal, state, and local waste management reduction statutes. The level of impact would be the same as that for the Proposed Project because neither the No Project Alternative nor the Proposed Project would conflict with federal, state, and local management and reduction statutes related to solid waste.

Mitigation. No mitigation required.

5.5.17.2 Entler Avenue Hybrid Alternative

Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.18, Utilities and Service Systems. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid Alternative is within the existing capacity of the Chico WPCP and would not stress the capacity of the current system. Consistent with the analysis for the

Proposed Project, construction of the Entler Avenue Hybrid Alternative would not require relocation of wastewater facilities, electricity transmission lines, and fiber optic cables. There is potential that groundwater would be encountered during construction of the Entler Avenue Hybrid Alternative. Construction work associated with this alternative would occur near waterbodies. However, significant environmental effects would not occur because a SWPPP, which includes water quality BMPs, would be implemented to protect groundwater and water quality. Nevertheless, because utilities could be affected during construction of the Entler Avenue Hybrid Alternative, with the potential for disruption of utility service, this impact would be significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measure as the Proposed Project (**MM-UTIL-1: Minimize Utility and Service System Disruptions**), which would reduce impacts on utility infrastructure during construction to less than significant. Consistent with the Proposed Project, the Entler Avenue Hybrid Alternative has the potential to foster population regrowth as a result of Camp Fire recovery efforts. However, long-term utility usage is expected to be similar to pre-Camp Fire levels and within the approved capacities for these services. This would not be a displacement or relocation of utilities, but rather part of the Town's recovery efforts. Operation and maintenance activities associated with this alternative would occur periodically throughout the year and would be minimally invasive. Therefore, operation and maintenance of the Entler Avenue Hybrid Alternative would result in no impacts on utility infrastructure.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on utility infrastructure.

Mitigation. To minimize potentially significant impacts on utility infrastructure during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measure **MM-UTIL-1** will be implemented.

MM-UTIL-1: Minimize Utility and Service System Disruptions (see Section 3.18, Utilities and Service Systems, for description)

Significance after Mitigation. With the implementation of **MM-UTIL-1**, impacts on utility infrastructure during construction would be less than significant.

Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years (No Impact)

Consistent with the analysis for the Proposed Project, water supply required during construction of the Entler Avenue Hybrid Alternative would be the responsibility of the construction contractor. Water supply would only be required temporarily during the construction period. Water would be required for such activities as dust suppression, equipment washing, or contractor potable and non-potable water needs. Water use during operations and maintenance would periodically involve flushing activities, flow monitoring, and flow data and wastewater sampling, as described in Section 2.8, Proposed Operation and Maintenance. No potable water would be required during operation and maintenance of this alternative. Therefore, no impact on water supply would occur.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would impact water supply.

Mitigation. No mitigation required.

Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments? (No Impact)

Impacts on wastewater would be similar to those discussed for the Proposed Project in Section 3.18, Utilities and Service Systems. Wastewater would be generated during construction of the Entler Avenue Hybrid Alternative. Water encountered during pit excavation would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Perched water and nuisance water encountered in trenches during construction would be collected via sump pump to a Baker Tank for settling and reused for truck dust control. Therefore, there would be no impact on wastewater during construction. Consistent with the analysis for the Proposed Project, wastewater generated during operation and maintenance of the Entler Avenue Hybrid Alternative would be within the current capacity of the Chico WPCP or within the amount agreed upon by the City of Chico. Therefore, there would be no impact on wastewater during operation and maintenance.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would impact wastewater.

Mitigation. No mitigation required.

Impact UTIL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (No Impact)

The Entler Avenue Hybrid Alternative would generate solid waste such as construction debris, asphalt, and excess soil during construction. Solid waste would be transported to a local landfill or another approved location, such as the Neal Road Recycling Waste Facility, which has capacity to accommodate solid waste from the Entler Avenue Hybrid Alternative. Therefore, there would be no impacts related to solid waste during construction. Operation and maintenance of this alternative would not generate additional solid waste. The Entler Avenue Hybrid Alternative has the potential to foster population regrowth as a result of Camp Fire recovery efforts. However, long-term landfill usage would be similar to pre-Camp Fire levels and within the approved capacities. Therefore, there would be no impacts related to solid waste during operation and maintenance.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would result in impacts related to solid waste.

Mitigation. No mitigation required.

Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (No Impact)

The Entler Avenue Hybrid Alternative would comply with federal, state, and local management and reduction statutes and regulations related to solid waste that have been identified in Section 3.18, Utilities and Service Systems. Table 3.18-3, Consistency with State and Local Plans, Policies, and Regulations, provides a consistency analysis of these local management and reduction statutes and regulations. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid Alternative would not conflict with federal, state, and local solid waste regulations and statutes, and no impact would occur.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid Alternative nor the Proposed Project Entler Avenue alignment would conflict with federal, state, and local solid waste regulations and statutes.

Mitigation. No mitigation required.

5.5.17.3 Crouch Avenue Alternative

Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant Impact with Mitigation Incorporated)

The Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.18, Utilities and Service Systems. Consistent with the analysis for the Proposed Project, the Crouch Avenue Alternative is within the existing capacity of the Chico WPCP and would not stress the capacity of the current system. Consistent with the analysis for the Proposed Project, construction of the Crouch Avenue Alternative would not require relocation of wastewater facilities, electricity transmission lines, and fiber optic cables. There is potential that groundwater would be encountered during construction of the Crouch Avenue Alternative. Construction work associated with this alternative would occur near waterbodies. However, significant environmental effects would not occur because a SWPPP, which includes water quality BMPs, would be implemented to protect groundwater and water quality. Nevertheless, because utilities could be affected during construction of the Crouch Avenue Alternative, with the potential for disruption of utility service, this impact would be significant. The Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-UTIL-1: Minimize Utility and Service System Disruptions**), which would reduce impacts on utility infrastructure during construction to less than significant. Consistent with the Proposed Project, the Crouch Avenue Alternative has the potential to foster population regrowth as a result of Camp Fire recovery efforts. However, long-term utility usage is expected to be similar to pre-Camp Fire levels and within the approved capacities for these services. This would not be a displacement or relocation of utilities, but rather part of the Town's recovery efforts. Operation and maintenance activities associated with this alternative would occur periodically throughout the year and would be minimally invasive. Therefore, operation and maintenance of the Crouch Avenue Alternative would result in no impacts on utility infrastructure.

The level of impact would be the same as that for the Proposed Project because both the Crouch Avenue Alternative and the Proposed Project Entler Avenue alignment would result in a less-than-significant impact with mitigation incorporated on utility infrastructure.

Mitigation. To minimize potentially significant impacts on utility infrastructure during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-UTIL-1** will be implemented.

MM-UTIL-1: Minimize Utility and Service System Disruptions (see Section 3.18, Utilities and Service Systems, for description)

Significance after Mitigation. With the implementation of **MM-UTIL-1**, impacts on utility infrastructure during construction would be less than significant.

Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years (No Impact)

Consistent with the analysis for the Proposed Project, water supply required during construction of the Crouch Avenue Alternative would be the responsibility of the construction contractor. Water supply would only be required temporarily during the construction period. Water would be required for such activities as dust suppression, equipment washing, or contractor potable and non-potable water needs. Water use during operations and maintenance would periodically involve flushing activities, flow monitoring, and flow data and wastewater sampling, as described in Section 2.8, Proposed Operation and Maintenance. No potable water would be required during operation and maintenance of this alternative. Therefore, no impact on water supply would occur.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would impact water supply.

Mitigation. No mitigation required.

Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments? (No Impact)

Impacts on wastewater would be similar to those discussed for the Proposed Project in Section 3.18, Utilities and Service Systems. Wastewater would be generated during construction of the Crouch Avenue Alternative. Water encountered during pit excavation would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Perched water and nuisance water encountered in trenches during construction would be collected via sump pump to a Baker Tank for settling and reused for truck dust control. Therefore, there would be no impact on wastewater during construction. Consistent with the analysis for the Proposed Project, wastewater generated during operation and maintenance of the Crouch Avenue Alternative would be within the current capacity of the Chico WPCP or within the amount agreed upon by the City of Chico. Therefore, there would be no impact on wastewater during operation and maintenance.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would impact wastewater.

Mitigation. No mitigation required.

Impact UTIL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (No Impact)

The Crouch Avenue Alternative would generate solid waste such as construction debris, asphalt, and excess soil during construction. Solid waste would be transported to a local landfill or another approved location, such as the Neal Road Recycling Waste Facility, which has capacity to accommodate solid waste from the Crouch Avenue Alternative. Therefore, there would be no impacts related to solid waste during construction. Operation and maintenance of this alternative would not generate additional solid waste. The Crouch Avenue Alternative has the potential to foster population regrowth as a result of Camp Fire recovery efforts. However, long-term landfill usage would be similar to pre-Camp Fire levels and within the approved capacities. Therefore, there would be no impacts related to solid waste during operation and maintenance.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would result in impacts related to solid waste.

Mitigation. No mitigation required.

Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste (No Impact)

The Crouch Avenue Alternative would comply with federal, state, and local management and reduction statutes and regulations related to solid waste that have been identified in Section 3.18, Utilities and Service Systems. Table 3.18-3, Consistency with State and Local Plans, Policies, and Regulations, provides a consistency analysis of these local management and reduction statutes and regulations. Therefore, construction, operation, and maintenance of the Crouch Avenue Alternative would not conflict with federal, state, and local solid waste regulations and statutes, and no impact would occur.

The level of impact would be the same as that for the Proposed Project because neither the Crouch Avenue Alternative nor the Proposed Project Entler Avenue alignment would conflict with federal, state, and local solid waste regulations and statutes.

Mitigation. No mitigation required.

5.5.17.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications

facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid and Crouch Avenue Alternative would result in similar impacts as those discussed for the Proposed Project in Section 3.18, Utilities and Service Systems. Consistent with the analysis for the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative is within the existing capacity of the Chico WPCP and would not stress the capacity of the current system. Consistent with the analysis for the Proposed Project, construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would not require relocation of wastewater facilities, electricity transmission lines, and fiber optic cables. There is potential that groundwater would be encountered during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative. Construction work associated with this alternative would occur near waterbodies. However, significant environmental effects would not occur because a SWPPP, which includes water quality BMPs, would be implemented to protect groundwater and water quality. Nevertheless, because utilities could be affected during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative, with the potential for disruption of utility service, this impact would be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measure as the Proposed Project (**MM-UTIL-1: Minimize Utility and Service System Disruptions**), which would reduce impacts on utility infrastructure during construction to less than significant. Consistent with the Proposed Project, the Entler Avenue Hybrid and Crouch Avenue Alternative has the potential to foster population regrowth as a result of Camp Fire recovery efforts. However, long-term utility usage is expected to be similar to pre-Camp Fire levels and within the approved capacities for these services. This would not be a displacement or relocation of utilities, but rather part of the Town's recovery efforts. Operation and maintenance activities associated with this alternative would occur periodically throughout the year and would be minimally invasive. Therefore, operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would result in no impacts on utility infrastructure.

The level of impact would be the same as that for the Proposed Project because both the Entler Avenue Hybrid and Crouch Avenue Alternative and the Proposed Project alignment would result in a less-than-significant impact with mitigation incorporated on utility infrastructure.

Mitigation. To minimize potentially significant impacts on utility infrastructure during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measure **MM-UTIL-1** will be implemented.

MM-UTIL-1: Minimize Utility and Service System Disruptions (see Section 3.18, Utilities and Service Systems, for description)

Significance after Mitigation. With the implementation of **MM-UTIL-1**, impacts on utility infrastructure during construction would be less than significant.

Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years (No Impact)

Consistent with the analysis for the Proposed Project, water supply required during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative would be the responsibility of the construction

contractor. Water supply would only be required temporarily during the construction period. Water would be required for such activities as dust suppression, equipment washing, or contractor potable and non-potable water needs. Water use during operations and maintenance would periodically involve flushing activities, flow monitoring, and flow data and wastewater sampling, as described in Section 2.8, Proposed Operation and Maintenance. No potable water would be required during operation and maintenance of this alternative. Therefore, no impact on water supply would occur.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would impact water supply.

Mitigation. No mitigation required.

Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments (No Impact)

Impacts on wastewater would be similar to those discussed for the Proposed Project in Section 3.18, Utilities and Service Systems. Wastewater would be generated during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative. Water encountered during pit excavation would be placed into a settling tank before being trucked to a nearby sewer main for discharge. Perched water and nuisance water encountered in trenches during construction would be collected via sump pump to a Baker Tank for settling and reused for truck dust control. Therefore, there would be no impact on wastewater during construction. Consistent with the analysis for the Proposed Project, wastewater generated during operation and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would be within the current capacity of the Chico WPCP or within the amount agreed upon by the City of Chico. Therefore, there would be no impact on wastewater during operation and maintenance.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would impact wastewater.

Mitigation. No mitigation required.

Impact UTIL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (No Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would generate solid waste such as construction debris, asphalt, and excess soil during construction. Solid waste would be transported to a local landfill or another approved location, such as the Neal Road Recycling Waste Facility, which has capacity to accommodate solid waste from the Entler Avenue Hybrid and Crouch Avenue Alternative. Therefore, there would be no impacts related to solid waste during construction. Operation and maintenance of this alternative would not generate additional solid waste. The Entler Avenue Hybrid and Crouch Avenue Alternative has the potential to foster population regrowth as a result of Camp Fire recovery efforts. However, long-term landfill usage would be similar to pre-Camp Fire levels and within

the approved capacities. Therefore, there would be no impacts related to solid waste during operation and maintenance.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would result in impacts related to solid waste.

Mitigation. No mitigation required.

Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste (No Impact)

The Entler Avenue Hybrid and Crouch Avenue Alternative would comply with federal, state, and local management and reduction statutes and regulations related to solid waste that have been identified in Section 3.18, Utilities and Service Systems. Table 3.18-3, Consistency with State and Local Plans, Policies, and Regulations, provides a consistency analysis of these local management and reduction statutes and regulations. Therefore, construction, operation, and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not conflict with federal, state, and local solid waste regulations and statutes, and no impact would occur.

The level of impact would be the same as that for the Proposed Project because neither the Entler Avenue Hybrid and Crouch Avenue Alternative nor the Proposed Project alignment would conflict with federal, state, and local solid waste regulations and statutes.

Mitigation. No mitigation required.

5.5.17.5 Alternatives Impact Summary

Table 5.5-17 summarizes the utilities and service systems impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-17. Alternatives Impacts Summary for Utilities and Service Systems

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years	NI	NI (=)	NI (=)	NI (=)	NI (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact UTIL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	NI	NI (=)	NI (=)	NI (=)	NI (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project Wildfire

5.5.18 Wildfire

5.5.18.1 No Project Alternative

Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan (No Impact)

Under the No Project Alternative, existing conditions would remain the same, and no construction is proposed. Therefore, the No Project Alternative would not impair an adopted emergency response plan or emergency evacuation plan, and no impact would occur. The level of impact would be less than that for the Proposed Project because the Proposed Project would result in a less-than-significant impact with mitigation incorporated on this criterion.

Mitigation. No mitigation required.

Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire (No Impact)

Under the No Project Alternative existing conditions would not change. No construction, operations or maintenance would occur that would exacerbate wildfire risk due to slope, prevailing winds and other factors in the study area. Therefore, no impact would occur.

Mitigation. No mitigation required.

Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment (No Impact)

Under the No Project Alternative, no installation or maintenance of associated infrastructure is proposed. Conditions in the study area would not change. Therefore, fire risk would not be exacerbated, and no impact would occur.

Mitigation. No mitigation required.

Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (No Impact)

Under the No Project Alternative, existing conditions would not change, and no construction and operational activities are proposed. Therefore, the No Project Alternative would not expose people or structures to significant risks, including downslope or downstream flooding or landslides. There would be no impact.

Mitigation. No mitigation required.

5.5.18.2 Entler Avenue Hybrid Alternative

Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project, no total road closures are proposed under the Entler Avenue Hybrid Alternative other than temporary movement of equipment. Portions of the alternative would be located along Skyway, which is a primary evacuation route. Closures within the ROW would be partial, however, in the event of a wildfire, all four lanes would be needed for evacuation along Skyway. Therefore, during construction impacts to an emergency response plan or emergency evacuation plan would be significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-3: Road Closure Restrictions, MM-HAZ-4: Rapid Demobilization Plan, MM-HAZ-5: Evacuation Warning Procedures** and **MM-HAZ-6: Traffic Management Plan**), which would reduce impacts on an emergency response plan or emergency evacuation plan to a less than significant level.

Operations and maintenance activities would not involve the presence or operation of equipment on roads for extended periods of time. As described in Section, 3.16, Transportation, the addition of traffic associated with operation and maintenance of the Entler Avenue Hybrid Alternative would not affect roadway operations in the study area. As such, operation and maintenance activities would have no impact on an adopted emergency response plan or emergency evacuation route.

The level of impact would be the same as that for the Proposed Project because impacts on an emergency response plan or emergency evacuation plan would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. To minimize potentially significant impacts on emergency response or emergency evacuation plan during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6** will be implemented.

MM-HAZ-3: Road Closure Restrictions (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-4: Rapid Demobilization Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-5: Evacuation Warning Procedures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6**, impacts on an emergency response or evacuation plan would be less than significant.

Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire (Less than Significant Impact with Mitigation Incorporated)

Portions of the Entler Avenue Hybrid Alternative are located in Very High FHSZs. Operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. Hazardous materials would also be used, transported and disposed of during construction activities. The Town would comply with all relevant federal, state, and local statutes and regulations related to the transport, use, storage, or disposal of hazardous materials associated with construction activities, and all materials designated for disposal would be evaluated for appropriate state and federal hazardous waste criteria and properly disposed of according to their classifications. However, because the alternative is located in a Very High FHSZ, the potential for wildfire exists during construction. Therefore, this impact is considered significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**), which would reduce impacts to a less than significant level.

Operations and maintenance would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Additionally, fire suppression equipment would be made available during operation and maintenance and Chico WPCP would continue to comply with existing fire codes. As a result, impacts from exacerbating fire risks during operation and maintenance would be less than significant.

The level of impact would be the same as that for the Proposed Project because impacts on wildfire risks due to slope, prevailing winds, or other factors would be less than significant with mitigation

incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. To minimize potentially significant impacts from exacerbating wildfire risk in the study area during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts from wildfire risk due to slope, prevailing winds, and other factors would be less than significant.

Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid Alternative would involve the construction of an Export Pipeline System. As discussed under Impact FIRE-2, portions of the study area are located in Very High FHSZs. Construction activities such as operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. Therefore, impacts during construction would be significant. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**), which would reduce impacts to a less than significant level. Operation and maintenance activities including the inspection of the Export Pipeline System and associated instrumentation, and flow data sampling would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Therefore, impacts from operation and maintenance of utility infrastructure would be less than significant.

The level of impact would be the same as that for the Proposed Project because impacts from the installation or maintenance of associated infrastructure that may exacerbate fire risk would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. To minimize potentially significant impacts on wildfire from installation or maintenance of utility infrastructure during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts from the installation or maintenance of associated infrastructure that may exacerbate wildfire risk would be less than significant.

Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (Less than Significant Impact with Mitigation Incorporated)

Paradise is located on a broad and gently sloping ridge, while Chico is predominantly flat. Installation of the Export Pipeline System would require installation via trenching or open cut methods within the Town's roadway ROWs. Given the sloped topography of the Town and ground disturbing activities that could create runoff or temporarily alter drainage patterns, impacts would be significant during construction. The Entler Avenue Hybrid Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan, MM-HYD-3: Flood Protection Plan,** and **MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts to a less than significant level.

Operation and maintenance activities, as described in Section 2.8, would not involve activities that create runoff or alter drainage. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. As a result, operations and maintenance of the Entler Avenue Hybrid Alternative would not expose people or structures to significant risks, including downslope or downstream flooding or landslides and there would be no impact.

The level of impact would be the same as that for the Proposed Project because impacts from exposing people or structure to significant risks, including downslope or downstream flooding or landslides would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid Alternative.

Mitigation. To minimize significant impacts on post-fire slope instability, or drainage changes during construction of the Entler Avenue Hybrid Alternative to a less than significant level, mitigation measures **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1** , impacts from the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides would be less than significant.

5.5.18.3 Crouch Avenue Alternative

Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project, no total road closures are proposed under the Crouch Avenue Alternative other than temporary movement of equipment. Portions of the alternative would be located along Skyway, which is a primary evacuation route. Closures within the ROW would be partial, however, in the event of a wildfire, all four lanes would be needed for evacuation along Skyway. Therefore, during construction impacts to an emergency response plan or emergency evacuation plan would be significant. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-3: Road Closure Restrictions, MM-HAZ-4: Rapid Demobilization Plan, MM-HAZ-5: Evacuation Warning Procedures** and **MM-HAZ-6: Traffic Management Plan**), which would reduce impacts on an emergency response plan or emergency evacuation plan to a less than significant level.

Operations and maintenance activities would not involve the presence or operation of equipment on roads for extended periods of time. As described in Section, 3.16, Transportation, the addition of traffic associated with operation and maintenance of the Crouch Avenue Alternative would not affect roadway operations in the study area. As such, operation and maintenance activities would have no impact on an adopted emergency response plan or emergency evacuation route.

The level of impact would be the same as that for the Proposed Project because impacts on an emergency response plan or emergency evacuation plan would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Crouch Alternative.

Mitigation. To minimize potentially significant impacts on emergency response or emergency evacuation plan during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6** will be implemented.

MM-HAZ-3: Road Closure Restrictions (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-4: Rapid Demobilization Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-5: Evacuation Warning Procedures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6**, impacts on an adopted emergency response plan or emergency evacuation plan would be less than significant.

Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire (Less than Significant Impact with Mitigation Incorporated)

Portions of the Crouch Avenue Alternative are located in Very High FHSZs. Operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. Hazardous materials would also be used, transported and disposed of during construction activities. The Town would comply with all relevant federal, state, and local statutes and regulations related to the transport, use, storage, or disposal of hazardous materials associated with construction activities, and all materials designated for disposal would be evaluated for appropriate state and federal hazardous waste criteria and properly disposed of according to their classifications. However, because the alternative is located in a Very High FHSZ, the potential for wildfire exists during construction. Therefore, this impact is considered significant. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**), which would reduce impacts to a less than significant level. Operations and maintenance would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Additionally, fire suppression equipment would be made available during operation and maintenance and Chico WPCP would continue to comply with existing fire codes. As a result, impacts from exacerbating fire risks during operation and maintenance would be less than significant.

The level of impact would be the same as that for the Proposed Project because impacts on wildfire risks due to slope, prevailing winds, or other factors would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative.

Mitigation. To minimize potentially significant impacts from exacerbating wildfire risk in the study area during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts from wildfire risk due to slope, prevailing winds, and other factors would be less than significant.

Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment (Less than Significant Impact with Mitigation Incorporated)

The Crouch Avenue Alternative would involve the construction of an Export Pipeline System. As discussed under Impact FIRE-2, portions of the study area are located in Very High FHSZs. Construction activities such as operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. Therefore, impacts during construction would be significant. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**), which would reduce impacts to a less than significant level.

Operation and maintenance activities including the inspection of the Export Pipeline System and associated instrumentation, and flow data sampling would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Therefore, impacts from operation and maintenance of utility infrastructure would be less than significant.

The level of impact would be the same as that for the Proposed Project because impacts from the installation or maintenance of associated infrastructure that may exacerbate fire risk would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative.

Mitigation. To minimize potentially significant impacts on wildfire from installation or maintenance of utility infrastructure during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts from the installation or maintenance of associated infrastructure would be less than significant.

Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (Less than Significant Impact with Mitigation Incorporated)

Paradise is located on a broad and gently sloping ridge, while Chico is predominantly flat. Installation of the Export Pipeline System would require installation via trenching or open cut methods within the Town's roadway ROWs. Given the sloped topography of the Town and ground disturbing activities that could create runoff or temporarily alter drainage patterns, impacts would be significant during construction. The Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan, MM-HYD-3: Flood Protection Plan,** and **MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts to a less than significant level.

Operation and maintenance activities, as described in Section 2.8, would not involve activities that create runoff or alter drainage. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. As a result, operations and maintenance of the Crouch Avenue Alternative would not expose people or structures to significant risks, including downslope or downstream flooding or landslides and there would be no impact.

The level of impact would be the same as that for the Proposed Project because impacts from exposing people or structure to significant risks, including downslope or downstream flooding or landslides would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Crouch Avenue Alternative.

Mitigation. To minimize significant impacts on post-fire slope instability, or drainage changes during construction of the Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10 Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1**, impacts from the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides would be less than significant.

5.5.18.4 Entler Avenue Hybrid and Crouch Avenue Alternative

Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan (Less than Significant Impact with Mitigation Incorporated)

Consistent with the Proposed Project, no total road closures are proposed under the Entler Avenue Hybrid and Crouch Avenue Alternative other than temporary movement of equipment. Portions of the alternative would be located along Skyway, which is a primary evacuation route. Closures within the ROW would be partial, however, in the event of a wildfire, all four lanes would be needed for evacuation along Skyway. Therefore, during construction impacts to an emergency response plan or emergency evacuation plan would be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-3: Road Closure Restrictions, MM-HAZ-4: Rapid Demobilization Plan, MM-HAZ-5: Evacuation Warning Procedures** and **MM-HAZ-6: Traffic Management Plan**), which would reduce impacts on an emergency response plan or emergency evacuation plan to a less than significant level.

Operations and maintenance activities would not involve the presence or operation of equipment on roads for extended periods of time. As described in Section, 3.16, Transportation, the addition of traffic associated with operation and maintenance of the Crouch Avenue Alternative would not affect roadway operations in the study area. As such, operation and maintenance activities would have no impact on an adopted emergency response plan or emergency evacuation route.

The level of impact would be the same as that for the Proposed Project because impacts on an emergency response plan or emergency evacuation plan would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. To minimize potentially significant impacts on emergency response or emergency evacuation plan during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6** will be implemented.

MM-HAZ-3: Road Closure Restrictions (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-4: Rapid Demobilization Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-5: Evacuation Warning Procedures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-6: Traffic Management Plan (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-3**, **MM-HAZ-4**, **MM-HAZ-5**, and **MM-HAZ-6**, impacts on an emergency response or evacuation plan would be less than significant.

Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire (Less than Significant Impact with Mitigation Incorporated)

Portions of the Entler Avenue Hybrid and Crouch Avenue Alternative are located in Very High FHSZs. Operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. Hazardous materials would also be used, transported and disposed of during construction activities. The Town would comply with all relevant federal, state, and local statutes and regulations related to the transport, use, storage, or disposal of hazardous materials associated with construction activities, and all materials designated for disposal would be evaluated for appropriate state and federal hazardous waste criteria and properly disposed of according to their classifications. However, because the alternative is located in a Very High FHSZ, the potential for wildfire exists during construction. Therefore, this impact is considered significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**), which would reduce impacts to a less than significant level.

Operations and maintenance would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Additionally, fire suppression equipment would be made available during operation and maintenance and Chico WPCP would continue to comply with existing fire codes. As a result, impacts from exacerbating fire risks during operation and maintenance would be less than significant.

The level of impact would be the same as that for the Proposed Project because impacts on wildfire risks due to slope, prevailing winds, or other factors would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. To minimize potentially significant impacts from exacerbating wildfire risk in the study area during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts from wildfire risk due to slope, prevailing winds, and other factors would be less than significant.

Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment (Less than Significant Impact with Mitigation Incorporated)

The Entler Avenue Hybrid and Crouch Avenue Alternative would involve the construction of an Export Pipeline System. As discussed under Impact FIRE-2, portions of the study area are located in Very High FHSZs. Construction activities such as operation and fueling of construction equipment in Very High FHSZs could create fire hazards in the study area. Therefore, impacts during construction would be significant. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HAZ-1: Vehicle Equipment Access and Fueling, MM-HAZ-7: Incorporate Fire Prevention Measures, MM-HAZ-8: Incorporate Public Safety Measures**, and **MM-HAZ-9: Wildland Fire Area**), which would reduce impacts to a less than significant level.

Operation and maintenance activities including the inspection of the Export Pipeline System and associated instrumentation, and flow data sampling would not require the use of heavy equipment, fueling, or other activities likely to create an additional fire hazard. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. Therefore, impacts from operation and maintenance of utility infrastructure would be less than significant.

The level of impact would be the same as that for the Proposed Project because impacts from the installation or maintenance of associated infrastructure that may exacerbate fire risk would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. To minimize potentially significant impacts on wildfire from installation or maintenance of utility infrastructure during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9** will be implemented.

MM-HAZ-1: Vehicle Equipment Access and Fueling (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-7: Incorporate Fire Prevention Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-8: Incorporate Public Safety Measures (see Section 3.9, Hazards and Hazardous Materials, for description)

MM-HAZ-9. Wildland Fire Area (see Section 3.9, Hazards and Hazardous Materials, for description)

Significance after Mitigation. With the implementation of **MM-HAZ-1**, **MM-HAZ-7**, **MM-HAZ-8**, and **MM-HAZ-9**, impacts from the installation or maintenance of associated infrastructure that may exacerbate wildfire risk would be less than significant.

Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (Less than Significant Impact with Mitigation Incorporated)

Paradise is located on a broad and gently sloping ridge, while Chico is predominantly flat. Installation of the Export Pipeline System would require installation via trenching or open cut methods within the Town's roadway ROWs. Given the sloped topography of the Town and ground disturbing activities that could create runoff or temporarily alter drainage patterns, impacts would be significant during construction. The Entler Avenue Hybrid and Crouch Avenue Alternative would implement the same mitigation measures as the Proposed Project (**MM-HYD-1: Stormwater Management and Treatment Plan, MM-HYD-3: Flood Protection Plan,** and **MM-GEO-1: Minimize Geologic Hazards**), which would reduce impacts to a less than significant level.

Operation and maintenance activities, as described in Section 2.8, would not involve activities that create runoff or alter drainage. Additionally, operation and maintenance activities would not exacerbate wildfire risk in the study area because these activities would not occur adjacent to wildland areas. As a result, operations and maintenance of the Entler Avenue Hybrid and Crouch Avenue Alternative would not expose people or structures to significant risks, including downslope or downstream flooding or landslides and there would be no impact.

The level of impact would be the same as that for the Proposed Project because impacts from exposing people or structure to significant risks, including downslope or downstream flooding or landslides would be less than significant with mitigation incorporated for both the Proposed Project Entler Avenue alignment and the Entler Avenue Hybrid and Crouch Avenue Alternative.

Mitigation. To minimize significant impacts on post-fire slope instability, or drainage changes during construction of the Entler Avenue Hybrid and Crouch Avenue Alternative to a less than significant level, mitigation measures **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1** will be implemented.

MM-HYD-1: Stormwater Management and Treatment Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-HYD-3: Flood Protection Plan (see Section 3.10, Hydrology and Water Quality, for description)

MM-GEO-1: Minimize Geologic Hazards (see Section 3.7, Geology, Soils, and Paleontological Resources, for description)

Significance after Mitigation. With the implementation of **MM-HYD-1**, **MM-HYD-3**, and **MM-GEO-1**, impacts from the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides would be less than significant.

5.5.18.5 Alternatives Impact Summary

Table 5.5-18 summarizes the wildfire impacts of the alternatives and a comparison to the Proposed Project.

Table 5.5-18. Alternatives Impacts Summary for Wildfire

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.6 Comparison of Proposed Project and Alternative Impacts

Table 5.6-1 summarizes the impacts of the alternatives and compares it with the Proposed Project impacts.

Table 5.6-1. Comparison of Proposed Project and Alternative Impacts

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Agriculture and Forestry Resources					
Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Air Quality					
Impact AIR-1: Conflict with or obstruct implementation of an applicable air quality plan	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact AIR-4: Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people	LTS	LTS (+)	LTS (=)	LTS (=)	LTS (=)
Biological Resources					
Impact BIO-1: Substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS	S/M	NI (-)	S/M (+)	S/M (=)	S/M (+)
Impact BIO-2: Substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	S/M	NI (-)	S/M (+)	S/M (=)	S/M (+)
Impact BIO-3: Substantial adverse effect on state or federally protected wetlands	S/M	NI (-)	NI (-)	S/M (+)	S/M (+)
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory	NI	NI (=)	NI (=)	NI (=)	NI (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites					
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	NI	NI (=)	NI (=)	NI (=)	NI (=)
Cultural Resources					
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Energy					
Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	NI	NI (=)	NI (=)	NI (=)	NI (=)
Geology, Soils, and Paleontological Resources					
Impact GEO-1(a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	NI	SU (+)	NI (=)	NI (=)	NI (=)
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Greenhouse Gas Emissions					
Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of GHG	NI	NI (=)	NI (=)	NI (=)	NI (=)
Hazards and Hazardous Materials					
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
loss, injury or death involving wildland fires					
Hydrology and Water Quality					
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HYD-3(a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on or off-site	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-3(b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-3(c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-3(d): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Impede or redirect flood flows	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact HYD-4: In flood hazard, risk release of pollutants due to Project inundation	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	S/M	SU (+)	S/M (=)	S/M (=)	S/M (=)
Land Use and Planning					
Impact LU-1: Physically divide an established community	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact LU-2: Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	NI	NI (=)	NI (=)	NI (=)	NI (=)
Noise and Groundborne Vibration					
Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise	S/M	NI (-)	S/M (=)	S/M (-)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies					
Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels	S/M	NI (-)	S/M (=)	S/M (-)	S/M (=)
Impact NSE-3: Be located within the vicinity of a private airstrip or an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, expose people residing or working in the Project area to excessive noise levels	LTS	NI (-)	NI (-)	LTS (+)	LTS (+)
Population and Housing					
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	NI	NI (=)	NI (=)	NI (=)	NI (=)
Public Services					
Impact PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(b): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
Recreation					
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Transportation					
Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	LTS	NI (-)	LTS (=)	LTS (=)	LTS (=)
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact TRA-4: Result in inadequate emergency access	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Tribal Cultural Resources					
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Utilities and Service Systems					
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact UTIL-2: Have sufficient water supplies available to serve the Project and reasonably	NI	NI (=)	NI (=)	NI (=)	NI (=)

Impact	Proposed Project	No Project Alternative	Entler Avenue Hybrid Alternative	Crouch Avenue Alternative	Entler Avenue Hybrid and Crouch Avenue Alternative
foreseeable future development during normal, dry and multiple dry years					
Impact UTIL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact UTIL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	NI	NI (=)	NI (=)	NI (=)	NI (=)
Impact UTIL-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste	NI	NI (=)	NI (=)	NI (=)	NI (=)
Wildfire					
Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)
Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	S/M	NI (-)	S/M (=)	S/M (=)	S/M (=)

Note: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SU = Significant and Unavoidable Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, (+) indicates a greater level of impacts compared to the Proposed Project; (-) indicates less impacts compared the Proposed Project; (=) indicates the same level of impacts as the Proposed Project

5.7 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an "environmentally superior" alternative be selected among the alternatives that are evaluated in the EIR. Generally, the environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. For the purpose of this analysis, the alternatives considered are:

- Proposed Project
- No Project
- Entler Avenue Hybrid Alternative –Proposed Project with alternative pipeline alignment for crossing SR 99
- Crouch Avenue Alternative – Proposed Project with alternative export pipeline alignment for crossing Little Chico Creek.
- Entler Avenue Hybrid and Crouch Avenue Alternative – Proposed Project with alternative pipeline alignment for crossing SR 99 and alternative pipeline alignment for crossing Little Chico Creek.

While the No Project Alternative would result in the fewest number of impacts when compared to the Proposed Project and alternatives, the No Project Alternative was the only alternative that would result in significant and unavoidable impacts. Significant and unavoidable impacts from the No Project Alternative would occur under geology, soils, and paleontological resources; and hydrology and water quality. All impacts associated with the No Project Alternative are attributed to the risks associated with continued use of individual septic systems and the potential for system failures and leakages.

This section summarizes the different impacts from the Proposed Project and action alternatives (that is, Entler Avenue Hybrid Alternative, Crouch Avenue Alternative, and Entler Avenue Hybrid and Crouch Avenue Alternative). The comparison focuses on air quality, biological resources, and noise and groundborne vibration because these were the resources that resulted in minor differences in the level of impacts amongst alternatives. However, as shown in Table 5.6-1, with mitigation incorporated, the Proposed Project and all action alternatives result in less than significant impacts or no impact for all resource areas; there are no significant and unavoidable impacts identified for the Proposed Project or any of the action alternatives.

Air Quality. Impacts on air quality would be lowest under the Crouch Avenue Alternative because sensitive receptors would be located farther from construction activities and resulting construction emissions than the Proposed Project and other alternatives. Sensitive receptors are located within 60 feet of the Crouch Avenue Alternative, while sensitive receptors are located within 50 feet of the Proposed Project, Entler Avenue Hybrid Alternative, and the Entler Avenue Hybrid and Crouch Avenue Alternative. (Google Earth 2022) However, with implementation of the proposed mitigation measures, impacts under the Proposed Project and all action alternatives would be less than significant.

Noise and Groundborne Vibration. Similar to the results of the air quality analysis, noise and groundborne vibration impacts would be lowest under the Crouch Avenue Alternative when compared to the Proposed Project and other alternatives because of the distance of sensitive receptors from construction activities. As it relates to impacts from being located within two miles of an airport or within

an airport land use plan, the Entler Avenue Hybrid Alternative would result in the lowest level of impacts. The Entler Avenue Hybrid Alternative is not located within an airport land use plan or within two miles of a public or private airport, while the other alternatives would meet at least one of these criteria. (Google Earth 2022). However, with implementation of the proposed mitigation measures, impacts under the Proposed Project and all action alternatives would be less than significant.

Biological Resources. The Entler Avenue Hybrid Alternative and Entler Avenue Hybrid and Crouch Avenue Alternative would result in a greater level of impacts on special-status species and sensitive communities when compared to the Proposed Project and Crouch Avenue Alternative. The Export Pipeline System under the Entler Avenue Hybrid Alternative and Entler Avenue Hybrid and Crouch Avenue Alternative would cross approximately 0.4 mile of additional valley-foothill riparian habitat, which is a sensitive community, between Butte Creek and SR 99. Valley-foothill riparian is suitable habitat for multiple special-status species of plants and wildlife and is often used by wildlife as a movement corridor. Alternatively, impacts on state or federally protected wetlands would be the lowest under the Entler Avenue Hybrid Alternative as compared to the Proposed Project and other action alternatives because no aquatic features are present within the Entler Avenue Hybrid Alternative footprint. Based on available preliminary data, the Crouch Avenue Alternative and Entler Avenue Hybrid and Crouch Avenue Alternative would result in a greater level of impacts on state or federally protected wetlands than the Proposed Project.

Summary and Conclusion. Based on the results of the alternatives analysis, the Crouch Avenue Alternative would be the environmentally superior alternative because fewer impacts would occur on air quality, noise and groundborne vibration, and biological resources (special-status species and sensitive communities) when compared to the Proposed Project other action alternatives. However, as noted above, the Crouch Avenue Alternative would also result in a greater level of impacts on state or federally protected wetlands than the Proposed Project. Since impact findings for the Proposed Project and all action alternatives with mitigation incorporated show less than significant impacts or no impacts for all resource areas, selection of any of the three action alternatives would not significantly alter the potential for effects of implementing the Proposed Project.

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Appendix A: NOP Scoping Report

Appendix B: Town of Paradise 1994 General Plan Resolution and Amendments

Appendix C: Regulatory Framework

Appendix D: Emissions Modeling

Appendix E: Vegetation Community Descriptions and Special-Status Species Accounts

Attachment 1: Aquatic Resources and Vegetation Communities Mapbook

Attachment 2: Database Queries

Attachment 3: Sensitive Biological Resources Table

Appendix F: Swainson's Hawk Survey and Elderberry Shrub Mapping Report

Appendix G: Tribal Consultation

Appendix H:
Pump Station Energy Consumption Calculation

Appendix I:
Public Comments and Responses on Draft PEIR

Paradise Sewer Project

EXHIBIT B

CEQA Findings Regarding Significant Environmental Impacts

Paradise, CA

November 7, 2022

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Exhibit B

CEQA Findings Regarding Significant Environmental Impacts

The Town of Paradise, California (Town), is the lead agency for the Paradise Sewer Project (the "Project" or "Proposed Project") under the California Environmental Quality Act, ("CEQA"). The City of Chico ("City"), Butte Local Agency Formation Commission ("Butte LAFCo") , Central Valley Regional Water Quality Control Board ("RWQCB"), Butte County ("County"), and California Department of Fish and Wildlife ("CDFW") are considered Responsible Agencies under CEQA based on their discretionary approval over aspects of the Proposed Project. The Proposed Project would be located in Paradise, Chico and unincorporated areas in Butte County, California.

As more fully explained in the PEIR, since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems have created public health and environmental issues and concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the Town in 2018, Paradise was the largest unsewered community in California. The Town has prepared numerous studies to address its need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 feasibility study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022.

The Town now the proposes the Paradise Sewer Project, consisting of the design, right of way acquisition and construction for the core collection system, extended collection system, export pipeline and connection to the City of Chico Water Pollution Control Plant ("Proposed Project" or "Project"). The Proposed Project would allow for the replacement of individual septic systems within the Town's sewer service area that are currently are managed, owned, and maintained by individual property owners. The abandonment of such individual septic systems is not within the scope of this Project or the PEIR. This Proposed Project further includes a regional approach through the provision of wastewater treatment services from the City of Chico to the Town, to be approved by Butte LAFCo.

The Proposed Project would consist of three primary components. The first two components are analyzed at a project level in the PEIR because sufficient information is available regarding the characteristics, timing, and locations of these proposed facilities. The third component is analyzed at a programmatic level. The three components include the following:

- **Core Collection System:** The Core Collection System would consist of pipelines and 28 small pump stations (also referred to as lift stations) to serve approximately 1,500 individual parcels within the Town's core sewer service area.
- **Export Pipeline System:** The 18-mile Export Pipeline System is proposed to convey wastewater from the Core Collection System to the Chico WPCP.
- **Extended Collection System:** The Extended Collection System would be an extension of the Core Collection System that would allow parcels within the Town limits to connect to the sewer system up to the capacity of the system infrastructure and the Town's allocation within the Chico WPCP capacity.

In order to approve these activities for the construction and operation of the Proposed Project, the Town has completed a PEIR in accordance with the California Environmental Quality Act (CEQA). This environmental review process focuses on the potential impacts caused by the Proposed Project on local resources.

The Town developed and implemented an extensive public outreach and education program for the public and other public agencies. The Town published the required documents for availability, distribution, and comments on the Draft PEIR, including a 45-day public review and comment period (July 14 through 5pm on August 29, 2022) and held three public meetings (August 8 (6:00 pm), August 10 (12:30 and 6:00 pm), 2022). All notices, materials and comments received at those meetings are included within the administrative records. Responsible and trustee agencies, involved federal agencies, interest groups, and members of the public were invited to provide input on the Draft PEIR. Comments were submitted in person, at Town Hall and through www.paradisesewer.com. All input received was documented and addressed in the Final Programmatic Environmental Impact Report.

As used here, "impacts" refers to one or more significant environmental effects of the project that have been identified in the PEIR process.

Pursuant to the requirements of CEQA Guidelines Section 15091 and specifically Section1 15091(a)(1) for each possible impact identified, the Town makes a finding of the changes or alternations required or incorporated into the Project that avoid or substantially lessen the significant environmental effect or impact.

In adopting these Findings, the Town also adopts a Mitigation Monitoring and Reporting Program pursuant to California Public Resources Code, Section 21081.6, and CEQA Guidelines, Section 15097. This program is designed to ensure that the project complies with the feasible mitigation measures identified below during implementation of the project. The program is set forth in the Paradise Sewer Project Mitigation Monitoring and Reporting Program, which is adopted by the Town concurrently with these Findings as Exhibit C.

Findings:

1. For the reasons set out in the PEIR, as specifically reviewed by the Town Council, the Town Council finds that adoption of a regional approach to the provision of sewer services to the Town of Paradise as detailed in the EIR as the approach which meets the Objectives and Goals for the Project.

2. The Town Council further finds that there are revisions in only three mitigation measures, as shown below in the Findings (Haz Mat 4-5).

3. The Town Council further findings that the significant environmental effects (also called "impacts") of the Project include conditions changes and alterations, as set out below and in the MMRP and PEIR, that avoid or substantially lessen the significant environmental effects where feasible and as identified in the PEIR; as a result, there are no significant impacts from implementation of the Project that were not mitigable by proposed Mitigation Measures (listed in the MMRP and PEIR).

Mitigation of Biological Resources Impacts

1. **Facts**. According to the EIR, the Project construction could create a substantial adverse effect, either directly or through habitat modifications, on the state or federally protected wetlands, riparian habitat, or other communities and any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFW or USFWS: Special-Status Plant Species. However, this impact can be mitigated to a less than significant level when the project applicant implements the mitigation measures explained below:

    i. During site preparation for any segment of the Core Collection System, Export Pipeline System, or Extended Collection System, ground disturbance and vegetation clearing footprints, including along construction access routes or at temporary work areas, will be reduced to the smallest area feasible. In addition, prior to any ground disturbance, a qualified biologist hired by the Town will identify areas to be avoided during construction activities; these areas will be fenced and/or flagged as close to construction limits as feasible. This mitigation measure applies to all biological resources.

    ii. Before initiating the proposed ground disturbance or vegetation clearing, a qualified botanist will perform focused surveys to determine the presence or absence of special-status plant species with the potential to occur within a one-hundred feet radius of the proposed disturbance areas, as prescribed by CDFW. These surveys will be conducted per CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018a), requiring rare plant surveys to be conducted during the proper time of the year when rare or endangered species are evident and identifiable. Surveys will be scheduled to coincide during known flowering periods and/or appropriate developmental periods necessary to identify the plant species of concern.

    iii. If any special-status plant species are found within one-hundred feet of ground disturbance or vegetation clearing areas, including construction access routes or temporary work areas, the following will be implemented:

        a. Suppose the area is not proposed to be disturbed or does not need to be cleared for construction. In that case, any special-status plant species will be protected by flagging, signage, orange plastic fence, and/or silt fence, as appropriate, based on site conditions. This will limit the effects of activities and material stockpiles on special-status plant species.

b. If activities could result in the loss of greater than ten percent of a population identified during surveys or occupied habitat for a special-status plant species, a qualified biologist will develop and implement a mitigation plan for the Town. The plan will include a program to transplant, salvage, cultivate, and reestablish the species at suitable sites (if feasible); means and methods to propagate affected special-status plants through vegetative or reproductive means as appropriate for the species; and transplant at suitable receiving sites as close to the existing population as possible. CDFW and any other agencies with jurisdiction will approve the plan over the species found prior to implementation of the plan and before the initiation of any construction-related activities. Propagation and transplantation will occur prior to the initiation of the activity. The receiving location will be evaluated and chosen based on similar conditions at the transplant source location. Site conditions to consider when choosing a receiving site will include aspect, substrate, hydrology, associated species, and canopy cover. A qualified biologist for the Town will monitor the transplanted plants for at least one year following transplantation. As part of the mitigation plan, a monitoring plan will be developed and approved by CDFW with propagation goals tailored to the species being transplanted. If propagation goals are not met after one year following transplantation, then adaptive management strategies will be developed in coordination with CDFW to achieve those goals.

c. The actual level of mitigation may vary depending on the sensitivity of the species, its prevalence in the area, the location of the occurrence, and the current state of knowledge about overall population trends and threats to its survival. However, at a minimum, the species and habitat will be replaced at a 1:1 ratio (individuals or acreage of occupied habitat). Ratios will be developed in coordination with and approved by CDFW.

iv. A qualified biologist will monitor construction activities that could potentially cause significant impacts on sensitive biological resources. The Town's qualified biologist will determine the amount and duration of monitoring depending on the activity. Monitoring will be required at any location where special status species have been identified within 100 feet of the vegetation clearing area. In addition, the Town will retain a qualified biologist to conduct mandatory awareness training for construction personnel regarding the identified location's sensitive biological resources, identifying species (visual and auditory) most likely to be present, the need to avoid impacts on biological resources (e.g., plants, wildlife, and jurisdictional waters), and the penalties for non-compliance with the mitigation requirements. If new construction

personnel are added to the Project, the contractor will ensure they receive the mandatory training before starting work. This mandatory training will be included in all contractor construction specs and required by the contract. This measure will apply to any biological resources for which complete avoidance cannot be attained through or resource-specific measures.

v. Following the construction of the Core Collection System, Export Pipeline System, or Extended Collection System, all exposed and/or disturbed areas resulting from ground-disturbing activities, including construction access routes or temporary work areas, will be returned to their original contour and grade, and restored using locally native grass and forb seeds, plugs, or a mix of the two. Areas will be seeded with species appropriate to their topographical and hydrological character and covered with broadcast straw and/or jute netted, as appropriate for specific habitat types. Several invasive and noxious weed species are known to occur in the study area, and 27 plant species classified by the California Invasive Plant Council as invasive were identified in the study area during field studies. To avoid the spread of invasive plant species in the study area, native species will be used for reseeding, and the Proposed Project will not allow any use of species listed as noxious weeds. Further, precautions will be taken to avoid the spread of invasive plant species. These include inspecting and cleaning construction equipment and implementing CDFW-approved eradication strategies should an invasion occur. This measure is focused on habitat but applies to all biological resources.

vi. No net loss of aquatic resources would be achieved through impact avoidance and minimization, covered under Section 1 through Section 4, and/or compensatory mitigation. The mitigation for permanent impacts on aquatic resources will be provided at a minimum 1:1 ratio. Mitigation will be achieved through onsite restoration, in-lieu fee payment, or purchase of mitigation credits at a USACE-, USFWS-, and/or CDFW-approved mitigation bank at the Town's expense. Mitigation will be applied to satisfy this measure as required in regulatory permits issued through CDFW, USACE, USFWS, and/or the RWQCB.

vii. If sensitive communities occur within 100 feet (250 feet for vernal pools as mandated by USFWS) of proposed ground disturbing activities, including construction access routes and temporary work areas, with no pre-existing barrier between them and the proposed ground disturbance, protective fencing, such as silt fencing, will be installed between habitats that are to be avoided and the construction limits to prevent accidental disturbance and to protect water quality during construction.

viii. Ground disturbing activities within 100 feet (250 feet for vernal pools) of aquatic resources will coincide with the driest time of year and will avoid occurring within 72 hours (before or after) a rain event, if feasible.

ix. If the proposed project impacts, including along construction access routes and temporary work areas, are to take place within 165 feet of a riparian corridor where elderberry shrubs are known to be present, then a full inventory of elderberry shrubs within 165 feet of the proposed disturbance, including an assessment of whether valley elderberry longhorn beetle exit holes are present, will be conducted under the Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle. Based on the inventory findings, the Town and USFWS will coordinate to determine whether formal consultation is required for the Project. If formal consultation is deemed required, the Town will submit inventory results in a Biological Assessment to USFWS. USFWS will review the proposed findings and mitigation, and respond in a Biological Opinion, which will finalize the elderberry mitigation required of the Town for the Proposed Project.

x. Elderberry shrubs that the Proposed Project would directly impact will be transplanted to a new suitable location. In addition, two credits would be purchased at a USFWS-approved bank for each shrub (2:1 ratio). Mitigation, as required in regulatory permits issued through USFWS, may be applied to satisfy this measure.

xi. Elderberry shrubs would be transplanted outside the flight season of the valley elderberry longhorn beetle (March to July) and follow the most current version of the American National Standards Institute A300 (Part 6) guidelines for transplanting (http://www.tcia.org/). Exit-hole surveys would be completed immediately before transplanting. The number of exit holes found, the GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted would be reported to USFWS. A qualified biologist hired by the Town will be on site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures and other conservation measures. In addition, the qualified biologist will monitor the transplanted shrubs during one growth season following the transplant to confirm shrub survival. No further monitoring or action would be necessary if the shrub(s) are deemed alive. If the shrub(s) are deemed dead, The Town will purchase an additional one credit per shrub from a USFWS-approved bank for the valley elderberry longhorn beetle.

xii. Activities that may indirectly damage or kill an elderberry shrub (trenching, paving, etc.) will require an avoidance area of at least 20 feet from a shrub's drip line, depending on the type of activity. All activities that could occur

within 165 feet of an elderberry shrub will also be conducted outside of the flight season of the valley elderberry longhorn beetle (March to July).

xiii. Herbicides will not be used within the drip line of the shrub. Insecticides will not be used within 98 feet (30 meters, as required by USFWS) of an elderberry shrub. If deemed necessary, all chemicals will be applied using a backpack sprayer or a similar direct application method.

xiv. Mechanical weed removal within the shrub's drip line would be limited to the season when adult-valley elderberry longhorn beetles are not active (August to February) and will be completed so as to not damage an elderberry shrub.

xv. Before construction, and as part of the specifications for the project included within the contractor agreement, the Town will require that its contractor prepare an Inadvertent Release Plan to address the inadvertent loss of inert drilling fluids in the event of a frac-out during HDD for each waterbody crossing. This plan will include Best Management Practices, monitoring, and contingency procedures. It will be developed, approved by a qualified biologist hired by the Town, and implemented by the contractor during construction to avoid or counteract potential impacts on water quality, fish, or other aquatic wildlife resulting from turbidity changes from the fluids.

xvi. A qualified biologist would conduct a preconstruction survey for western pond turtles within 24 hours before the onset of any ground-disturbing activities that would occur within 350 feet of the Ordinary High Water Mark (OHWM) of a creek or stream. If juvenile or adult turtles are found within the survey area, they would be moved by a qualified and CDFW-permitted biologist hired by the Town at least 500 feet away from the proposed disturbance area to a location with similar habitat. If a turtle nest is found within the survey area, construction activities will not occur within 100 feet of the nest until the turtles have hatched or the eggs have been moved to an appropriate location. Any egg relocation would be conducted by a qualified and CDFW-permitted biologist in coordination with CDFW.

xvii. Within 3-5 days before working within 300 feet radius of the OHWM of a creek or stream within the foothill yellow-legged frog range, per CDFW guidelines, a qualified and CDFW-permitted biologist will survey the Proposed Project site for foothill yellow-legged frogs (adults, subadults, tadpoles or egg masses), including construction access routes and at least 500 feet upstream and downstream (CDFW 2018b). Although unlikely, if the Project activities are expected to result in effects extending beyond 500 feet downstream (e.g., heavy sedimentation that could bury egg masses or tadpole rearing sites), the survey area will be expanded to encompass the expected affected area.

Suppose surface water is present during the work period. In that case, a qualified biologist hired by the Town will inspect the site daily for foothill yellow-legged frogs before work begins and during construction.

xviii. Within 3-5 days before working within 300 feet of the OHWM of a creek or within 300 feet of fresh emergent wetland habitat, a qualified and CDFW-permitted biologist will conduct a visual encounter survey of the Proposed Project site for California red-legged frogs (adults, subadults, tadpoles or egg masses).

xix. During biological monitoring (Section 4 above), the biologist will identify any suitable aquatic or upland habitat that may be used by giant garter snakes within or adjacent to areas where ground-disturbing and vegetation-clearing activities would occur. Construction activities within 200 feet of suitable giant garter snake aquatic (generally defined as sloughs, irrigation ditches, creeks, or slow-moving streams) or upland habitat (defined as grasslands or disturbed areas within 200 feet of an aquatic feature suitable for a giant garter snake) will be conducted during the snake's active period (May 1 through October 1). This minimizes the risk that the snakes will be underground and more susceptible to injury or death from ground-disturbing activities.

xx. Staging areas will be located more than 200 feet from any suitable giant garter snake aquatic or upland habitat as identified during monitoring by the biologist, or the area will be fenced with exclusion fencing before the start of construction. Vegetation clearing within 200 feet of the banks of suitable giant garter snake aquatic habitat will be limited to the minimum area necessary. The movement of heavy equipment within 200 feet of the banks of suitable giant garter snake aquatic habitat will be confined to designated haul routes to minimize habitat disturbance.

xxi. To the extent feasible, tree and vegetation clearing will be conducted outside the migratory bird nesting season (March 1 through August 31) in areas where the Town's biologist identifies potential nesting trees. However, if clearing and/or construction activities need to occur during the migratory bird nesting season in these locations, then preconstruction surveys to identify active migratory bird and/or raptor nests would be conducted by a qualified biologist within 14 calendar days before construction initiation. A qualified biologist must perform focused surveys to determine the presence or absence of active nest sites within the proposed impact area, including construction access routes with a 500-foot buffer, where feasible.

xxii. In the year that construction of the Proposed Project is planned to be initiated, a qualified biologist will conduct protocol surveys for Swainson's hawk in and

within 0.5-mile of all suitable habitats for the species in the Proposed Project footprint. These surveys will follow the protocol outlined in the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (CDFW 2000). Suppose any active Swainson's hawk nests are found. In that case, the biologist will determine an appropriately sized buffer around the nest in which construction activities will not be allowed to commence until the biologist has determined the nest to have reached the end of its cycle (fledged or failed). The size of the buffer will initially be 0.25-mile per CDFW standard requirements. However, it may be reduced in certain circumstances based on the opinion of the biologist regarding the observed sensitivity of the hawks to disturbance, visual screens between the nest and disturbance, and other factors.

xxiii. If active nests of any MBTA- and FGC-protected bird species are identified within the survey areas, a no-disturbance buffer would be established for all active nest sites before the commencement of any Proposed Project construction activities to avoid construction or access-related disturbances to migratory bird nesting activities. A no-disturbance buffer is a zone in which Proposed Project-related activities (vegetation removal, earth moving, noise generation, and construction) cannot occur. A qualified biologist would determine the size of the no-disturbance buffers based on the species, activities proposed near the nest, and topographic and other visual barriers.

xxiv. Before implementing Proposed Project-related activities in undisturbed portions of the Proposed Project site and in and around buildings or other human-made structures with recesses where bats could roost, a qualified biologist will conduct a daytime site reconnaissance of the area. The biologist, focusing on buildings and other human-made structures or trees with cavities or exfoliating bark, would look for bats and bat signs, including existing roost sites, bat guano deposits, and will listen for roosting bats. If the daytime survey does not identify the presence of potential bat roosts, no further mitigation is required. If potential roost sites are identified, a nighttime exit survey will be conducted to determine species of roosting bats, relative bat activity and to estimate the number of individual bats. This nighttime survey may be an active or passive acoustic monitoring survey. If occupied bat roost sites are identified, appropriate spatial and temporal buffers, as defined by the Town's biologist based on experience with bat species, would be implemented to minimize the impact on roosting bats during the construction of the Project.

xxv. Within 14 days before the implementation of Project-related activities in or adjacent to the American badger habitat (annual grassland, mixed chaparral, and blue oak-foothill pine), a qualified biologist will determine if American

badger dens are present within 500 feet of the proposed impact area, including construction access routes. If badger den(s) are observed, the following buffer distances, according to what type of den(s) the biologist determines it (them) to be, will be established before construction activities:

a. Potential den = 30 feet
b. Active (adults present) den = 250 feet
c. Natal (young present) den = 500 feet

Activities permitted within and the size of the no-disturbance buffers may be adjusted based on an evaluation by the qualified biologist. The buffer would be imposed until a qualified biologist determines the den is inactive.

xxvi. Compensatory mitigation for temporary and permanent impacts on state and/or federally protected wetlands that cannot be avoided through other mitigation measures will be purchased by the Town at a minimum 1:1 ratio, as defined by USACE through the Section 404 permit. Mitigation might include onsite restoration approved by the USACE, in-lieu fee payment, or purchasing mitigation credits at a USACE-approved mitigation bank. Mitigation may be applied to satisfy this measure as required in regulatory permits issued through the USACE and/or CDFW.

2. **Findings.** The Town Council finds that:

i. As outlined above, the measures recommended in the EIR to mitigate the creation of a substantial effect on candidate, sensitive, or special status species from construction activities have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

ii. These measures will mitigate and reduce the impact on the candidate, sensitive, or special-status species created by construction and operation to a less than significant level during site preparation, before, during, and post-construction.

Mitigation of Cultural Resources Impacts

1. **Facts.** According to the EIR, project construction could cause a substantial adverse change in the significance of archaeological resources under Section 15064.5. However, this impact can be mitigated to a less than significant level if the project

applicant implements targeted archaeological monitoring and follow inadvertent discovery procedures. The mitigation measures are the following:

i. The archaeological survey did not include the proposed Export Pipeline System between Midway Road and Skyway due to a lack of landowner consent to access. Although not fully relocated, previous monitoring work along Skyway recorded a series of sparse lithic scatters demonstrating an elevation sensitivity for near-surface archaeological sites. Therefore, based on the lack of previous survey coverage and the number of previously documented archaeological sites in the vicinity, the Project alignment between Midway Road (on the west) and the intersection of Skyway and Neal Road (on the east) will be subject to a qualified professional archaeologist monitoring during the initial ground disturbance. The archaeologist will monitor the initial trenching of previously undisturbed deposits. However, the monitoring may vary based on the excavation rate, the materials excavated, and the absence/presence of artifacts and/or cultural features.

ii. Suppose unrecorded cultural resources are encountered during Project-related ground-disturbing activities, even without an onsite archaeological monitor. In that case, a qualified cultural resources specialist will be contacted to assess the potential significance of the finding. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure remains) is made during Project-related construction activities, ground disturbances in the area of the find will be halted, and a qualified professional archaeologist will be notified of the discovery. The archaeologist will determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation, such as avoidance or data recovery.

2. **Findings.** The Town Council finds that:

i. As outlined above, the measures recommended in the EIR to mitigate the creation of a substantial adverse change in the significance of an archaeological resource under Section 15064.5 from construction activities have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

ii. These measures will mitigate and reduce the impact on the identified location's archaeological resource created by construction and operation to a less than significant level at the initial and during the ground disturbance.

Mitigation of Geology, Soils, and Paleontological Resources

1. **Facts.** According to the EIR, the project construction may cause potential substantial adverse effects including risk of loss, injury, or death involving strong seismic ground shaking, seismic-related ground failure, liquefaction, on or off-site landslides, lateral spreading, subsidence or collapse, and directly or indirectly destroy a unique paleontological resource, site or unique geologic feature. However, this impact can be mitigated to a less than significant level when the Town obtains the services of a qualified, licensed geotechnical engineer to prepare a design-level geotechnical report. The Town will review the geotechnical report with the geotechnical engineer to develop viable measures and require contractors to incorporate these measures into all construction plans and specifications.

   To minimize Geologic Hazards, the Town will obtain the services of a qualified, licensed geotechnical engineer before construction to prepare a design-level geotechnical report with specific recommendations to address geologic hazards, seismic safety, and soil conditions during construction. The Town will review the geotechnical report with the geotechnical engineer to develop viable measures that will avoid or minimize risks associated with ground shaking, liquefaction, landslides, unstable soils, and expansive soils during construction. The Town will require contractors to incorporate these measures into all construction plans and specifications.

   If paleontological resources are inadvertently discovered during earth-moving activities, the construction crew will immediately cease work within a 50-foot radius of the find and notify the Town's Project Manager. Construction work will be halted until the collection of fossil specimens has been completed. The collection and treatment actions will occur after recovery of specimens and once scientific value can be confirmed and documented. If fossils are found, treatment actions will include sampling for microfossils, conducting paleomagnetic analysis, identifying and preparing fossils, arranging for a repository, and preparing a final report.

2. **Findings.** The Town Council finds that:

   i. As state above, the measures recommended in the EIR to mitigate the potential adverse effects of potential risk of loss, injury, or death involving geological hazards and potential destruction of a unique paleontological resource from construction activities have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

ii. These measures will mitigate and reduce the impact on the identified location's geological, soil, and paleontological resources to a less than significant level before the construction and during earth-moving activities.

Mitigation of Hazards and Hazardous Materials Impacts

1. **Facts.** According to the EIR, the project construction could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and be located on a site under Government Code § 65962.5. In addition, the project construction may impair implementation or physically interfere with the emergency response or evacuation plan and expose people or structures to a significant risk of loss, injury, or death involving wildland fires. However, the Town can mitigate this impact to a less than significant level when the Town implements and requires contractors to incorporate the following measures (underlined and bolded text are updates made to the Final PEIR in response to agency comments):

   i. The Town will require and enforce, through encroachment permit conditions and construction documents, that all vehicle traffic associated with Proposed Project-related activities will be confined to established roads, staging areas, and parking areas during construction. Additionally, maintenance or refueling of vehicles or equipment must occur in designated areas and/or secondary containment away from waterbodies.

   ii. Before any work is to occur within 500 feet of the Cypress Lane Site, a parcel-specific contaminated soil management plan shall be prepared to address the known contamination at the site for submission to and approval by DTSC. The plan shall include specific hazards and provisions for managing soils and groundwater at the Cypress Lane Site. The plan shall provide requirements for soil testing and characterization, soil disposal protocols, protocols governing the discovery of unknown contaminants, and soil management. The plan shall also include health and safety provisions, including training requirements for site workers who may be handling contaminated material, including the transport and disposal of contaminated material; chemical exposure hazards in soil, groundwater, or soil vapor that are known to be present at the property; and mitigation and monitoring measures that are protective of the site worker and public health and safety. These health and safety provisions shall be prepared to meet OSHA requirements, Title 29 of the CFR 1910.120 and CCR Title 8, Section 5192, and all applicable federal, state, and local regulations and agency ordinances related to the proposed management, transport, and disposal of contaminated media during the implementation of work and field

activities. The plan shall be signed and sealed by a Certified Industrial Hygienist licensed by the American Board of Industrial Hygiene. The DTSC or another applicable regulator, included as a requirement of construction/in construction documents, shall enforce the plan.

iii. The Proposed Project will require a Butte County encroachment permit to mitigate the adverse effect on emergency services. The standard Butte County encroachment permit requires that "at least one lane of any public road…shall be kept open for travel by the general public at all times." Skyway consists of four lanes of traffic, two in each direction. Therefore, the Proposed Project will require a Town of Paradise encroachment permit for work within the Town limits. **In addition, the Proposed Project will be held accountable to the Butte County Local Hazard Mitigation Plan Update and policies included in the Butte County General Plan and the Town's draft Safety Element (1994) and Hazardous Waste Management Element (1994)**. Further, to minimize the potential for impeding emergency response vehicles at any time during construction, the Proposed Project will only close one lane of traffic at any given time. A two-lane closure might be required only for short instances for the relocation of large equipment, which will be a requirement stated in the construction documents issued by the Town. Therefore, the three lanes of Skyway will always remain open.

iv. To implement a rapid demobilization plan, the Proposed Project **will be held accountable to the Butte County Local Hazard Mitigation Plan Update and policies included in the Butte County General Plan and the Town's draft Safety Element (1994) and Hazardous Waste Management Element (1994)**. Further, the contractor will be required to prepare a rapid demobilization plan covering the one Skyway Lane it occupies in the construction documents issued by the Town. Demobilization would require the contractor to cover any open trench with metal plates sufficiently strong to carry vehicle traffic, patch cut pavement, remove traffic barrier rails (if used), and move construction equipment completely clear of the road. During fire season, the contractor will be required to have sufficient metal plating on-site to immediately cover any open trench. Conversely, the length of open trenching will be limited to the amount of metal plating on-site. The contractor will also need sufficient cold-mix asphalt on site to temporarily patch any cut road surface. The plan will be reviewed and approved by the Public Works Director and enforced by the Town.

v. **The Proposed Project will be held accountable to the Butte County Local Hazard Mitigation Plan Update and policies included in the Butte County General Plan and the Town's draft Safety Element (1994) and Hazardous Waste Management Element (1994).** Further, to minimize the potential for

impeding emergency response vehicles and at the direction of the Town during an evacuation, the contractor will be required to demobilize off of Skyway (Hazard Mitigation, Section (iv)), leaving all four lanes clear for the public traffic and emergency crews within four hours if no traffic barrier rails are being used and within eight hours if traffic barrier rails are being used. Again, other than short instances where a two-lane closure might be required to relocate large equipment, three of the four lanes of Skyway will be continuously open during construction.

vi. During the final design, the Town will require that the engineering designer prepare a Traffic Management Plan that complies with Section 110.7 Traffic Control Plans of the Highway Design Manual (Caltrans 2020), which will be included in the construction documents and implemented by the construction contractor. The designer will submit the plan to the Town of Paradise, Butte County, and the City of Chico's transportation and engineering departments for review and approval before it is included in the construction documents. The plan will be prepared following professional engineering standards and will consist of, but not be limited to, the following requirements:

a) Schedule truck trips outside of peak traffic hours when feasible.

b) Store all equipment and materials in designated staging areas.

c) Use signage to guide vehicles, bicyclists, and pedestrians through and/or around the construction areas.

d) Install traffic control devices where traffic conditions warrant.

e) Provide safe detours to reroute vehicle, bicycle, and pedestrian traffic.

f) Encourage construction crews to park at staging areas to limit lane closures in the public right-of-way.

g) Consult with Butte Regional Transit before construction to coordinate bus stop relocations (as necessary).

h) Coordinate all construction activities with the emergency service providers in the area.

i) Stop all construction work during any period declared as a Red Flag Warning. The National Weather Service issues a Red Flag Warning for weather events that may produce an increased risk of fire danger.

j) Post notices and/or appropriate signage to notify the public of upcoming construction activities, including exact location, schedule, and duration. This will include alternative access routes

if a short-term full-lane closure will be required to transport equipment.

k) The Town of Paradise will enforce the Traffic Management Plan.

vii. The project should incorporate fire prevention measures that require construction crews and equipment to avoid circumstances that could cause wildfire and that crews and staff have access to fire-prevention equipment onsite. Specific fire prevention measures include: fire extinguishers or other approved fire suppressants be available at all times, proper storage of flammable materials, safe cutting and welding practices, proper installation of temporary electrical equipment, and use of dust-collecting apparatus on power equipment.

viii. The Town and construction contractor must ensure that the public will receive adequate warning of construction activities and any dangerous conditions that might result from the use of fences, barriers, lights, flagging, guards, and signs. This will be incorporated into the Traffic Management Plan.

ix. The construction Contractor will be advised before construction activities that the Town of Paradise is in a Wildland Fire Area and that fire hazard is EXTREME during the summer months.

2. **Findings.** The Town Council finds that:

i. The measures recommended in the EIR as outlined above to mitigate the potential adverse effects of the construction to the public or the environment through hazardous materials, interference with the emergency response or evacuation plan, and exposure of people or structures to wildland fires have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

ii. These measures will mitigate the impact of the transport, use, or disposal of hazardous materials, interference with an emergency response or evacuation plan, and exposure to wildland fires to less than significant level through the implementation of mitigation plans set out above before and during construction activities and in the event of an emergency requiring evacuation.

Mitigation of Hydrology and Water Quality Impacts

1. **Facts.**. According to the EIR, the project construction could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The project could also substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces. The alteration would result in a substantial erosion or siltation on or off-site, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. In flood hazard, tsunami or seiche zones risk the release of pollutants due to the project inundation. The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

   However, this impact can be mitigated to a less than significant level if the project contractor prepares and implements flood protection, stormwater management and treatment plan. These mitigation measures include:

   i. The Town will require and enforce, through encroachment permit conditions and construction documents, that all vehicle traffic associated with Proposed Project-related activities will be confined to established roads, staging areas, and parking areas during construction. Additionally, maintenance or refueling of vehicles or equipment must occur in designated areas and/or secondary containment away from waterbodies.

   ii. The Town will require in the construction agreement that the contractor prepare and implement a Proposed Project-specific Stormwater Management and Treatment Plan that addresses construction-related activities. The plan will include all the SWPPP and Small MS4 permits, as well as the Construction Best Management Practices (explained below).

   iii. Prior to initiation of ground- disturbing activities within 250 feet of vernal pools or 100 feet of other aquatic resources, construction Best Management Practices ("BMPs") will be employed on-site to prevent degradation to on-site and off-site aquatic resources. Methods will include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs will be in place prior to initiation of any construction activities and will remain until construction activities are completed. All erosion control methods will be maintained until all on-site soils are stabilized.

   iv. Before construction, and as part of the specifications for the project included within the contractor agreement, the Town will require that its contractor prepare an Inadvertent Release Plan to address the inadvertent loss of inert

drilling fluids in the event of a frac-out during HDD for each waterbody crossing. This plan will include Best Management Practices, monitoring, and contingency procedures. It will be developed, approved by a qualified biologist hired by the Town, and implemented by the contractor during construction to avoid or counteract potential impacts on water quality, fish, or other aquatic wildlife resulting from turbidity changes from the fluids.

v. Before construction, the Town will require the contractor to prepare and implement a Flood Protection Plan for the Proposed Project. The Flood Protection Plan must include evacuation routes in the event of a flood and will consist of the implementation of temporary flood barriers, such as sandbags, berms, or portable fence systems, to be set up around the perimeter of the construction work area in high flood hazard areas, as discussed in Section 3.10.1.5, Tsunami, Seiche and Flood Hazards.

2. **Findings.** The Town Council finds that:

   i. The measures recommended in the EIR as outlined above to mitigate the potential alteration of drainage patterns, violation of any water quality standards, waste discharge requirements, or otherwise substantially degrade surface or ground water quality which could result in a substantial erosion or siltation on or off-site have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

   ii. These measures will mitigate the impact of construction activities that could alter existing drainage patterns, including the alteration of the course of a stream or river, risk of floods, and conflict with water quality control plans to less than significant levels through the implementation of Flood Protection, Stormwater Management, and Treatment Plans set out above before construction activities.

Mitigation of Noise Impacts

1. **Facts.** According to the EIR, the project construction could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project above the standards established in the local general plan, noise ordinance, or applicable standards of other agencies, and an excessive ground-borne vibration or ground-borne noise levels. However, these impacts can be mitigated to a less than significant level if the Town and contractor minimize construction noise.

   Before construction, the Town will incorporate the following measures into all construction plans and agreements to reduce noise levels during construction:

a) Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

b) Locate stationary noise-generating equipment as far as possible from noise-sensitive receptors.

c) Use quiet air compressors and other stationary noise-generating equipment where appropriate technology exists and is feasible.

d) Maintain and tune all equipment following the manufacturer's recommendations to minimize noise emission.

e) Install temporary construction-site sound barriers near noise sources.

f) Prohibit unnecessary idling of internal combustion engines.

g) Limit the use of public address systems.

h) Post construction dates and times, as well as the designated representative's name and phone number to be contacted for noise-related concerns at the perimeter of the construction site.

i) Comply with county, city and/or town noise policies applicable to the location's jurisdiction.

2. **Findings.** The Town Council finds that:

i. The mitigation measures recommended in the EIR outlined above to mitigate the noise levels from construction activities have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

ii. These measures will mitigate the impact of a substantial increase in the Project vicinity's noise levels and potential excessive ground-borne vibrations to a less than significant level.

Mitigation of Public Services Impacts

1. **Facts.** According to the EIR, project construction could result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Fire and Police protection, schools, and other public facilities.

However, these impacts can be mitigated to a less than significant when the Town implements and requires contractors to incorporate the Traffic Management Plan explained below:

During the final design, the Town will require that the engineering designer prepare a Traffic Management Plan that complies with Section 110.7 Traffic Control Plans of the Highway Design Manual (Caltrans 2020), which will be included in the construction documents and implemented by the construction contractor. The designer will submit the plan to the Town of Paradise, Butte County, and the City of Chico's transportation and engineering departments for review and approval before it is included in the construction documents. The plan will be prepared following professional engineering standards and will consist of, but not be limited to, the following requirements:

a) Schedule truck trips outside of peak traffic hours when feasible. Store all equipment and materials in designated staging areas.

b) Use signage to guide vehicles, bicyclists, and pedestrians through and/or around the construction areas.

c) Install traffic control devices where traffic conditions warrant.

d) Provide safe detours to reroute vehicle, bicycle, and pedestrian traffic.

e) Encourage construction crews to park at staging areas to limit lane closures in the public right-of-way.

f) Consult with Butte Regional Transit before construction to coordinate bus stop relocations (as necessary).

g) Coordinate all construction activities with the emergency service providers in the area.

h) Stop all construction work during any period declared as a Red Flag Warning. The National Weather Service issues a Red Flag Warning for weather events that may produce an increased risk of fire danger.

i) Post notices and/or appropriate signage to notify the public of upcoming construction activities, including exact location, schedule, and duration. This will include alternative access routes if a short-term full-lane closure will be required to transport equipment.

j) The Town of Paradise will enforce the Traffic Management Plan.

2. **Findings**. The Town Council Finds that:

   i. The mitigation measures recommended in the EIR stated above to mitigate the potential adverse effects on public or government facilities and performance have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

   ii. These measures will mitigate the impact of construction-related activities to a less than significant level through the implementation of the Traffic Management Plan enforced by the Town.

Mitigation of Transportation Impacts

1. **Facts**. According to the EIR, the project construction could result in a conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. In addition, the project may result in inadequate emergency access. However, these impacts can be mitigated to a less than significant when the Town implements and requires contractors to incorporate the Traffic Management Plan explained below:

   During the final design, the Town will require that the engineering designer prepare a Traffic Management Plan that complies with Section 110.7 Traffic Control Plans of the Highway Design Manual (Caltrans 2020), which will be included in the construction documents and implemented by the construction contractor. The designer will submit the plan to the Town of Paradise, Butte County, and the City of Chico's transportation and engineering departments for review and approval before it is included in the construction documents. The plan will be prepared following professional engineering standards and will consist of, but not be limited to, the following requirements:

   a) Schedule truck trips outside of peak traffic hours when feasible. Store all equipment and materials in designated staging areas.
   b) Use signage to guide vehicles, bicyclists, and pedestrians through and/or around the construction areas.
   c) Install traffic control devices where traffic conditions warrant.
   d) Provide safe detours to reroute vehicle, bicycle, and pedestrian traffic.
   e) Encourage construction crews to park at staging areas to limit lane closures in the public right-of-way.

f) Consult with Butte Regional Transit before construction to coordinate bus stop relocations (as necessary).

g) Coordinate all construction activities with the emergency service providers in the area.

h) Stop all construction work during any period declared as a Red Flag Warning. The National Weather Service issues a Red Flag Warning for weather events that may produce an increased risk of fire danger.

i) Post notices and/or appropriate signage to notify the public of upcoming construction activities, including exact location, schedule, and duration. This will include alternative access routes if a short-term full-lane closure will be required to transport equipment.

j) The Town of Paradise will enforce the Traffic Management Plan.

2. **Findings**. The Town Council Finds that:

i. The mitigation measures recommended in the EIR stated above to mitigate the potential conflict with program, ordinance, or policy addressing transit systems and adverse effects on emergency access have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

ii. These measures will mitigate the impact of construction-related activities to a less than significant level through the implementation of the Traffic Management Plan enforced by the Town.

Mitigation of Tribal Cultural Resources Impacts

1. **Facts** According to the EIR, the project construction could cause a substantial adverse change in the significance of tribal cultural resources, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape geographically defined in size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources as defined in PRC Section 5020.1(k); or
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant according to the criteria set forth in subdivision (c) of PRC Section 5024.1. In

applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.

However, these impacts can be mitigated to less than significant level when the Town coordinates efforts with the Konkow Valley Band of Maidu, and Mechoopda Indian Tribe explained below:

i. During the final design, the Town will continue to consult and coordinate with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe to identify sensitive areas to be protected during construction work and appropriate methods to protect those areas.

ii. Before construction, the Town will coordinate with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe in identifying a Tribal Cultural Monitor, as deemed necessary by either/both Tribes, to be present during ground disturbance work within areas designated as sensitive for tribal cultural resources.

2. **Findings**. The Town Council Finds that:

i. The mitigation measures recommended in the EIR, as outlined above, to mitigate the potential adverse effect on the significance of trial cultural resources have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

ii. These measures will mitigate the impact of construction-related activities to a less than significant level through the Town's coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe during the final design of the project, before and during construction activities.

Mitigation of Utilities and Service Systems Impacts

1. **Facts.** According to the EIR, the project construction could require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities which could result in significant environmental effects. However, these impacts can be mitigated to less than significant when the Town prepares and implement a Utility conflict and coordination plan.

   During the final design, to minimize disruptions to utility services, the Town will prepare a Utility Conflict and Coordination Plan that identifies outages that could affect residents and businesses, including fiber-optic/communications, water, power, and gas. As part of that plan, the public and stakeholders will be notified

by signage and on the Town's website of any potential service interruptions at least two weeks before construction work.

2. **Findings**. The Town Council Finds that:

   i. As stated above, the mitigation measures recommended in the EIR to mitigate the potential adverse effect on the environment through the relocation or construction of utilities and service systems have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

   ii. These measures will mitigate the impact of construction-related activities to a less than significant level through the Town's preparation and implementation of a utility coordination plan during the final project's final design.

Mitigation of Wildfire Impacts

1. **Facts**. According to the EIR, the project construction could substantially impair an adopted emergency response or evacuation plan and exacerbate wildfire risks due to slopes, prevailing winds, and other factors, thereby exposing project occupants to pollutant concentrations from or the uncontrolled spread of a wildfire. In addition, the project may require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or result in temporary or ongoing impacts on the environment. This could also expose people or structures to significant risks, including downslope or downstream flooding or landslides resulting from runoff, post-fire slope instability, or drainage changes.

   As explained in the MMRP, mitigation measures include:

   i. The Proposed Project will require a Butte County encroachment permit to mitigate the adverse effect on emergency services. The standard Butte County encroachment permit requires that "at least one lane of any public road…shall be kept open for travel by the general public at all times." Skyway consists of four lanes of traffic, two in each direction. Therefore, the Proposed Project will require a Town of Paradise encroachment permit for work within the Town limits. In addition, the Proposed Project will be held accountable to the Butte County Local Hazard Mitigation Plan Update and policies included in the Butte County General Plan and the Town's draft Safety Element (1994) and Hazardous Waste Management Element (1994). Further, to minimize the potential for impeding emergency response vehicles at any time during construction, the Proposed Project will only close one lane of traffic at any given time. A two-lane closure might

be required only for short instances for the relocation of large equipment, which will be a requirement stated in the construction documents issued by the Town. Therefore, the three lanes of Skyway will always remain open.

ii. To implement a rapid demobilization plan, the Proposed Project will be held accountable to the Butte County Local Hazard Mitigation Plan Update and policies included in the Butte County General Plan and the Town's draft Safety Element (1994) and Hazardous Waste Management Element (1994). Further, the contractor will be required to prepare a rapid demobilization plan covering the one Skyway Lane it occupies in the construction documents issued by the Town. Demobilization would require the contractor to cover any open trench with metal plates sufficiently strong to carry vehicle traffic, patch cut pavement, remove traffic barrier rails (if used), and move construction equipment completely clear of the road. During fire season, the contractor will be required to have sufficient metal plating on-site to immediately cover any open trench. Conversely, the length of open trenching will be limited to the amount of metal plating on-site. The contractor will also need sufficient cold-mix asphalt on site to temporarily patch any cut road surface. The plan will be reviewed and approved by the Public Works Director and enforced by the Town.

iii. The Proposed Project will be held accountable to the Butte County Local Hazard Mitigation Plan Update and policies included in the Butte County General Plan and the Town's draft Safety Element (1994) and Hazardous Waste Management Element (1994). Further, to minimize the potential for impeding emergency response vehicles and at the direction of the Town during an evacuation, the contractor will be required to demobilize off Skyway (Hazard Mitigation, Section (iv)), leaving all four lanes clear for the public traffic and emergency crews within four hours if no traffic barrier rails are being used and within eight hours if traffic barrier rails are being used. Again, other than short instances where a two-lane closure might be required to relocate large equipment, three of the four lanes of Skyway will be continuously open during construction.

iv. During the final design, the Town will require that the engineering designer prepare a Traffic Management Plan that complies with Section 110.7 Traffic Control Plans of the Highway Design Manual (Caltrans 2020), which will be included in the construction documents and implemented by the construction contractor. The designer will submit the plan to the Town of Paradise, Butte County, and the City of Chico's transportation and engineering departments for review and approval before it is included in the construction documents. The plan will be prepared following professional engineering standards and will consist of, but not be limited to, the following requirements:

l) Schedule truck trips outside of peak traffic hours when feasible.

m) Store all equipment and materials in designated staging areas.

n) Use signage to guide vehicles, bicyclists, and pedestrians through and/or around the construction areas.

o) Install traffic control devices where traffic conditions warrant.

p) Provide safe detours to reroute vehicle, bicycle, and pedestrian traffic.

q) Encourage construction crews to park at staging areas to limit lane closures in the public right-of-way.

r) Consult with Butte Regional Transit before construction to coordinate bus stop relocations (as necessary).

s) Coordinate all construction activities with the emergency service providers in the area.

t) Stop all construction work during any period declared as a Red Flag Warning. The National Weather Service issues a Red Flag Warning for weather events that may produce an increased risk of fire danger.

u) Post notices and/or appropriate signage to notify the public of upcoming construction activities, including exact location, schedule, and duration. This will include alternative access routes if a short-term full-lane closure will be required to transport equipment.

v) The Town of Paradise will enforce the Traffic Management Plan.

v. The Town will require and enforce, through encroachment permit conditions and construction documents, that all vehicle traffic associated with Proposed Project-related activities will be confined to established roads, staging areas, and parking areas during construction. Additionally, maintenance or refueling of vehicles or equipment must occur in designated areas and/or secondary containment away from waterbodies.

vi. The project should incorporate fire prevention measures that require construction crews and equipment to avoid circumstances that could cause wildfire and that crews and staff have access to fire-prevention equipment onsite. Specific fire prevention measures include: fire extinguishers or other approved fire suppressants be available at all times, proper storage of flammable materials, safe cutting and welding practices, proper installation of temporary electrical equipment, and use of dust-collecting apparatus on power equipment.

vii. The Town and construction contractor must ensure that the public will receive adequate warning of construction activities and any dangerous conditions that might result from the use of fences, barriers, lights, flagging, guards, and signs. This will be incorporated into the Traffic Management Plan.

viii. The construction Contractor will be advised before construction activities that the Town of Paradise is in a Wildland Fire Area and that fire hazard is EXTREME during the summer months.

ix. The Town will require in the construction agreement that the contractor prepare and implement a Proposed Project-specific Stormwater Management and Treatment Plan that addresses construction-related activities. The plan will include all the SWPPP and Small MS4 permits, as well as the Construction Best Management Practices (explained below).

Prior to initiation of ground- disturbing activities within 250 feet of vernal pools or 100 feet of other aquatic resources, construction Best Management Practices ("BMPs") will be employed on-site to prevent degradation to on-site and off-site aquatic resources. Methods will include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs will be in place prior to initiation of any construction activities and will remain until construction activities are completed. All erosion control methods will be maintained until all on-site soils are stabilized.

x. Before construction, the Town will require the contractor to prepare and implement a Flood Protection Plan for the Proposed Project. The Flood Protection Plan must include evacuation routes in the event of a flood and will consist of the implementation of temporary flood barriers, such as sandbags, berms, or portable fence systems, to be set up around the perimeter of the construction work area in high flood hazard areas, as discussed in Section 3.10.1.5, Tsunami, Seiche and Flood Hazards.

xi. To minimize Geologic Hazards, the Town will obtain the services of a qualified, licensed geotechnical engineer before construction to prepare a design-level geotechnical report with specific recommendations to address geologic hazards, seismic safety, and soil conditions during construction. The Town will review the geotechnical report with the geotechnical engineer to develop viable measures that will avoid or minimize risks associated with ground shaking, liquefaction, landslides, unstable soils, and expansive soils during construction. The Town will require contractors to incorporate these measures into all construction plans and specifications.

2. **Findings**. The Town Council Finds that:

   i. As outlined above, the mitigation measures recommended in the EIR to mitigate the potential adverse effect of the Project Construction on an adopted emergency response or evacuation plan and the risks associated with wildfires through the installation or maintenance of associate structures have been adopted as stated in the approval resolution, project development guidelines, and the Monitoring and Reporting Plan.

   ii. These measures will mitigate the impact of construction-related activities on emergency response plans and wildfire risks to a less than significant level.

Paradise Sewer Project

Mitigation, Monitoring and Reporting Program

Paradise, CA

November 4, 2022

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Mitigation Monitoring and Reporting Program

The Town of Paradise, California (Town), is the lead agency for the Paradise Sewer Project under CEQA. The City of Chico (City), Butte Local Agency Formation Commission (Butte LAFCo), Central Valley Regional Water Quality Control Board (RWQCB), Butte County (County), and California Department of Fish and Wildlife (CDFW) are considered Responsible Agencies under CEQA based on their discretionary approval over aspects of the Proposed Project. The Proposed Project would be located in Paradise, Chico and unincorporated areas in Butte County, California.

The Town is proposing to construct, operate, and maintain a new sewer collection system within the Town limits, with an export pipeline from the Town to the Chico Water Pollution Control Plant (WPCP). The Proposed Project would allow for the replacement of individual septic systems within the Town's sewer service area that are managed, owned, and maintained by individual property owners. The abandonment of such individual septic systems is not within the scope of this Program Environmental Impact Report (PEIR). This Proposed Project further includes the provision of wastewater treatment services from the City to the Town, to be approved by Butte LAFCo.

Specifically, the Proposed Project would consist of three primary components. The first two components are analyzed at a project level in the PEIR because sufficient information is available regarding the characteristics, timing, and locations of these proposed facilities. The third component is analyzed at a programmatic level. The three components include the following:

- **Core Collection System:** The Core Collection System would consist of pipelines and 28 small pump stations (also referred to as lift stations) to serve approximately 1,500 individual parcels within the Town's core sewer service area.
- **Export Pipeline System:** The 18-mile Export Pipeline System is proposed to convey wastewater from the Core Collection System to the Chico WPCP.
- **Extended Collection System:** The Extended Collection System would be an extension of the Core Collection System that would allow parcels within the Town limits to connect to the sewer system up to the capacity of the system infrastructure and the Town's allocation within the Chico WPCP capacity.

In order to approve these activities for the construction and operation of the Proposed Project, the Town has completed a PEIR in accordance with the California Environmental Quality Act (CEQA). This environmental review process focuses on the potential impacts caused by the Proposed Project on local resources.

In accordance with Section 21083, Public Resources Code (CEQA Guidelines Section 15097 [a]), "a public agency shall adopt a program for monitoring or reporting on the revisions which it has required and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed, the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program" (CEQA Guidelines Section 15097 (a)).

This Mitigation Monitoring and Reporting Program (MMRP) addresses the requirement. Unless noted otherwise, the Town would be the enforcing entity for all mitigation requirements, including but not limited to contractors, are responsible for implementation. Measures identified as the responsibility of contractors would be included as requirements in Town contracting agreements and construction specs.

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Table 1. Mitigation Monitoring and Reporting Program

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
Biological Resources					
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Plant Species	**MM-BIO-1: Minimize Disturbance Footprint.** During site preparation for any segment of the Core Collection System, Export Pipeline System, or Extended Collection System, ground disturbance and vegetation clearing footprints, including along construction access routes or at temporary work areas, will be reduced to the smallest area feasible. Prior to any ground disturbance, a qualified biologist hired by the Town will identify areas to be avoided during construction activities; these areas will be fenced and/or flagged as close to construction limits as feasible. This mitigation measure is coordinated with **MM-BIO-2** but applies to all biological resources.	Significant Impact	Less-than-Significant Impact	A qualified biologist will identify areas to be avoided during construction activities.	During site preparation, prior to construction.
	MM-BIO-2: Special-status Plant Surveys. Prior to initiating proposed ground disturbance or vegetation clearing, including along construction access routes or at temporary work areas, a qualified botanist will perform focused surveys to determine the presence or absence of special-status plant species with potential to occur in and adjacent to (within a radius of 100 feet, as prescribed by CDFW) proposed disturbance areas. These surveys will be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018a), which requires rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Surveys will be scheduled to coincide with known flowering periods, and/or during appropriate developmental periods that are necessary to identify the plant species of concern. If special-status plants are identified during surveys, then **MM-BIO-3** will be implemented.			A qualified botanist will perform focused surveys to determine the presence or absence of special-status plant species with potential to occur in and adjacent to proposed disturbance areas. These surveys will be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities/Town, CDFW	Prior to ground disturbance or vegetation clearing.
	MM-BIO-3: Special-status Plant Avoidance. If any special-status plant species are found within 100 feet of ground disturbance or vegetation clearing areas, including construction access routes or temporary work areas, during **MM-BIO-2,** the following will be implemented: • Any special-status plant species that are identified within 100 feet of proposed ground disturbance or vegetation clearing areas, including construction access routes or temporary work areas, but are not proposed to be disturbed (that is, the area doesn't need to be cleared for construction), will be protected by flagging, signage, orange plastic fence, and/or silt fence, as appropriate based on site conditions, to limit the effects of activities and material stockpiles on special-status plant species. • If activities could result in the loss of greater than 10 percent of a population identified during surveys or occupied habitat for a special-status plant species, a mitigation plan will be developed and implemented by a qualified biologist for the Town that will include a program to transplant, salvage, cultivate, and reestablish the species at suitable sites (if feasible); means and methods to propagate affected special-status plants through vegetative or reproductive means (for example, harvesting of seed or seed bank through topsoil collection, salvaging and transplanting or collecting of cuttings), as appropriate for the species, and transplant at suitable receiving sites as close to the existing population as possible. The plan will be approved by CDFW and any other agencies with jurisdiction over the species found to be present prior to implementation of the plan and before initiation of any construction related activities. Propagation and transplantation will occur prior to initiation of the activity. The receiving location will be evaluated and chosen based on similarity to conditions at the transplant source location. Site conditions to consider when choosing a receiving site will include aspect, substrate, hydrology, associated species, and canopy cover. The transplanted plants will be monitored by a qualified biologist for the Town for at least 1 year following transplantation. As part of the mitigation plan, a monitoring plan will be developed and approved by CDFW with propagation goals tailored to the species that are being transplanted. If propagation goals are not met after 1 year following transplantation, then adaptive management strategies will be developed in coordination with CDFW to achieve those goals. • The actual level of mitigation may vary depending on the sensitivity of the species, its prevalence in the area, the location of the occurrence, and the current state of knowledge about overall population trends and threats to its survival; however, at a minimum, the species and habitat will be replaced at a 1:1 ratio (individuals or acreage of occupied habitat). Ratios will be developed in coordination with and approved by CDFW.			A mitigation plan will be developed and implemented by a qualified biologist for the Town or designated Contractor. The plan will be approved by CDFW and any other agencies with jurisdiction over the species found to be present prior to implementation of the plan and before initiation of any construction related activities. As part of the mitigation plan, a monitoring plan will be developed and approved by CDFW. If propagation goals are not met after 1 year following transplantation, then adaptive management strategies will be developed in coordination with CDFW to achieve those goals/CDFW and other jurisdictional agencies./Town, CDFW	Prior to ground disturbance or vegetation clearing; during construction activities; and after 1 year of initiation of a mitigation plan.

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
	MM-BIO-4: Biological Monitoring and Worker Environmental Awareness Training. A qualified biologist will monitor construction activities that could potentially cause significant impacts on sensitive biological resources. The amount and duration of monitoring will depend on the activity and will be determined by a qualified biologist for the Town. Monitoring will be required at any location where special status species have been identified within 100 feet of vegetation clearing area. In addition, a qualified biologist will be retained by the Town to conduct mandatory contractor/worker awareness training for construction personnel to brief them on the identified location of sensitive biological resources, including how to identify species (visual and auditory) most likely to be present, the need to avoid impacts on biological resources (e.g., plants, wildlife, and jurisdictional waters), and on the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the Project, the contractor will ensure that they receive the mandatory training before starting work. This mandatory training will be included in all contractor construction specs and required by contract. This measure will apply to any biological resources for which complete avoidance cannot be attained through **MM-BIO-1** or resource-specific measures.			A qualified biologist will monitor construction activities that could potentially cause significant impacts on sensitive biological resources. A qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. If new construction personnel are added to the Project, the Contractor will ensure that they receive the mandatory training before starting work.	During construction activities.
	MM-BIO-5: Restoration of Temporarily Disturbed Areas and Invasive Weed Control. Following construction of the Core Collection System, Export Pipeline System, or Extended Collection System, all exposed and/or disturbed areas resulting from ground disturbing activities, including construction access routes or temporary work areas, will be returned to their original contour and grade, and restored using locally native grass and forb seeds, plugs, or a mix of the two. Areas will be seeded with species appropriate to their topographical and hydrological character and covered with broadcast straw and/or jute netted, as appropriate for specific habitat type. For example, temporarily disturbed wetlands will be seeded with native hydrophytic species typical to the region, whereas upland areas will be seeded with an upland grass and forb mix. Several invasive and noxious weed species are known to occur in the study area, and 27 plant species classified by the California Invasive Plant Council as invasive were identified in the study area during field studies (Appendix G). In order to avoid the spread of invasive plant species in the study area, native species will be used for reseeding, and the Proposed Project will not allow any use of species listed as noxious weeds. Further, precautions will be taken to avoid the spread of invasive plant species. These include the inspection and cleaning of construction equipment and implementation of CDFW-approved eradication strategies should an invasion occur. This measure is focused on habitat, but applies to all biological resources (e.g., special status species dependent on specific habitat).			The construction contractor will be responsible for implementation.	Post-construction.
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Vernal Pool Crustaceans	MM-BIO-1: Minimize Disturbance Footprint. See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-6: No Net Loss of Aquatic Resources. No net loss of aquatic resources would be achieved through impact avoidance, minimization, which are both covered under MM-BIO-1 through MM-BIO-4, and/or compensatory mitigation. Mitigation for permanent impacts on aquatic resources will be provided at a minimum 1:1 ratio. Mitigation will be achieved through onsite restoration, in-lieu fee payment, or purchase of mitigation credits at a USACE-, USFWS-, and/or CDFW-approved mitigation bank at the expense of the Town. Mitigation, as required in regulatory permits issued through CDFW, USACE, USFWS, and/or the RWQCB will be applied to satisfy this measure.			Mitigation will be achieved through onsite restoration, in-lieu fee payment, or purchase of mitigation credits at a USACE-, USFWS-, and/or CDFW-approved mitigation bank at the expense of the Town. Mitigation, as required in regulatory permits issued through CDFW, USACE, USFWS, and/or the RWQCB will be applied to satisfy this measure./Town, CDFW, USACE, USFWS, RWQCB	During construction activities and post-construction.
	MM-BIO-7: Sensitive Community Fencing. If sensitive communities occur within 100 feet (250 feet for vernal pools as mandated by USFWS) of proposed ground disturbing activities, including construction access routes and temporary work areas, with no pre-existing barrier between them and the proposed ground disturbance, protective fencing, such as silt fencing, will be installed between habitats that are to be avoided and the construction limits to prevent accidental disturbance and to protect water quality during construction.			The construction contractor will be responsible for implementation of this mitigation in accordance with USFWS standards.	Prior to construction activities.
	MM-BIO-8: Dry Work Areas. Ground disturbing activities within 100 feet (250 feet for vernal pools) of aquatic resources will coincide with the driest time of year and will avoid occurring within 72 hours (before or after) a rain event, if feasible.			The construction contractor will be responsible for implementation of this mitigation.	At the driest time of year and will avoid occurring within 72 hours (before or after) a rain event, if feasible.

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Valley Elderberry Longhorn Beetle	**MM-BIO-1. Minimize Disturbance Footprint.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-9: Mapping of Elderberry Shrubs and USFWS Section 7 Consultation. If Proposed Project impacts, including along construction access routes and temporary work areas, are to take place within 165 feet of a riparian corridor where elderberry shrubs are known to be present, then a full inventory of elderberry shrubs within 165 feet of the proposed disturbance, including an assessment of whether valley elderberry longhorn beetle exit holes are present, will be conducted pursuant to the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle*. Based on the inventory findings, the Town and USFWS will coordinate to determine whether formal consultation is required for the Project. If formal consultation is deemed required, results of the inventory will be submitted by the Town in a Biological Assessment to USFWS. USFWS will review proposed findings and mitigation, and respond in a Biological Opinion, which will finalize elderberry mitigation that will be required of the Town for the Proposed Project.			An inventory of elderberry shrubs will be conducted by a qualified biologist. The Town and USFWS will coordinate to determine whether formal consultation is required for the Project. If formal consultation is deemed required, results of the inventory will be submitted by the Town in a Biological Assessment to USFWS. USFWS will review proposed findings and mitigation, and respond in a Biological Opinion, which will finalize elderberry mitigation that will be required of the Town for the Proposed Project./Town, USFWS	Prior to ground disturbance and vegetation clearing.
	MM-BIO-10: No Net Loss of Elderberry Shrubs. Elderberry shrubs that would be directly impacted by the Proposed Project will be transplanted to a new suitable location. In addition, two credits would be purchased at a USFWS-approved bank for each shrub (2:1 ratio). Mitigation as required in regulatory permits issued through USFWS may be applied to satisfy this measure.			A qualified will be on site for the duration of transplanting activities The Town will obtain regulatory permits issued through USFWS./Town, USFWS	Prior to ground disturbance and vegetation clearing.
	MM-BIO-11: Elderberry Transplanting. Elderberry shrubs would be transplanted outside the flight season of the valley elderberry longhorn beetle (March to July) and follow the most current version of the American National Standards Institute A300 (Part 6) guidelines for transplanting (http://www.tcia.org/). Exit-hole surveys would be completed immediately before transplanting. The number of exit holes found, GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted would be reported to USFWS. A qualified biologist hired by the Town will be on site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures and other conservation measures. The transplanted shrubs will be monitored by a qualified biologist during one growth season following transplant to confirm shrub survival. If the shrub(s) are deemed alive, no further monitoring or action would be necessary. If the shrub(s) are deemed dead, an additional one credit per shrub would be purchased by the Town from a USFWS-approved bank for valley elderberry longhorn beetle.			A qualified biologist will be on site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures and other conservation measures. The transplanted shrubs will be monitored by a qualified biologist during one growth season following transplant to confirm shrub survival./Town, USFWS	Elderberry shrubs would be transplanted outside the flight season of the valley elderberry longhorn beetle (March to July).
	MM-BIO-12: MM-BIO-12: Avoidance Areas. Activities that may indirectly damage or kill an elderberry shrub (trenching, paving, etc.) will require an avoidance area of at least 20 feet from a shrub's drip line, as appropriate, depending on the type of activity. All activities that could occur within 165 feet of an elderberry shrub will also be conducted outside of the flight season of the valley elderberry longhorn beetle (March to July).			The construction contractor will be responsible for implementation of this mitigation.	All activities that could occur within 165 feet of an elderberry shrub will also be conducted outside of the flight season of the valley elderberry longhorn beetle (March to July).
	MM-BIO-13: Chemical Use. Herbicides will not be used within the drip line of the shrub. Insecticides will not be used within 98 feet (30 meters, as required by USFWS) of an elderberry shrub. If deemed necessary, all chemicals will be applied using a backpack sprayer or similar direct application method.			The construction contractor will be responsible for implementation of this mitigation.	Prior to and during construction.
	MM-BIO-14: Mowing. Mechanical weed removal within the drip line of the shrub would be limited to the season when adult- valley elderberry longhorn beetles are not active (August to February) and will be completed so as to not damage an elderberry shrub.			The construction contractor will be responsible for the implementation of this mitigation.	Implementation of this mitigation will be limited to the season when adult- valley elderberry longhorn beetles are not active (August to February).
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Fishes	**MM-BIO-15: Frac-Out-Plan**. Prior to construction, and as part of the specifications for the project included within the contractor agreement, the Town will require that its contractor prepare an Inadvertent Release Plan to address inadvertent loss of inert drilling fluids in the event of a frac-out during HDD for each waterbody crossing. This plan will include Best Management Practices, monitoring, and contingency procedures, and will be developed, approved by a qualified biologist hired by the Town, and implemented by the contractor during construction to avoid or counteract potential impacts on water quality, fish, or other aquatic wildlife resulting from turbidity changes from the fluids.	Significant Impact	Less-than-Significant Impact	The Town will require that its contractor prepare an Inadvertent Release Plan to address inadvertent loss of inert drilling fluids in the event of a frac-out during HDD for each waterbody crossing./Town, RWQCB, CDFW, USFWS	Prior to construction.

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Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-status Amphibians and Reptiles	**MM-BIO-1: Minimize Disturbance Footprint.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-6: No Net Loss of Aquatic Resources. See description above.			See description above.	See description above.
	MM-BIO-7: Sensitive Community Fencing. See description above.			See description above.	See description above.
	MM-BIO-8: Dry Work Areas. See description above.			See description above.	See description above.
	MM-BIO-16: Western Pond Turtle Visual Encounter Surveys. A preconstruction survey for western pond turtle would be conducted by a qualified biologist within 24 hours prior to the onset of any ground disturbing activities that would occur within 350 feet of the Ordinary High Water Mark (OHWM) of a creek or stream. If juvenile or adult turtles are found within the survey area, they would be moved by a qualified and CDFW-permitted biologist hired by the Town at least 500 feet away from the proposed disturbance area to a location with similar habitat. If a turtle nest is found within the survey area, construction activities would not take place within 100 feet of the nest until the turtles have hatched or the eggs have been moved to an appropriate location. Any egg relocation would be conducted by a qualified and CDFW-permitted biologist in coordination with CDFW.			A preconstruction survey for western pond turtle would be conducted by a qualified biologist./Town, CDFW	Within 24 hours prior to the onset of any ground disturbing activities that would occur within 350 feet of the Ordinary High Water Mark (OHWM) of a creek or stream.
	MM-BIO-17: Foothill Yellow-legged Frog Surveys. Within 3-5 days prior to working within 300 feet radius of the OHWM of a creek or stream within the foothill yellow-legged frog range, per CDFW guidelines, a qualified and CDFW-permitted biologist will survey the Proposed Project site for foothill yellow-legged frogs (adults, subadults, tadpoles or egg masses), including construction access routes and at least 500 feet upstream and downstream (CDFW 2018b). Although unlikely, if the Project activities are expected to result in effects extending beyond 500 feet downstream (e.g., heavy sedimentation that could bury egg masses or tadpole rearing sites), the survey area will be expanded to encompass the expected affected area. If surface water is present during the work period, a qualified biologist hired by the Town will inspect the work area daily for foothill yellow-legged frogs before work begins and during construction.			A qualified and CDFW-permitted biologist will survey the Proposed Project site for foothill yellow-legged frogs. If surface water is present during the work period, a qualified biologist hired by the Town will inspect the work area daily for foothill yellow-legged frogs before work begins and during construction./Town, CDFW	Within 3-5 days prior to working within 300 feet radius of the OHWM of a creek or stream within the foothill yellow-legged frog range. If surface water is present during the work period, a qualified biologist hired by the Town will inspect the work area daily for foothill yellow-legged frogs before work begins and during construction.
	MM-BIO-18: California Red-legged Frog Surveys. Within 3-5 days prior to working within 300 feet of the OHWM of a creek or within 300 feet of fresh emergent wetland habitat, a qualified and CDFW-permitted biologist will conduct a visual encounter survey of the Proposed Project site for California red-legged frogs (adults, subadults, tadpoles or egg masses).			A qualified and CDFW-permitted biologist will conduct a visual encounter survey of the Proposed Project site for California red-legged frogs./Town, CDFW	Within 3-5 days prior to working within 300 feet of the OHWM of a creek or within 300 feet of fresh emergent wetland habitat.
	MM-BIO-19: Conduct Construction Activities during the Active Period for Giant Garter Snakes. During biological monitoring (MM-BIO-4), the biologist will identify any suitable aquatic or upland habitat that may be used by giant garter snake within or adjacent to areas where ground disturbing and vegetation clearing activities would occur. All construction activity within 200 feet of suitable giant garter snake aquatic (generally defined as sloughs, irrigation ditches, creeks or slow-moving streams) or upland habitat (defined as grasslands or disturbed areas within 200 feet of an aquatic feature suitable for a giant garter snake) will be conducted during the snake's active period (May 1 through October 1) in order to minimize the risk that the snakes will be underground and more susceptible to injury or death from ground disturbing activities.			A qualified biologist will be responsible for identifying any suitable aquatic or upland habitat that may be used by giant garter snake./Town, CDFW	During biological monitoring, prior to ground disturbance and vegetation clearing. All construction activity within 200 feet of suitable giant garter snake aquatic will be conducted during the snake's active period (May 1 through October 1)
	MM-BIO-20: Minimize Potential Effects on Giant Garter Snake Habitat. Staging areas will be located more than 200 feet from any suitable giant garter snake aquatic or upland habitat as identified during monitoring by the biologist, or the area will be fenced with exclusion fencing prior to the start of construction. Vegetation clearing within 200 feet of the banks of suitable giant garter snake aquatic habitat will be limited to the minimum area necessary. The movement of heavy equipment within 200 feet of the banks of suitable giant garter snake aquatic habitat will be confined to designated haul routes to minimize habitat disturbance.			Monitoring will be performed by a qualified biologist. The construction contractor will be responsible for implementation of the mitigation.	Prior to construction, during biological monitoring.

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Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: MBTA and FGC-Protected Birds and Raptors	**MM-BIO-1: Minimize Disturbance Footprint.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-21: MBTA- and FGC-Protected Bird and Raptor Surveys. To the extent feasible, tree and vegetation clearing will be conducted outside the migratory bird nesting season (March 1 through August 31) in areas where the Town's biologist identifies potential nesting trees. However, if clearing and/or construction activities need to occur during the migratory bird nesting season in these locations, then preconstruction surveys to identify active migratory bird and/or raptor nests would be conducted by a qualified biologist within 14 calendar days prior to construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence or absence of active nest sites within the proposed impact area, including construction access routes with a 500-foot buffer, where feasible.			The Town's biologist would be responsible for surveys and identifying potential nesting trees./Town, CDFW	To the extent feasible, tree and vegetation clearing will be conducted outside the migratory bird nesting season (March 1 through August 31). However, if clearing and/or construction activities need to occur during the migratory bird nesting season in these locations, then preconstruction surveys to identify active migratory bird and/or raptor nests would be conducted by a qualified biologist within 14 calendar days prior to construction initiation.
	MM-BIO-22: Protocol Swainson's Hawk Surveys. In the year that construction of the Proposed Project is planned to be initiated, a qualified biologist will conduct protocol surveys for Swainson's hawk in and within 0.5-mile of all suitable habitat for the species in the Proposed Project footprint. These surveys will follow the protocol outlined in the Swainson's Hawk Technical Advisory Committee's *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (CDFW 2000). If any active Swainson's hawk nests are found, the biologist will determine an appropriately sized buffer around the nest in which construction activities will not be allowed to commence until which time the nest has been determined by the biologist to have reached the end of its cycle (fledged or failed). The size of the buffer will initially be 0.25-mile per CDFW standard requirements but may be reduced in certain circumstances based on the opinion of the biologist regarding observed sensitivity of the hawks to disturbance, visual screens between the nest and disturbance, and other factors.			A qualified biologist will conduct protocol surveys for Swainson's hawk./Town, CDFW	In the year that construction of the Proposed Project is planned to be initiated.
	MM-BIO-23: Nest Avoidance. If active nests of any MBTA- and FGC-protected bird species are identified within the survey areas, a no-disturbance buffer would be established for all active nest sites prior to commencement of any Proposed Project construction activities to avoid construction or access-related disturbances to migratory bird nesting activities. A no disturbance buffer is a zone in which Proposed Project-related activities (that is, vegetation removal, earth moving, noise generation, and construction) cannot occur. The size of the no disturbance buffers would be determined by a qualified biologist based on the species, activities proposed near the nest, and topographic and other visual barriers.			The construction contractor will be responsible for implementation of the mitigation. The size of the no disturbance buffers would be determined by a qualified biologist./Town, CDFW	Prior to construction activities.

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Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: Special-Status Bats	**MM-BIO-1. Minimize Disturbance Footprint.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-24: Bat Surveys. Prior to implementation of Proposed Project-related activities in undisturbed portions of the Proposed Project site and in and around buildings or other human-made structures with recesses where bats could potentially roost, a qualified biologist will conduct a daytime site reconnaissance of the area. The biologist, focusing on buildings and other human-made structures or trees with cavities or exfoliating bark, would look for bats and bat signs including existing roost sites, bat guano deposits, and will listen for roosting bats. If the daytime survey does not identify the presence of potential bat roosts, no further mitigation is required. If potential roost sites are identified, an exit nighttime survey will be conducted to determine species of roosting bats, relative bat activity, and to estimate the number of individual bats. This nighttime survey may be an active or passive acoustic monitoring survey. If occupied bat roost sites are identified, appropriate spatial and temporal buffers, as defined by the Town's biologist based on experience with bat species, would be implemented to minimize impact on roosting bats during construction of the Project.			A qualified biologist will conduct a daytime site reconnaissance of the area./Town, CDFW	Prior to construction activities.
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS: American Badger	**MM-BIO-1. Minimize Disturbance Footprint.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-25: American Badger Detection Surveys. Within 14 days prior to implementation of Proposed Project-related activities in or adjacent to American badger habitat (annual grassland, mixed chaparral, and blue oak-foothill pine), a qualified biologist will determine if American badger dens are present within 500 feet of the proposed impact area, including construction access routes. If badger den(s) are observed, the following buffer distances, according to what type of den(s) the biologist determines it (them) to be, will be established prior to construction activities: • potential den = 30 feet • active (adults present) den = 250 feet • natal (young present) den = 500 feet Activities permitted within and the size of the no disturbance buffers may be adjusted based on an evaluation by the qualified biologist. The buffer would be imposed until a qualified biologist determines the den is inactive.			A qualified biologist will determine if American badger dens are present within 500 feet of the proposed impact area./Town, CDFW	Within 14 days prior to implementation of Proposed Project-related activities in or adjacent to American badger habitat.
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS	**MM-BIO-1: Minimize Disturbance Footprint.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-5: **Restoration of Temporarily Disturbed Areas and Invasive Weed Control.** See description above.			See description above.	See description above.
	MM-BIO-6: No Net Loss of Aquatic Resources. See description above.			See description above.	See description above.
	MM-BIO-7: Sensitive Community Fencing. See description above.			See description above.	See description above.
	MM-BIO-8: **Dry Work Areas. See description above.**			See description above.	See description above.
Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands	**MM-BIO-1: Minimize Disturbance Footprint.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-BIO-5: **Restoration of Temporarily Disturbed Areas and Invasive Weed Control.** See description above.			See description above.	See description above.
	MM-BIO-6: No Net Loss of Aquatic Resources. See description above.			See description above.	See description above.
	MM-BIO-7: Sensitive Community Fencing. See description above.			See description above.	See description above.
	MM-BIO-8: **Dry Work Areas. See description above.**			See description above.	See description above.
	MM-BIO-26: State or Federally Protected Wetlands Mitigation. Compensatory mitigation for temporary and permanent impacts on state and/or federally protected wetlands that cannot be avoided through other mitigation measures will be purchased by the Town at a minimum 1:1 ratio, as defined by USACE through the Section 404 permit. Mitigation might include onsite restoration approved by the USACE, in-lieu fee payment, or purchase of mitigation credits at a USACE approved mitigation bank. Mitigation as required in regulatory permits issued through the USACE and/or CDFW may be applied to satisfy this measure.			Compensatory mitigation for temporary and permanent impacts on state and/or federally protected wetlands that cannot be avoided through other mitigation measures will be purchased by the Town, in accordance with USACE 404 permitting./Town, USACE, CDFW	During and post-construction activities.

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Cultural Resources					
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	**MM-CUL-1: Targeted Archaeological Monitoring.** As described above, the archaeological survey did not include the proposed Export Pipeline System between Midway Road and Skyway due to lack of landowner consent to access. Additionally, although not fully relocated, previous monitoring work along Skyway recorded a series of sparse lithic scatters demonstrating an elevation sensitivity for near-surface archaeological sites. Therefore, based on the lack of previous survey coverage and the number of previously documented archaeological sites in the vicinity, the Project alignment between Midway Road (on the west) and the intersection of Skyway and Neal Road (on the east) will be subject to monitoring during initial ground disturbance by a qualified professional archaeologist. The archaeologist will monitor initial trenching of previously undisturbed deposits, but the monitoring may vary based on the rate of excavation, the materials excavated, and the absence/presence of artifacts and/or cultural features. In the event of an inadvertent discovery during monitoring, the procedures noted in **MM-CUL-2** will be implemented.	Significant Impact	Less-than-Significant Impact	Monitoring will be performed by a qualified archeologist.	During initial ground disturbance.
	MM-CUL-2: Follow Inadvertent Discovery Procedures. If unrecorded cultural resources are encountered during Project-related ground-disturbing activities, even in the absence of an onsite archaeological monitor, a qualified cultural resources specialist will be contacted to assess the potential significance of the find. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) is made during Project-related construction activities, ground disturbances in the area of the find will be halted, and a qualified professional archaeologist will be notified regarding the discovery. The archaeologist will determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation, such as avoidance or data recovery.			A qualified cultural resources specialist will be contacted to assess the potential significance of unrecorded cultural resources. A qualified archaeologist will be notified regarding any inadvertent discovery of cultural resources.	During project-related ground-disturbing activities.
Geology, Soils, and Paleontological Resources					
Impact GEO-1(b): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking	**MM-GEO-1: Minimize Geologic Hazards.** Prior to construction, the Town will obtain the services of a qualified, licensed geotechnical engineer to prepare a design-level geotechnical report with specific recommendations to address geologic hazards, seismic safety, and soil conditions during construction. The Town will review the geotechnical report with the geotechnical engineer to develop viable measures that will avoid or minimize risks associated with ground shaking, liquefaction, landslides, unstable soils, and expansive soils during construction. The Town will require contractors to incorporate these measures into all construction plans and specifications.	Significant Impact	Less-than-Significant Impact	The Town will obtain the services of a qualified, licensed geotechnical engineer to prepare a design-level geotechnical report. The Town will review the geotechnical report with the geotechnical engineer to develop viable measures. The Town will require contractors to incorporate these measures into all construction plans and specifications.	Prior to construction activities.
Impact GEO-1(c): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction	**MM-GEO-1: Minimize Geologic Hazards.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
Impact GEO-1(d): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides	**MM-GEO-1: Minimize Geologic Hazards.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	**MM-GEO-1: Minimize Geologic Hazards.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property	**MM-GEO-1: Minimize Geologic Hazards.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.

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Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	**MM-GEO-2: Inadvertent Discovery Protocol**. If paleontological resources are discovered during earth-moving activities, the construction crew will immediately cease work within a 50-foot radius of the find and notify the Town's Project Manager. Construction work will be halted until the collection of fossil specimens has been completed. The collection and treatment actions will occur after recovery of specimens and once scientific value can be confirmed and documented. If fossils are found, treatment actions will include sampling for microfossils, conducting paleomagnetic analysis, identifying and preparing fossils, arranging for a repository, and preparing a final report.	Significant Impact	Less-than-Significant Impact	If paleontological resources are discovered during earth-moving activities, the construction crew will immediately cease work and notify the Town's Project Manager.	During earth-moving activities.
Hazards and Hazardous Materials					
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	**MM-HAZ-1: Vehicle Equipment Access and Fueling:** During construction, the Town will require and enforce through encroachment permit conditions and construction documents that all vehicle traffic associated with Proposed Project-related activities will be confined to established roads, staging areas, and parking areas. Additionally, maintenance or refueling of vehicles or equipment must occur in designated areas and/or secondary containment away from waterbodies.	Significant Impact	Less-than-Significant Impact	The Town will be responsible for mitigation enforcement through encroachment permit conditions.	During construction activities.
Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	**MM-HAZ-2: Cypress Lane Site Specific Contaminated Soil Management Plan.** Prior to any work set to occur within 500 feet of the Cypress Lane Site, a parcel-specific contaminated soil management plan shall be prepared to address the known contamination at the site for submittal to and approval by DTSC. The plan shall include specific hazards and provisions for how soils and groundwater will be managed at the Cypress Lane Site. The plan shall provide requirements for soil testing and characterization, soil disposal protocols, protocols governing the discovery of unknown contaminants, and soil management. The plan shall also include health and safety provisions including training requirements for site workers who may be handling contaminated material, including the transport and disposal of contaminated material; chemical exposure hazards in soil, groundwater, or soil vapor that are known to be present at the property; and mitigation and monitoring measures that are protective of the site worker and public health and safety. These health and safety provisions shall be prepared to meet OSHA requirements, Title 29 of the CFR 1910.120 and CCR Title 8, Section 5192, and all applicable federal, state, and local regulations and agency ordinances related to the proposed management, transport, and disposal of contaminated media during implementation of work and field activities. The plan shall be signed and sealed by a Certified Industrial Hygienist, who is licensed by the American Board of Industrial Hygiene. The plan shall be enforced by DTSC or another applicable regulator and included as a requirement of construction/in construction documents.	Significant Impact	Less-than-Significant Impact	The construction contractor will be responsible for implementation of a soil management plan, which will be submitted and approved by DTSC. The plan shall be signed and sealed by a Certified Industrial Hygienist who is licensed by the American Board of Industrial Hygiene. The plan shall be enforced by DTSC or another applicable regulator and included as a requirement of construction/in construction documents./Town, DTSC or other regulator	Prior to any work set to occur within 500 feet of the Cypress Lane Site.

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	**MM-HAZ-3: Road Closure Restrictions.** The Proposed Project will require a Butte County encroachment permit. The standard Butte County encroachment permit requires that "at least one lane of any public road…shall be kept open for travel by the general public at all times." Skyway consists of four lanes of traffic, two in each direction. The Proposed Project will require a Town of Paradise encroachment permit for work within the Town limits. **The Proposed Project will be held accountable to the *Butte County Local Hazard Mitigation Plan Update* and policies included in the *Butte County General Plan* and the Town's draft *Safety Element* (1994) and *Hazardous Waste Management Element* (1994). Further, during construction, to minimize the potential for impeding emergency response vehicles at any time,** the Proposed Project will only close one lane of traffic at any given time, other than short instances where a two-lane closure might be required for relocation of large equipment; this will be a requirement stated in the construction documents issued by the Town. Therefore, three lanes of Skyway will always remain open.	Significant Impact	Less-than-Significant Impact	The Town will be responsible for obtaining a Butte County construction encroachment permit. Butte County will have authority to enforce this mitigation./Town, Butte County	
	MM-HAZ-4: Rapid Demobilization Plan. **The Proposed Project will be held accountable to the *Butte County Local Hazard Mitigation Plan Update* and policies included in the *Butte County General Plan* and the Town's draft *Safety Element* (1994) and *Hazardous Waste Management Element* (1994). Further, in** the construction documents issued by the Town, the contractor will be required to prepare a rapid demobilization plan covering the one Skyway lane it occupies. **D**emobilization **would require** the contractor cover any open trench with metal plates sufficiently strong to carry vehicle traffic, patching cut pavement, removing traffic barrier rails (if used), and moving construction equipment completely clear of the road. During fire season, the contractor will be required to have sufficient metal plating on-site to immediately cover any open trench, and conversely the length of open trenching will be limited to the amount of metal plating on-site. The contractor will also be required to have sufficient cold-mix asphalt on site to temporarily patch any cut road surface. The plan will be reviewed and approved by the Public Works Director and enforced by the Town.			The contractor will be required to prepare a rapid demobilization plan and obtain necessary materials. The plan will be reviewed and approved by the Public Works Director and enforced by the Town.	The rapid demobilization plan will be prepared prior to construction.
	MM-HAZ-5: Evacuation Warning Procedures. The Proposed Project will be held accountable to the *Butte County Local Hazard Mitigation Plan Update* and policies included in the *Butte County General Plan* and the Town's draft *Safety Element* (1994) and *Hazardous Waste Management Element* (1994). Further, to minimize the potential for impeding emergency response vehicles and at the direction of the Town **during an evacuation**, the contractor will be required to demobilize off of Skyway **(MM-HAZ-4)**, leaving all four lanes clear for public traffic and emergency crews, within four hours if no traffic barrier rails are being used and within eight hours if traffic barrier rails are being used. Again, other than short instances where a two-lane closure might be required for relocation of large equipment, during construction, three of the four lanes of Skyway will be continuously open.			At the direction of the Town, the contractor will cease all construction operations and implement the rapid demobilization plan. As part of the rapid demobilization plan approved by the Public Works Director and enforced by the Town, the contractor will be required to demobilize off of Skyway.	In the event of an emergency requiring evacuation.
	MM-HAZ-6: Traffic Management Plan. During final design, the Town will require that the engineering designer prepare a Traffic Management Plan that complies with Section 110.7 Traffic Control Plans of the *Highway Design Manual* (Caltrans 2020), that will be included in the construction documents and implemented by the construction contractor. The designer will submit the plan to the Town of Paradise, Butte County, and City of Chico's transportation and engineering departments for review and approval before it is included in the construction documents. The plan will be prepared in accordance with professional engineering standards and will include, but not be limited to, the following requirements: • Schedule truck trips outside of the peak traffic hours, when feasible. • Store all equipment and materials in designated staging areas. • Use of signage to guide vehicles, bicyclists, and pedestrians through and/or around the construction areas. • Install traffic control devices where traffic conditions warrant. • Provide safe detours to reroute vehicle, bicycle, and pedestrian traffic. • Encourage construction crews to park at staging areas to limit lane closures in the public right-of-way. • Consult with Butte Regional Transit prior to construction to coordinate bus stop relocations (as necessary). • Coordinate all construction activities with the emergency service providers in the area. • Stop all construction work during any period of time declared as a Red Flag Warning. A Red Flag Warning is issued by the National Weather Service for weather events that may produce an increased risk of fire danger. • Post notices and/or appropriate signage to notify the public of upcoming construction activities, including exact location, schedule, and duration. This will include alternative access routes if a short-term full-lane			The Town will require that the engineering designer prepare a Traffic Management Plan, that will be included in the construction documents and implemented by the construction contractor. The designer will submit the plan to the Town of Paradise, Butte County, and City of Chico's transportation and engineering departments for review and approval before it is included in the construction documents./Town, County, City	During final design, the Town will require that the engineering designer prepare a Traffic Management Plan.

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
	closure will be required to transport equipment. • The Traffic Management Plan will be enforced by the Town of Paradise.				
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	**MM-HAZ-1: Vehicle Equipment Access and Fueling** .See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-HAZ-7: **Incorporate Fire Prevention Measures**. Require that construction crews and equipment avoid circumstances that could cause wildfire and that crews and staff have access to fire-prevention equipment onsite. Specific fire prevention measures include: fire extinguishers or other approved fire suppressants are to be available at all times, proper storage of flammable materials, safe cutting and welding practices, proper installation of temporary electrical equipment, and use of dust-collecting apparatus on power equipment.			The construction contractor will be responsible for implementation of this mitigation.	Prior to and during construction activities.
	MM-HAZ-8: Incorporate Public Safety Measures. Requires that the public will receive adequate warning of construction activities and any dangerous condition that might result from the use of fences, barriers, lights, flagging, guards, and signs. This will be incorporated into the Traffic Management Plan.			The Town and construction contractor will be responsible for implementation of this mitigation.	Prior to construction activities.
	MM-HAZ-9: Wildland Fire Area. The Contractor will be advised that the Town of Paradise is in a Wildland Fire Area and during the summer months the fire hazard is EXTREME.			The construction contractor is responsible for implementation of this mitigation.	Prior to construction activities.
Hydrology and Water Quality					
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	**MM-HAZ-1: Vehicle and Equipment Access and Fueling.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HYD-1: Stormwater Management and Treatment Plan. The Town will require in the construction agreement that the contractor prepare and implement a Proposed Project-specific Stormwater Management and Treatment Plan that addresses construction-related activities. The plan will include all of the SWPPP and Small MS4 permits, as well as the Construction BMPs included in **MM-HYD-2**.			Town will require in the construction agreement that the contractor prepare and implement a Proposed Project-specific Stormwater Management and Treatment Plan./Town, RWQCB	Prior to construction activities.
	MM-HYD-2: Construction Best Management Practices: Prior to initiation of ground- disturbing activities within 250 feet of vernal pools or 100 feet of other aquatic resources, construction BMPs will be employed on-site to prevent degradation to on-site and off-site aquatic resources. Methods will include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs will be in place prior to initiation of any construction activities and will remain until construction activities are completed. All erosion control methods will be maintained until all on-site soils are stabilized.			The construction contractor would be responsible for the implementation of this mitigation.	Prior to initiation of ground disturbing activities.
	MM-BIO-15: Frac-Out-Plan. See description under Biological Resources, above.			See description under Biological Resources, above.	See description under Biological Resources, above.
Impact HYD-3(a): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on or off-site	**MM-HYD-1: Stormwater Management and Treatment Plan.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
Impact HYD-3(b): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	**MM-HYD-1: Stormwater Management and Treatment Plan.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
	MM-HYD-3: Flood Protection Plan. Prior to construction, the Town will require that the contractor prepare and implement a Flood Protection Plan for the Proposed Project. The Flood Protection Plan must include evacuation routes in the event of a flood, and will include the implementation of temporary flood barriers, such as sandbags, berms or portable fence systems, to be set up around the perimeter of the construction work area in high flood hazard areas, as discussed in Section 3.10.1.5, Tsunami, Seiche and Flood Hazards.			The Town will require that the contractor prepare and implement a Flood Protection Plan for the Proposed Project./Town, RWQCB	Prior to construction activities.

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
Impact HYD-3(c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	**MM-HYD-1: Stormwater Management and Treatment Plan.** See description above. **MM-HYD-3: Flood Protection Plan.** See description above.	Significant Impact	Less-than-significant Impact	See description above. See description above.	See description above See description above
Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation	**MM-HYD-3: Flood Protection Plan.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	**MM-HYD-1: Stormwater Management and Treatment Plan.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
Noise					
Impact NSE-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies	**MM-NSE-1: Minimize Construction Noise.** Prior to construction, the Town will incorporate the following measures into all construction plans and agreements to reduce noise levels during construction: • Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. • Locate stationary noise-generating equipment as far as possible from noise-sensitive receptors. • Use quiet air compressors and other stationary noise-generating equipment where appropriate technology exists and is feasible. • Maintain and tune all equipment in accordance with the manufacturer's recommendations to minimize noise emission. • Install temporary construction-site sound barriers near noise sources. • Prohibit unnecessary idling of internal combustion engines. • Limit use of public address systems. • Post the days and hours of construction as well as the name and phone number of a designated representative to be contacted for noise-related concerns at the perimeter of the construction site. • Comply with county, city and/or town noise policies applicable to the location's jurisdiction.	Significant Impact	Less-than-Significant Impact	The Town and construction contractor will be responsible for implementation of this mitigation.	Prior to construction.
Impact NSE-2: Generate excessive groundborne vibration or groundborne noise levels	**MM-NSE-1: Minimize Construction Noise.** See description above.	Significant Impact	Less-than-Significant Impact	See description above.	See description above.
Public Services					
Impact PS-1(a): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Fire Protection	**MM-HAZ-6: Traffic Management Plan.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
Impact PS-1(b): Result in substantial	**MM-HAZ-6: Traffic Management Plan.** See description under Hazards and Hazardous Materials, above.	Significant	Less-than-	See description under Hazards and Hazardous	See description under Hazards

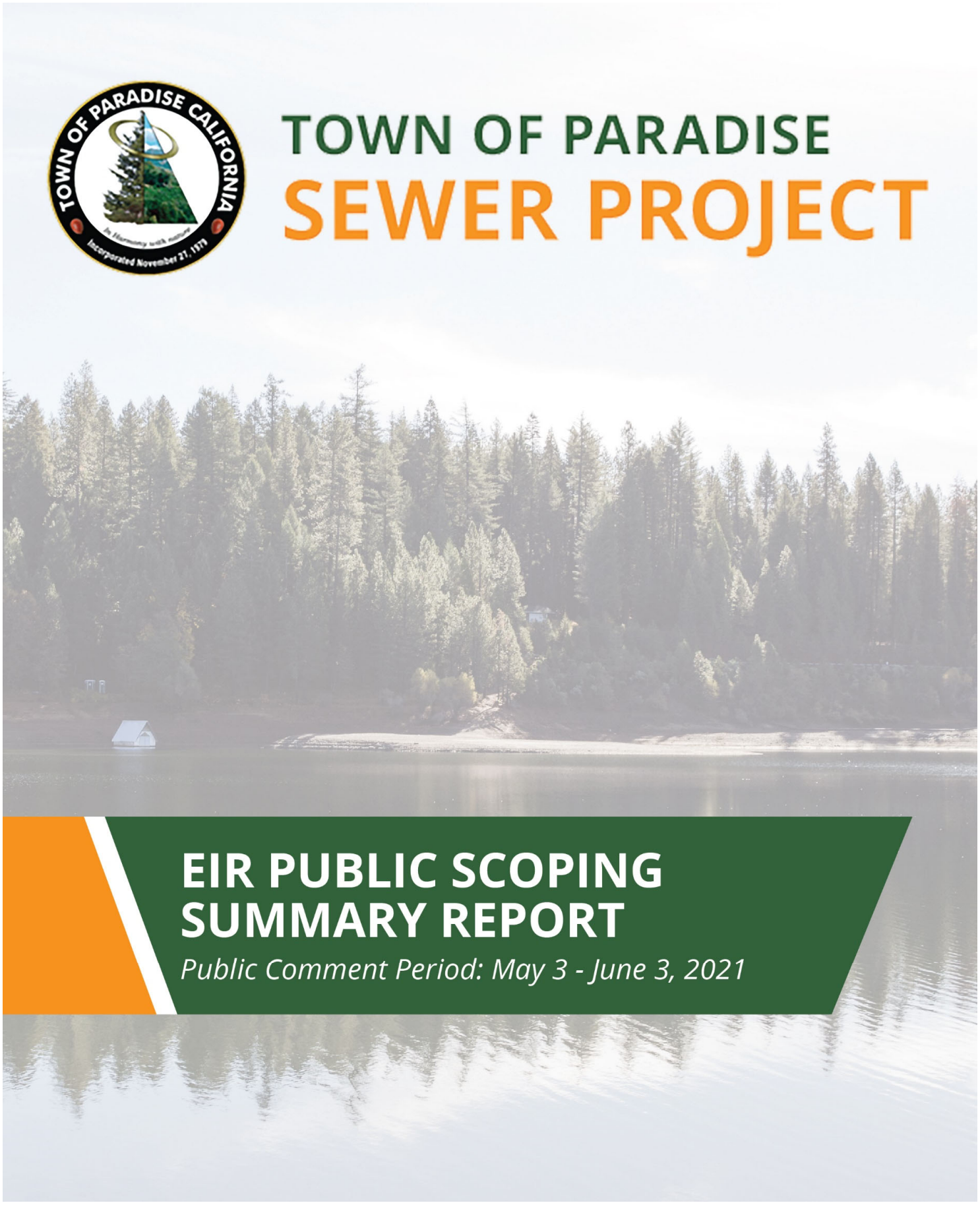
CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Police Protection		Impact	Significant Impact	Materials, above.	and Hazardous Materials, above.
Impact PS-1(c): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Schools	**MM-HAZ-6: Traffic Management Plan.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
Impact PS-1(d): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: Other Public Facilities	**MM-HAZ-6: Traffic Management Plan.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
Transportation					
Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	**MM-HAZ-6: Traffic Management Plan.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
Impact TRA-4: Result in inadequate emergency access	**MM-HAZ-6: Traffic Management Plan.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
Tribal Cultural Resources					
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or** • **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe**	**MM-TCR-1:** Coordination with Konkow Valley Band of Maidu and Mechoopda Indian Tribe. During final design, the Town will continue to consult and coordinate with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe to identify sensitive areas to be protected during construction work and appropriate methods to protect those areas.	Significant Impact	Less-than-Significant Impact	The Town will be responsible for coordination efforts with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe.	During final design.
	MM-TRC-2: Tribal Cultural Monitoring. Prior to construction, the Town will coordinate with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe to identify a Tribal Cultural Monitor, as deemed necessary by either/both Tribes, to be present during ground disturbance work within areas designated as sensitive for tribal cultural resources.			The Town will coordinate with the Konkow Valley Band of Maidu and Mechoopda Indian Tribe to identify a Tribal Cultural Monitor.	Prior to and during construction activities.
Utilities and Service Systems					
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	**MM-UTIL-1: Minimize Utility and Service System Disruptions.** During final design, to minimize disruptions to utility services, the Town will prepare a Utility Conflict and Coordination Plan that identifies outages that could affect residents and businesses, including fiber-optic/communications, water, power, and gas. As part of that plan, the public and stakeholders will be notified by signage and on Town's website of any potential service interruptions at least 2 weeks prior to construction work.			The Town will prepare a Utility conflict and Coordination Plan and will be responsible for its implementation.	During final design.
Wildfire					
Impact FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan	**MM-HAZ-3: Road Closure Restrictions.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-4: Rapid Demobilization Plan. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-5: Evacuation Warning Procedures. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-6: Traffic Management Plan. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.

CEQA Mitigation Designation	Mitigation and/or Monitoring Reporting Description	Impact Level Prior to Mitigation	Impact Level with Mitigation	Responsibilities/Enforcement	Timeframe
Impact FIRE-2: Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	**MM-HAZ-1: Vehicle Equipment Access and Fueling.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-7: Incorporate Fire Prevention Measures. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-8: Incorporate Public Safety Measures. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-9. Wildland Fire Area. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
Impact FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	**MM-HAZ-1: Vehicle Equipment Access and Fueling.** See description under Hazards and Hazardous Materials, above.	Significant Impact	Less-than-Significant Impact	See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-7: Incorporate Fire Prevention Measures. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-8: Incorporate Public Safety Measures. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
	MM-HAZ-9. Wildland Fire Area. See description under Hazards and Hazardous Materials, above.			See description under Hazards and Hazardous Materials, above.	See description under Hazards and Hazardous Materials, above.
Impact FIRE-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	**MM-HYD-1: Stormwater Management and Treatment Plan.** See description under Hydrology and Water Quality, above.	Significant Impact	Less-than-Significant Impact	See description under Hydrology and Water Quality above.	See description under Hydrology and Water Quality, above.
	MM-HYD-3: Flood Protection Plan. See description under Hydrology and Water Quality, above.			See description under Hydrology and Water Quality, above.	See description under Hydrology and Water Quality, above.
	MM-GEO-1: Minimize Geologic Hazards. See description under Geology, Soils, and Paleontological Resources, above.			See description under Geology, Soils, and Paleontological Resources, above.	See description under Geology, Soils, and Paleontological Resources, above.

A

NOP Scoping Report


TOWN OF PARADISE
SEWER PROJECT
EIR PUBLIC SCOPING
SUMMARY REPORT
Public Comment Period: May 3 - June 3, 2021

TOWN OF PARADISE
SEWER PROJECT

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EIR PUBLIC SCOPING SUMMARY REPORT

Public Comment Period: May 3 - June 3, 2021

TOWN OF PARADISE
SEWER PROJECT

Introduction

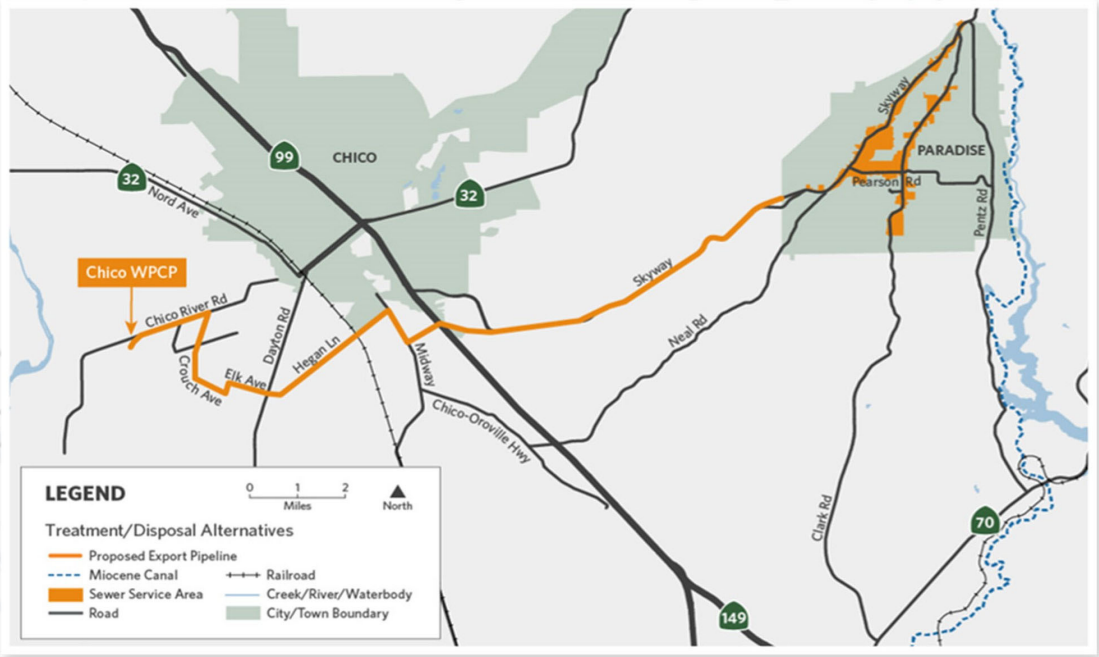
The Town of Paradise, California, (Town) is proposing a new wastewater management system for the residents of Paradise. Currently, all wastewater within the Town is treated by individual, on-site septic systems. The Paradise Sewer Project would bring long-term and reliable wastewater management to Paradise that would be both economically and socially beneficial. Specifically, local businesses would have better opportunities to expand and thrive, which would provide more economic stability for Paradise as well as more job opportunities for residents. Residents and visitors would also have the potential for an overall better quality of life because there would be fewer potential health risks from the existing septic systems. With the new wastewater system, residential parcels could be developed more densely, including multi-family housing, which would allow for more low-income housing opportunities.

Overview

Project Purpose

The proposed project involves two major components: a wastewater collection system that would provide service connections to individual parcels within the designated sewer service area, and an 18-mile-long export pipeline to carry wastewater to the Chico Water Pollution Control Plant (WPCP), as shown in Figure 1. The project would provide long-term wastewater management to the residents of Paradise.

Figure 1. Study Area Map



Project Benefits

The Paradise Sewer Project would bring many benefits to Paradise and the region, including:

- providing wastewater disposal surety to help businesses and jobs return to Paradise and spur economic recovery;
- improving Paradise groundwater quality by decreasing septic tank discharges;
- allowing for more densely populated residential development in Paradise to increase affordable/multi-family housing;
- creating a wastewater solution supported by the Central Valley Regional Water Quality Control Board and partner agencies to help create opportunities for additional funding.

Notice of Preparation

On May 3, 2021, the Town, acting as the California Environmental Quality Act (CEQA) Lead Agency, launched the environmental process for the proposed Paradise Sewer Project with a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and virtual public scoping meetings. The first step in the EIR process was to solicit public input regarding the scope and content of environmental information to be included in the EIR. The NOP was posted at the State Clearinghouse (SCH# 2021050008) and circulated to public agencies and other interested parties in compliance with CEQA Guidelines, Section 15082(a). The NOP notified the public that the EIR is being prepared and provided information on how the public could provide comments on the scope of the EIR. Issuance of the NOP started the 30-day public comment period, which was open from May 3 to June 3, 2021.

The NOP provided information about the public comment period, project location, project background, project description, and the probable environmental effects of the proposed project. The NOP was posted on the project website at www.paradisesewer.com. The NOP package can be found in **Attachment A** of this document and includes the NOP, the distribution list, and the Notice of Completion and Environmental Document Transmittal.

Public Notification and Outreach

Several methods were used to build awareness about the Paradise Sewer Project, the NOP, and the subsequent public comment period and scoping meetings. Using the established project website (www.paradisesewer.com) and the Town's social media accounts (Facebook and YouTube), the project team posted key information online to direct viewers to the project website and to promote the initial project activities and environmental milestones. Additionally, the project team submitted notices in local Paradise and Chico media publications, and conducted public and Town Council engagement meetings.

Public Notice Advertisements

Public notices for the public comment period were published in the *Paradise Post* on May 1, 2021, and in the *Enterprise-Record* on May 3, 2021. Copies of the public notice advertisements are included in **Attachment B.**

Media Relations

One press release was sent on May 3, 2021, to n the surrounding project area. A copy of the media release is included in **Attachment C.**

TOWN OF PARADISE
SEWER PROJECT

Website

The project website (www.paradisesewer.com), which was revamped on April 9th, 2021 continued to act as the main information hub for the public to learn about the project and get updated information at milestones throughout the environmental phase. The website includes the following pages and sections:

Page	Sections
Project Overview	- Project Components - Project Area Map (static map) - Project Costs - Find My Property (interactive map) - Project Benefits - Project Schedule
Public Engagement	- News - Events - Key Activities
Environmental	- Environmental Review - CEQA Process - Environmental Key Activities
Advisory Committee	- Overview - Advisory Committee Members - Advisory Committee Meetings
Project Materials	- Frequently Asked Questions - Project Documents - Technical Documents - Related Links
Contact	- Mailing information and Phone Number Comment Submittal Form

The website is updated regularly to provide timely information on outreach and engagement activities. All comments received via the website were documented and recorded for the scoping process. Screenshots of the project website can be found in **Attachment D.**

E-Blasts

Four e-blasts were distributed during the 30-day public comment period. The e-blasts provided reminders of the virtual public meetings and public comment period and included the project website address. Copies of the e-blasts are included in **Attachment E.**

Social Media

Throughout the public comment period, social media was used to educate and inform the public about the Paradise Sewer Project. The project team used both the Town's Facebook and YouTube pages. The Town's Facebook page provided the public with information about community meetings, reminders of the virtual public scoping meetings, and directions on how to submit comments. The YouTube page provided the public with council meeting recordings. Copies of social media posts are provided in **Attachment F.**

Public and Stakeholder Engagement

Virtual Public Meetings

For public convenience and to allow participation in a safe environment, two virtual public meetings were held via Webex during the public comment period. The meetings provided a brief overview of the proposed project and the EIR process and encouraged the public to provide comments about the scope of the EIR effort. The first virtual public meeting took place on May 13, 2021, and had 40 attendees—11 project team members and 29 public attendees. The second virtual public meeting took place on May 25, 2021, and had 26 attendees—12 project team members and 14 public attendees. Those who needed additional accessibility preferences were directed to post a message on the project website (www.paradisesewer.com/contact). Any persons who are deaf, hard of hearing or speech impaired (TDD) were also encouraged to contact the California Relay Service TTY and/or Voice Line at 1-800-735-2929, or 711. The PowerPoint presentations from the virtual public meetings are provided in **Attachment G.**

Sewer Regionalization Project Advisory Committee

In addition to the virtual public meetings, the project team participated in monthly Sewer Regionalization Project Advisory Committee meetings starting in April 2021. The purpose of the committee meetings is to develop an agreement between the Town of Paradise and the City of Chico regarding potential future discharge of the Town's wastewater to the Chico WPCP, and to monitor the progress of the Paradise Sewer Project EIR. Information about the committee, including meeting minutes, can be found on the project website (www.paradisesewer.com/advisory-committee).

Comment Submittal

To encourage public comments, a number of submittal methods were provided. Comments could be submitted by direct mail, email, on the project website (www.paradisesewer.com/contact), during the two virtual public meetings, and by phone. Overall, 75 comments were submitted by 27 individual commenters during the project scoping period. A few commenters made multiple comment submittals during the public comment period. A comment matrix including all comments received during the public comment period can be found in **Attachment H.**

The following summarizes the number of comments received by each submittal method:

- 6 letters (from the Native American Heritage Commission, Butte Local Agency Formation Commission, Paradise Irrigation District, California Department of Fish and Wildlife, Central Valley Flood Protection Board, and Butte County Department of Development Services)
- 1 email
- 9 virtual public meeting comment submittals
- 14 website comment submittals

Virtual Public Meeting Comments

As mentioned previously, two virtual public meetings were held via Webex during the public comment period. Attendees of the public meetings were encouraged to ask questions and provide input on the project and process. Nine comments were provided during the public meetings. Commonly asked questions were about any potential project costs to property owners and if the project would be able to handle future growth in Paradise. Additionally, several commenters requested more project information about current funding sources for the project, the export

pipeline route, and recommendations for property owners considering constructing septic tank systems before construction of the new sewer system.

Comment Documentation and Review

The final step during the public comment period is the collection, categorization, and review of all comments received. Comments submitted during the 30-day public comment period were documented and organized by category to allow for easy review by the project team and the respective technical disciplines. Afterwards, the process will be to consider the comments as the project team continues its environmental analysis.

Comment Themes

There were 27 individual commenters who submitted a total of 75 comments. Of the 75 comments submitted during the public comment period, the following themes were identified (some of the comments were outside the scope of the Paradise Sewer Project). The sub-bullets below each theme were specific items addressed by the public:

- Administrative (jurisdiction, rights, and oversight)
  - Provide post-construction recommendations to property owners after project completion
  - Consider addition of properties to the proposed sewer service area
  - Provide a subcontractor bidding schedule
- Aesthetics
  - Coordinate project construction with road rebuilding efforts
  - Provide a physical description of the export pipeline
- Agency Coordination
  - Coordinate efforts with the Native American Heritage Commission (NAHC)
  - Coordinate efforts with the California Department of Fish and Wildlife (CDFW)
  - Coordinate efforts with the Central Valley Flood Protection Board (CVFPB) if Title 23 standards are not followed
  - Coordinate efforts with Paradise Irrigation District (PID)
- Biological Resources
  - Assess biological resources
  - Analyze direct, indirect, and cumulative impacts to biological resources
  - Include appropriate and adequate mitigation measures for project impacts to biological resources
- Concepts/Alternatives
  - Consider smaller and de-centralized alternatives
  - Consider a separate Town of Paradise wastewater system
  - Confirm the export pipeline route
  - Confirm the project boundary
  - Provide better plans/designs/maps depicting the project
- Funding/Costs
  - Inform project funding sources
  - Inform potential costs to residents and rate payers in the City of Chico
  - Inform potential costs to Paradise residents and property owners not within the sewer service area
- Health/Safety
  - Consider risks to public safety when developing the project

- Land Use
  - Clarify export pipeline alignment outside of right-of-way
  - Assess potential crossing of prime agricultural land
- Outreach/Communications
  - Consult with respective stakeholders
- Tribal/Cultural Resources
  - Consult with Native American tribes
  - Assess cultural resources
- Urban Growth
  - Address the increase of population in the Town of Paradise, City of Chico, and surrounding region
- Outreach/Communications
  - Consult with respective stakeholders
- Water Quality
  - Assess potential water quality impacts of all respective water bodies
- Wildfire
  - Consider the potential fire hazard associated with pipe materials
  - Consider the potential for increased exposure to fire risks

Next Steps

The Town will review and, as appropriate, incorporate input received during the public comment period into the Draft EIR. The Draft EIR will contain the results of the alternatives analysis, an assessment of environmental impacts, and identification of mitigation measures. The next key project milestone will be the release of the Draft EIR for public review in early 2022.

Attachment A
Notice of Preparation

April 30, 2021

Notice of Preparation of an Environmental Impact Report and Public Scoping Meeting Notice

RE: Paradise Sewer Project

To Interested Agencies and Persons:

The Town of Paradise (Town) as the Lead Agency for the Paradise Sewer Project (Proposed Project) has issued this Notice of Preparation (NOP) pursuant to the California Environmental Quality Act (CEQA) to notify responsible and trustee agencies and other interested parties that an Environmental Impact Report (EIR) will be prepared to evaluate potential environmental impacts of the Proposed Project. The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR.

The NOP provides information about the public review and comment period, project location, project description, and the probable environmental effects of the Proposed Project, and is posted on the Town's website at www.paradisesewer.com.

Agency and Public Review and Comment

The Town is interested in receiving input from agencies, stakeholders, and the public regarding the Proposed Project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the Proposed Project, if any is required. Please respond with written comments regarding the proposed scope and the intended content of the EIR as it relates to your agency's area of statutory responsibility or your areas of concern or expertise. We are requesting that all comments be provided in writing to enable us to address the comments as intended in the EIR. Written comments are also requested from organizations and other interested parties regarding the scope and evaluation of potential environmental issues associated with the Proposed Project.

Written responses are due within 30 days of the receipt of this NOP, as provided by state law. As such, a 30-day public review and scoping period is established from May 3 to June 3, 2021. Comments may be submitted by mail or email, or by attending the public scoping meeting (see details below) and submitting a written comment. All comments should indicate a contact person for the agency or organization.

Two virtual public scoping meetings regarding the Proposed Project and EIR will be held. You, members of your agency or organization, and the public are invited to attend to provide written comments on the scope and content of environmental information to be included in the EIR. These meetings will include a brief overview of the Proposed Project and EIR process, and will allow time for questions about the project and process.

The Town will hold these public scoping meetings on May 13 with an approximately 30-minute presentation starting at 6:00 p.m. and on May 25 with an approximately 30-minute presentation starting at 12:00 p.m. In light of the COVID-19 pandemic, the meetings will be held virtually for remote public participation. The meeting links and call-in number for the presentation are provided below.

Thursday, May 13, at 6:00 p.m.	**Tuesday, May 25, at 12:00 p.m.**
WebEx Link: bit.ly/Paradise_Sewer_Mtg1 **WebEx Password:** Paradise **Dial In #:** 408-418-9388 **Code:** 123 202 6837	**WebEx Link:** bit.ly/Paradise_Sewer_Mtg2 **WebEx Password:** Paradise **Dial In #:** 408-418-9388 **Code:** 123 877 2748

For additional accessibility preferences, please post a message on the project website at paradisesewer.com/contact (from subject dropdown menu, select “Submit a comment on Environmental Impact Report”). Persons who are deaf, hard of hearing, or speech impaired (TDD) may contact the California Relay Service TTY and/or Voice Line at 1-800-735-2929, or 711.

We value your input and look forward to hearing from you. For your convenience, we have a number of ways for you to provide comments at any time during the 30-day comment period ending at 5:00 p.m. on June 3, 2021. Comments can be submitted the following ways:

- Direct Mail:
  Colette Curtis, Public Information Officer
  Town of Paradise
  5555 Skyway
  Paradise, CA 95969
- Website and Virtual Meeting comment submittal: paradisesewer.com/contact (from subject dropdown menu, select “Submit a comment on Environmental Impact Report”).
- Telephone: 530-872-6291, ext. 112

If you are an authorized representative of a Responsible Agency or a Trustee Agency, the Town needs to know the views of your agency regarding the scope and content of the environmental information that is relevant to your agency’s statutory responsibilities in connection with the Proposed Project. Your agency will need to use the EIR when considering whether to permit or otherwise approve the Proposed Project. Comments received from State of California agencies should address (1) whether the agency will be a Responsible Agency or a Trustee Agency for the Proposed Project, and (2) if the agency is a Responsible Agency, the significant environmental issues and reasonable alternatives and mitigation measures that the Responsible Agency will need to have explored in the analysis. We will also need the name, address, telephone number, and email address of the contact person for your agency.

Project Location

Paradise is in eastern Butte County, in the western foothills of the Sierra Nevada Mountains. The topography of Paradise is characterized by intervening ridges and valleys sloping to the southwest, with elevations ranging from 1,080 to 2,320 feet. Paradise is bordered on the east by the west branch of the Feather River and on the west by Little Butte Creek. Paradise is approximately 12 miles east of the City of Chico, California; 20 miles northwest of the City of Oroville, California; and 90 miles north of the City of Sacramento California. The primary entrances to Paradise are Skyway and Highway 191 (Clark Road). Paradise is connected to Chico via Skyway and to Oroville via Highway 191, which is known as Clark Road upon entering Paradise.

Chico, also in Butte County, sits on the Sacramento Valley floor close to the foothills of the Sierra Nevada range to the east. Chico's terrain is generally flat, with increasingly hilly terrain beginning at the eastern city limits. The city is traversed by two creeks, Big Chico Creek and Little Chico Creek, and the Lindo channel, all of which feed into the Sacramento River. Highways 32 and 99 comprise Chico's regional transportation network. Highway 32 connects Chico residents to Glenn and Plumas Counties to the west and east, respectively. Highway 99 connects residents to Tehama and Sutter Counties to the north and south, respectively (see Figure 1, map inset).

Project Background

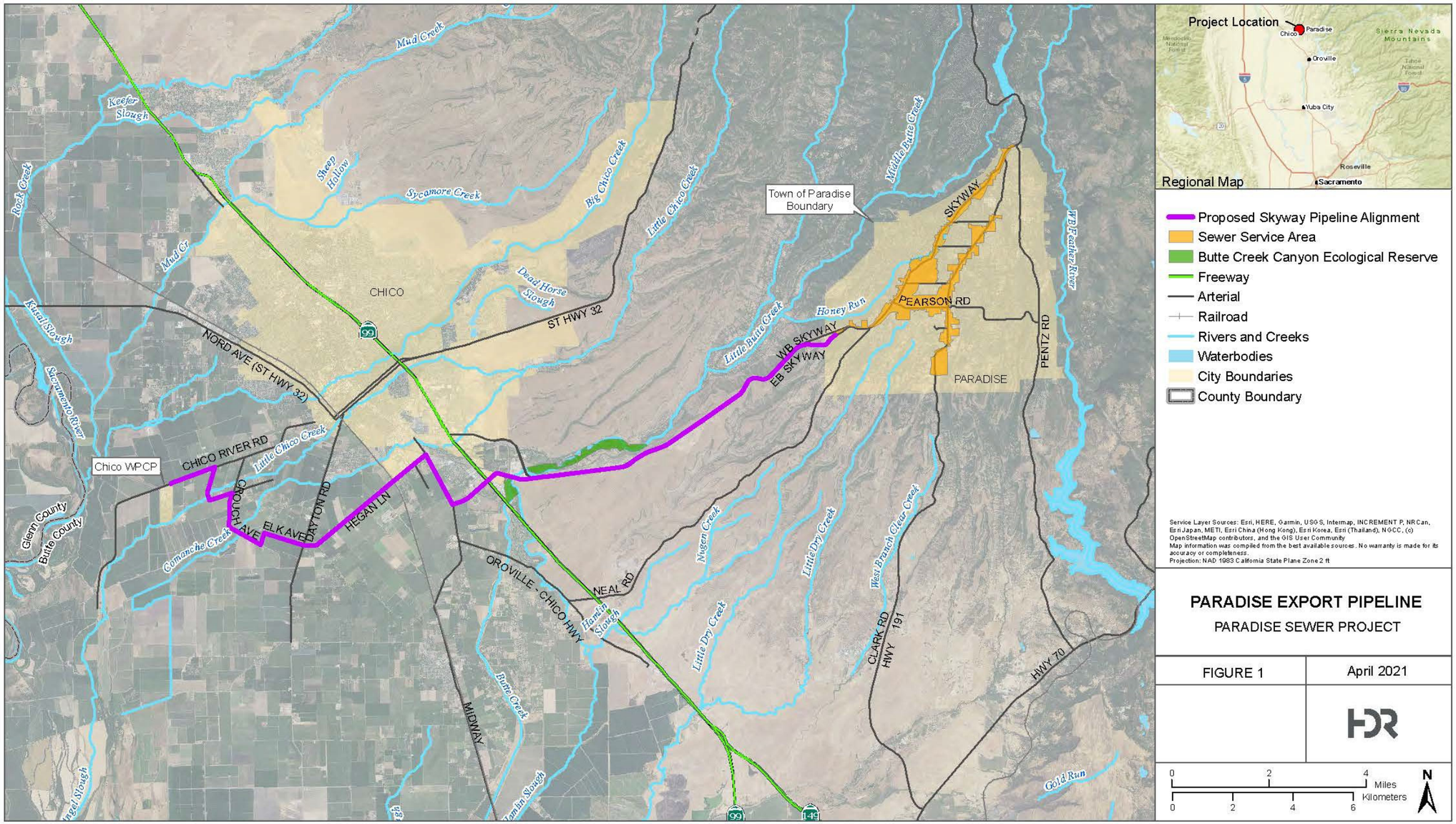
Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California.

The Town has supported numerous studies to address its need for a centralized wastewater treatment solution, and in its most recent study,[1] the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022.

Existing Facilities

Wastewater treatment facilities in Paradise consist of individual, privately owned septic tanks and soil absorption disposal systems known as leach fields, together with several engineered subsurface disposal systems serving commercial and institutional facilities. Businesses and residences near the future sewer system continue to rely on septic tanks and leach field systems for wastewater treatment and disposal.

[1] Bennett Engineering, 2017, Town of Paradise Sewer Project Alternatives Analysis and Feasibility Report: Determining a Preferred Option for Implementation, June 21.


Project Location
Chico
Paradise
Sierra Nevada Mountains
Oroville
Yuba City
Roseville
Sacramento
Regional Map
Proposed Skyway Pipeline Alignment
Sewer Service Area
Butte Creek Canyon Ecological Reserve
Freeway
Arterial
Railroad
Rivers and Creeks
Waterbodies
City Boundaries
County Boundary
Town of Paradise Boundary
CHICO
PARADISE
Chico WPCP
SKYWAY
PEARSON RD
PENTZ RD
WB SKYWAY
EB SKYWAY
ST HWY 32
NORD AVE (ST HWY 32)
CHICO RIVER RD
OROVILLE - CHICO HWY
NEAL RD
CLARK RD
HWY 191
HWY 70
MIDWAY
HEGAN LN
DAYTON RD
ELK AVE
OROVILLE AVE
Mud Creek
Keefer Slough
Sheep Hollow
Sycamore Creek
Big Chico Creek
Little Chico Creek
Middle Butte Creek
Rock Creek
Mud Cr
Dead Horse Slough
Honey Run
Little Butte Creek
W.B. Feather River
Actual Slough
Sacramento River
Chico Creek
Comanche Creek
Glenn County
Butte County
Hamlin Slough
Little Dry Creek
Nugen Creek
West Branch Clear Creek
Gold Run
Angel Slough
Butte Creek
Service Layer Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection: NAD 1983 California State Plane Zone 2 ft
PARADISE EXPORT PIPELINE
PARADISE SEWER PROJECT
FIGURE 1
April 2021
0 2 4 Miles
0 2 4 6 Kilometers
N

The Chico Water Pollution Control Plant (WPCP) is approximately 5 miles southwest of Chico on 120 acres of land owned by the City of Chico. The City of Chico owns and operates the Chico WPCP, which provides wastewater treatment and disposal for the greater Chico area. The Chico WPCP service area comprises the incorporated area of Chico and small parcels of unincorporated Butte County.

The Chico WPCP treatment system consists of screening for removal of large solids, grit removal, primary clarification, activated sludge treatment with secondary clarification, and chlorination/dechlorination. Sludge is treated by anaerobic digestion followed by mechanical dewatering. Biosolids are hauled directly from the centrifuge building for land application in unincorporated Sacramento County, California. The treated wastewater from the Chico WPCP is discharged to the Sacramento River through a submerged outfall diffuser and is regulated in accordance with the National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079081 (Order No. R5-2016-0023). This order permits an average dry weather flow effluent flow of 12 million gallons per day (gpd).

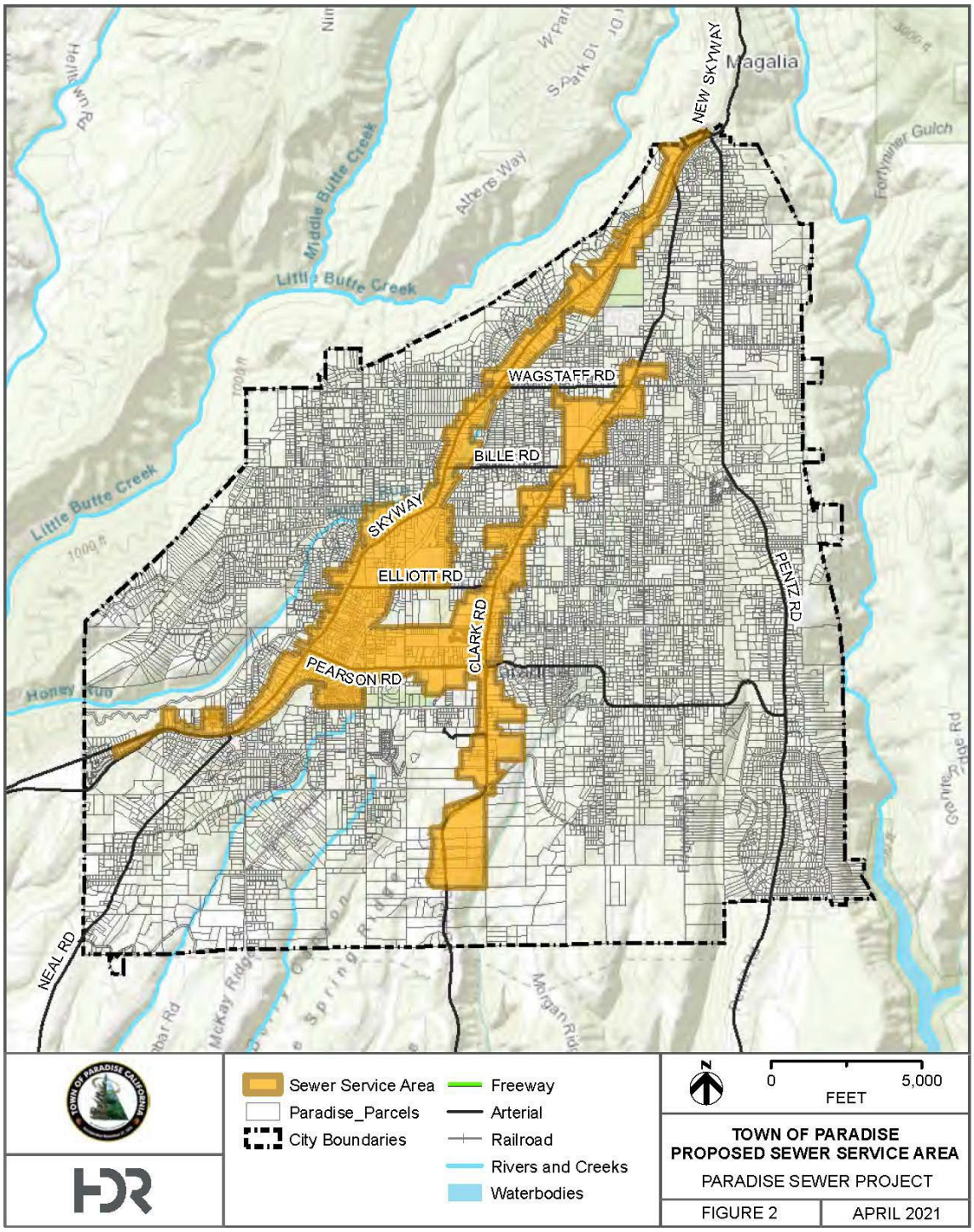
Project Description

The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico WPCP, and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and rate payers as a result of the Proposed Project.

Sewer Service Area

The sewer service area (SSA) would serve approximately 1,500 parcels (out of the 11,000 total parcels in Paradise) along the Skyway, Clark Road, and Pearson Road corridors (see Figure 2). The SSA also would serve most businesses in Paradise and would enable future construction of affordable multi-family housing, which is limited because of multiple septic system constraints such as high groundwater, poor soils, and limited parcel sizes.

At the time of initial operation, an estimated 360 occupied parcels within the SSA would be generating an average wastewater flow of 109,000 gpd. It is estimated that it could take 30 years for the entire SSA to be occupied, at which time the average wastewater flow would be 448,000 gpd. The Town is considering this level of development and wastewater flow in planning its wastewater treatment solutions.


NEW SKYWAY
Magalia
Middle Butte Creek
Little Butte Creek
WAGSTAFF RD
BILLE RD
SKYWAY
ELLIOTT RD
CLARK RD
PENTZ RD
PEARSON RD
NEAL RD
Sewer Service Area
Paradise_Parcels
City Boundaries
Freeway
Arterial
Railroad
Rivers and Creeks
Waterbodies
N
0
5,000
FEET
TOWN OF PARADISE
PROPOSED SEWER SERVICE AREA
PARADISE SEWER PROJECT
FIGURE 2
APRIL 2021

Collection System

The collection system would serve all parcels within the SSA, and would consist of a system of gravity sewers, small pump stations, and force mains. This collection system would enable properties within the SSA to have existing septic tanks and leach line systems abandoned altogether and would remove future onsite wastewater treatment and dispersal requirements. Because of the varied topography within the SSA, a number of pump stations and pressurized force mains would be required to pump flows out of valleys and swales, and back up to an adjacent gravity sewer. The collection system would consist of approximately 157,000 feet of 2- to 4-inch-diameter force mains, 29,000 feet of 8-inch-diameter gravity trunk lines, and 28 pump stations, all within public right-of-way. The gravity sewers would come together at the southwest edge of town, on Skyway, where they would transition to the export pipeline to the Chico WPCP.

Export Pipeline

The proposed export pipeline would start along Skyway at the south end of the Paradise collection system and would continue southwest along Skyway. Near Chico, at the bend where Skyway turns north, the pipeline would continue west, heading cross-country with crossings of Butte Creek and Highway 99 until reaching Midway, and would proceed into Chico and end at the Chico WPCP. The connection to the Chico WPCP is not associated with other ongoing facility upgrades. Figure 1 shows the proposed export pipeline route and connection to the Chico WPCP.

Operation and Maintenance

Operation and maintenance activities would occur with the facilities that comprise the Proposed Project. This would include various inspections, servicing, and replacement of pertinent Proposed Project facility elements at designated intervals.

Probable Environmental Effects of the Proposed Project

After completing a preliminary review of the Proposed Project, as described in Section 15060(d) of the CEQA Guidelines, the Town has determined that an EIR should be prepared to assess the potentially significant environmental impacts of the Proposed Project.

The EIR will address environmental impacts of the Proposed Project's construction and operation activities and will propose mitigation measures to address significant impacts that are identified. The following describes the anticipated environmental issues that may be addressed in the EIR:

- **Aesthetics**. Potential impacts on aesthetics during construction and operation of the Proposed Project will be considered. Although temporary impacts may occur during construction, no permanent change in the visual landscape or viewshed is expected.
- **Agriculture and Forestry Resources**. Given the rural conditions, impacts on agriculture and forestry resources will be considered. However, it is anticipated that the Proposed Project would not result in impacts on prime agriculture and forestry resources that cannot be avoided.

- **Air Quality and Greenhouse Gas Emissions.** Criteria air pollutants generated during construction and operation of the Proposed Project would be estimated using the California Emissions Estimator Model (CalEEMod). Potential impacts on air quality will be assessed by comparing the Proposed Project's criteria air pollutant emissions with the thresholds of significance for criteria air pollutants in the Butte County Air Quality Management District's (BCAQMD) *CEQA Air Quality Handbook*.

  Construction would be the main source of greenhouse gas (GHG) emissions. GHG emissions during construction of the Proposed Project would be estimated using CalEEMod. Impacts associated with GHG emissions would be determined by comparing project GHG emissions during construction to BCAQMD's recommended thresholds for GHG emissions contained in the *CEQA Air Quality Handbook*.

- **Biological Resources**. The Town is completing field surveys to catalogue protected species and habitat conditions including wetlands and vernal pools. The EIR will consider impacts of proposed trenching and trenchless construction methods on biological resources.

- **Cultural Resources**. Potential impacts on cultural resources that could occur during ground-disturbing construction activities will be evaluated. An initial historic records search was completed, and intensive pedestrian surveys are being completed as part of this planning process. The findings from these studies will be used to analyze the potential physical impacts on historic, pre-historic, archaeological, and cultural resources that could result from proposed construction activities.

- **Energy**. A temporary increase in the consumption of energy would be required during construction, and a long-term increase in the use of energy would be required for operation of the Proposed Project. The impact analysis will assess if the Proposed Project would result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation, or would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

- **Geology and Soils**. Construction of the Proposed Project could result in site-specific impacts on or from local geology and soils conditions. Potential impacts related to geologic, seismic, and soils constraints will be assessed. Potential impacts on paleontological resources and mineral resources will also be considered.

- **Hazards and Hazardous Materials.** Potential impacts related to hazards and hazardous materials will be evaluated, including the potential hazardous materials associated with transport, use, and disposal of hazardous materials during construction and potential hazardous emissions or hazardous materials used during construction and operation of the Proposed Project.

- **Hydrology and Water Quality.** Potential impacts on hydrology and water quality will be described based on qualitative assessment of Project construction activities. No permanent changes to hydrology are expected to result from the Proposed Project.

- **Land Use and Planning.** Although the Proposed Project is not expected to change existing land use, the EIR will evaluate zoning within the sewer service area in relation to current and future development.
- **Noise.** Potential construction-period noise and vibration impacts on sensitive receptors (residences) near the Proposed Project will be assessed. Operational noise will also be analyzed in the EIR.
- **Population and Housing**. While the Proposed Project is not a response to the recovery effort from population and housing loss associated with the 2018 Camp Fire, the Proposed Project could lead to new opportunities for population and housing in the sewer service area. It is not anticipated that siting of the Proposed Project would lead to housing displacement. The balance of current and planned housing in the sewer service area would be considered against the Chico WPCP capacity.
- **Public Services**. Impacts on fire protection services, law enforcement services, schools, and other public services will be evaluated based on available information.
- **Recreation**. Potential impacts on existing recreational resources will be evaluated. It is not anticipated that the Proposed Project would affect existing recreational facilities or activities.
- **Transportation**. Because much of the proposed collection and export pipeline would be constructed in or adjacent to existing roadways, impacts on transportation are expected. Construction-related vehicle trips will be estimated, and temporary construction-related traffic will be evaluated to identify any hazardous conditions on roadways or inadequacies in emergency access that may result during construction of the Proposed Project.
- **Tribal Cultural Resources**. The Town is coordinating with interested tribes in accordance with Assembly Bill 52. Impacts on tribal cultural resources will be evaluated based on discussions with tribes regarding the relationship of the Proposed Project to the ongoing practice of traditional life ways.
- **Utilities and Service Systems**. The Proposed Project would introduce a new utility and service system, which will be analyzed. Construction and operation of the Proposed Project would raise demands on water supply and power utilities.
- **Wildfire**. The Proposed Project is in a state responsibility area, traversing moderate and high fire hazard severity zones. Therefore, this evaluation will focus on the potential for construction activities to impair an emergency response or evacuation plan, exacerbate wildfire risks, and expose people to risks due to post-fire effects, consistent with standards in the CEQA Guidelines Appendix G. The focus will be on elements of construction that could exacerbate fire hazard risks; however, once construction is completed, the underground pipeline would not create conditions that would affect wildland fire risks.
- **Other Sections**. The EIR will include additional topics as required by the CEQA Guidelines, including significant irreversible environmental changes, growth inducement, cumulative

impacts, and alternatives. The EIR will describe and evaluate a reasonable range of alternatives to the Proposed Project that would feasibly attain most or all of the Proposed Project's basic objectives while avoiding or substantially lessening any significant effects of the Proposed Project. These alternatives may include alternative pipeline routes. For each alternative, the EIR will assess the degree to which it might reduce one or more identified significant project impacts, whether it could result in other new or increased impacts, its feasibility, and the degree to which it is consistent with the Proposed Project objectives. The "No Project" alternative will also be evaluated as required by CEQA.

Further Information

For environmental review information or questions about the Proposed Project, please contact us at through our project website at paradisesewer.com/contact (from subject dropdown menu, select "Submit a comment on Environmental Impact Report") or by calling us at 530-872-6291, ext. 112

Sincerely,

4/23/2021

Marc Mattox

Town of Paradise Director of Public Works

Attachment B
Public Notice Advertisement

PUBLIC NOTICE

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND PUBLIC SCOPING MEETING NOTICE

The Town of Paradise (Town) as the Lead Agency for the Paradise Sewer Project (Proposed Project) has issued this Notice of Preparation (NOP) pursuant to the California Environmental Quality Act (CEQA) to notify responsible and trustee agencies and other interested parties that an Environmental Impact Report (EIR) will be prepared to evaluate potential environmental impacts of the Proposed Project. The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR. The NOP provides information about the public review and comment period, project location, project description, and the probable environmental effects of the Proposed Project, and is posted on the Town's website at **paradisesewer.com**.

PUBLIC REVIEW & COMMENT PERIOD: May 3 to June 3, 2021

PROJECT OVERVIEW

Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. The Town has supported numerous studies to address its need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022.

The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico WPCP, and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and rate payers as a result of the Proposed Project.

POTENTIAL ENVIRONMENTAL IMPACTS

The EIR process will assess the potential environmental impacts of the proposed Project on the physical, human, and natural environment. A wide variety of resource areas will be studied during the environmental review to identify potential impacts, including aesthetics, agriculture and forestry resources, air quality and greenhouse gas emissions, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, wildfire, and additional topics as required by the CEQA Guidelines including significant irreversible environmental changes, growth inducement, cumulative impacts, and alternatives. Measures to avoid, minimize, and mitigate any potential adverse impacts will be identified and evaluated in the EIR.

VIRTUAL PUBLIC SCOPING MEETINGS

A 30-day public scoping process is being initiated with this notice. Responsible and Trustee Agencies, involved federal agencies, interest groups, and members of the public are invited to participate and provide valuable input into the scope of the EIR. For your convenience, and to allow participation in a safe environment while social distancing, two virtual public scoping meetings will be held during the project's 30-day scoping period. Please join us at one of the following meetings to learn about the project, interact with project team members, ask questions, and submit formal comments.

THURSDAY, MAY 13, 2021 | 6 P.M.
Webex: bit.ly/Paradise_Sewer_Mtg1
Webex Password: Paradise
Dial-in #: 408-418-9388 | **Code:** 123 202 6837

TUESDAY, MAY 25, 2021 | 12 P.M.
Webex: bit.ly/Paradise_Sewer_Mtg2
Webex Password: Paradise
Dial-in #: 408-418-9388 | **Code:** 123 877 2748

SUBMITTING COMMENTS

Submission of comments on the environmental scope of the Project are invited from all interested parties from May 3, 2021 until **5 p.m. PST on June 3, 2021**. Comments can be submitted via the website at **paradisesewer.com/contact** (from subject dropdown menu, select "Submit a comment on Environmental Impact Report") or via the following options:

Telephone: 530-872-6291, ext. 112

Mail: Colette Curtis, Public Information Officer
Town of Paradise
5555 Skyway, Paradise, CA 95969

SPECIAL MEETING ACCOMMODATIONS

For additional accessibility preferences, please submit a message on the project website at **paradisesewer.com/contact** (from subject dropdown menu, select "Submit a comment on Environmental Impact Report"). Persons who are deaf, hard of hearing, or speech impaired (TDD) may contact the California Relay Service TTY and/or Voice Line at 1-800-735-2929, or 711.

Attachment C
Press Release

May 3, 2021
FOR IMMEDIATE RELEASE

Media Contact: Colette Curtis
Public information Officer
Town of Paradise
ccurtis@townofparadise.com
530-872-6291 ext. 112

TOWN OF PARADISE
SEWER PROJECT

Town of Paradise Launches Environmental Review for Paradise Sewer Project

Public input solicited on environmental scope and content of EIR

Paradise, CA – On Monday, May 3, the Town of Paradise (Town), and the California Environmental Quality Act (CEQA) Lead Agency, officially launched the environmental review process for the Paradise Sewer Project with a **Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Virtual Public Scoping Meetings.** The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR.

PROJECT OVERVIEW
Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. Numerous studies have supported the need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022. A map of the proposed sewer service area can be found on the project website here.

The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico Water Pollution Control Plant (WPCP), and connection to the WPCP — and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and existing Chico WPCP rate payers as a result of the Proposed Project. This long-term wastewater solution will allow for sustainable housing and business activity in Town, supporting the community's economic recovery and vitality.

LEARN MORE AT UPCOMING VIRTUAL PUBLIC SCOPING MEETINGS
As an initial step within the CEQA process, project scoping allows the Town to seek public and stakeholder input on the environmental scope of the project. To provide convenient participation in a safe environment while social distancing, the Town is hosting two virtual public scoping meetings during the project's 30-day public comment period to allow attendees to learn about the project, interact with project team members, ask questions and submit formal comments.

THURSDAY, MAY 13, 2021 | 6 P.M.	**TUESDAY, MAY 25, 2021 | 12 P.M.**
ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg1 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 202 6837	ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg2 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 877 2748

For additional accessibility preferences, please submit a message on the project website at paradisesewer.com/contact (from subject dropdown menu, select "Submit a comment on Environmental Impact Report"). Persons who are deaf, hard of hearing, or speech impaired (TDD) may contact the California Relay Service TTY and/or Voice Line at 1-800-735-2929, or 711.

SUBMITTING COMMENTS
Suggestions and comments on the scope and content of the EIR are invited from all interested parties for a period of 30 days (May 3 through June 3, 2021 by 5 p.m. PDT). Written or verbal comments concerning the Proposed Project's environmental scope should be submitted via the following options.

Website: paradisesewer.com/contact
(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")

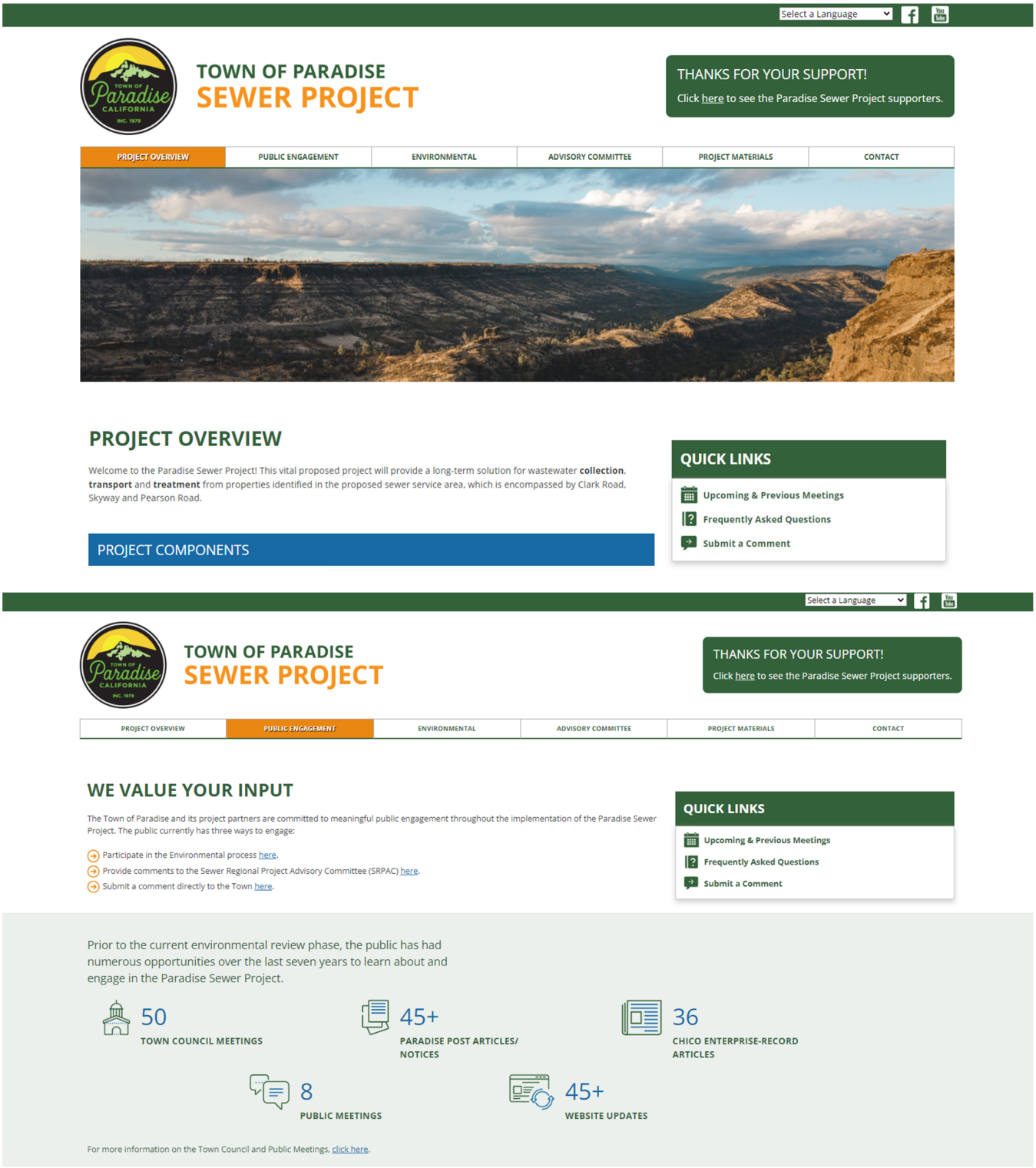
Telephone: 530-872-6291, ext. 112

Mail: Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

LEARN MORE ABOUT THE PARADISE SEWER PROJECT:
To learn more about the proposed project or to stay updated, visit paradisesewer.com.

# # #

Attachment D
Project Website


Select a Language
TOWN OF PARADISE
SEWER PROJECT
THANKS FOR YOUR SUPPORT!
Click here to see the Paradise Sewer Project supporters.
PROJECT OVERVIEW
PUBLIC ENGAGEMENT
ENVIRONMENTAL
ADVISORY COMMITTEE
PROJECT MATERIALS
CONTACT
PROJECT OVERVIEW
Welcome to the Paradise Sewer Project! This vital proposed project will provide a long-term solution for wastewater collection, transport and treatment from properties identified in the proposed sewer service area, which is encompassed by Clark Road, Skyway and Pearson Road.
PROJECT COMPONENTS
QUICK LINKS
Upcoming & Previous Meetings
Frequently Asked Questions
Submit a Comment
Select a Language
TOWN OF PARADISE
SEWER PROJECT
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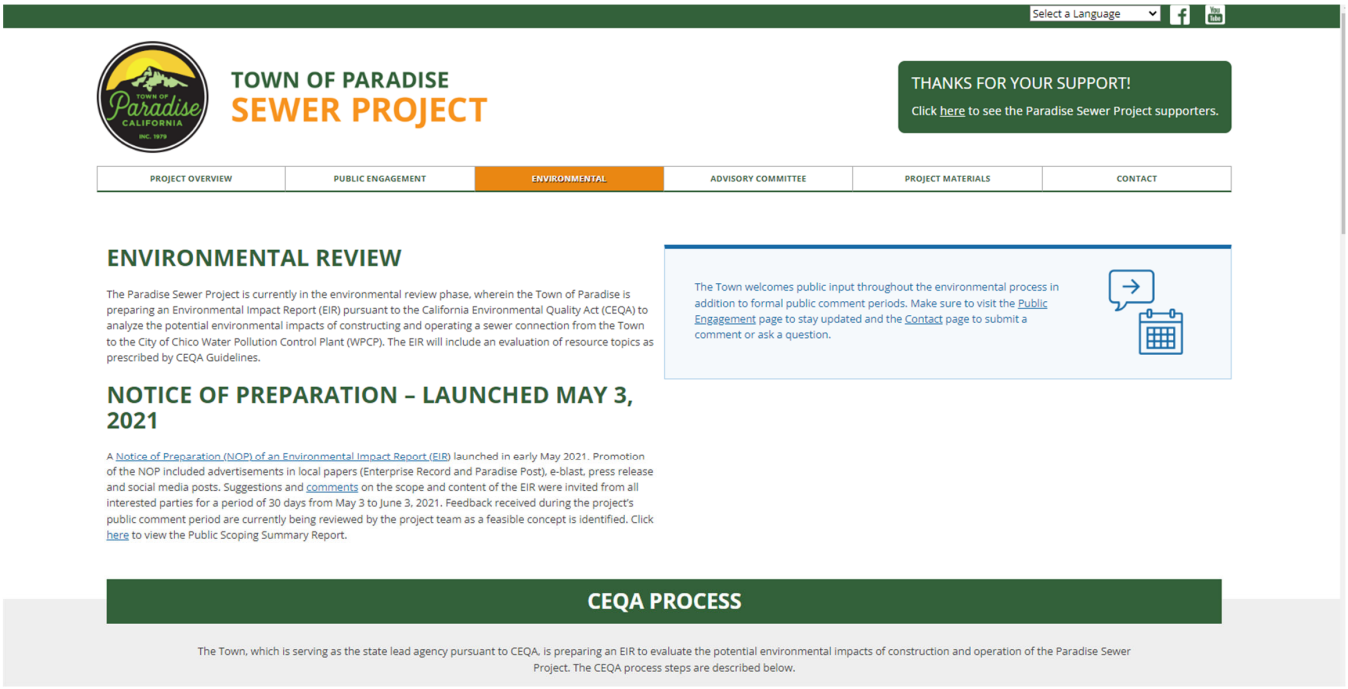
PROJECT OVERVIEW
PUBLIC ENGAGEMENT
ENVIRONMENTAL
ADVISORY COMMITTEE
PROJECT MATERIALS
CONTACT
WE VALUE YOUR INPUT
The Town of Paradise and its project partners are committed to meaningful public engagement throughout the implementation of the Paradise Sewer Project. The public currently has three ways to engage:
Participate in the Environmental process here.
Provide comments to the Sewer Regional Project Advisory Committee (SRPAC) here.
Submit a comment directly to the Town here.
QUICK LINKS
Upcoming & Previous Meetings
Frequently Asked Questions
Submit a Comment
Prior to the current environmental review phase, the public has had numerous opportunities over the last seven years to learn about and engage in the Paradise Sewer Project.
50
TOWN COUNCIL MEETINGS
45+
PARADISE POST ARTICLES/ NOTICES
36
CHICO ENTERPRISE-RECORD ARTICLES
8
PUBLIC MEETINGS
45+
WEBSITE UPDATES
For more information on the Town Council and Public Meetings, click here.


Select a Language
TOWN OF PARADISE
SEWER PROJECT
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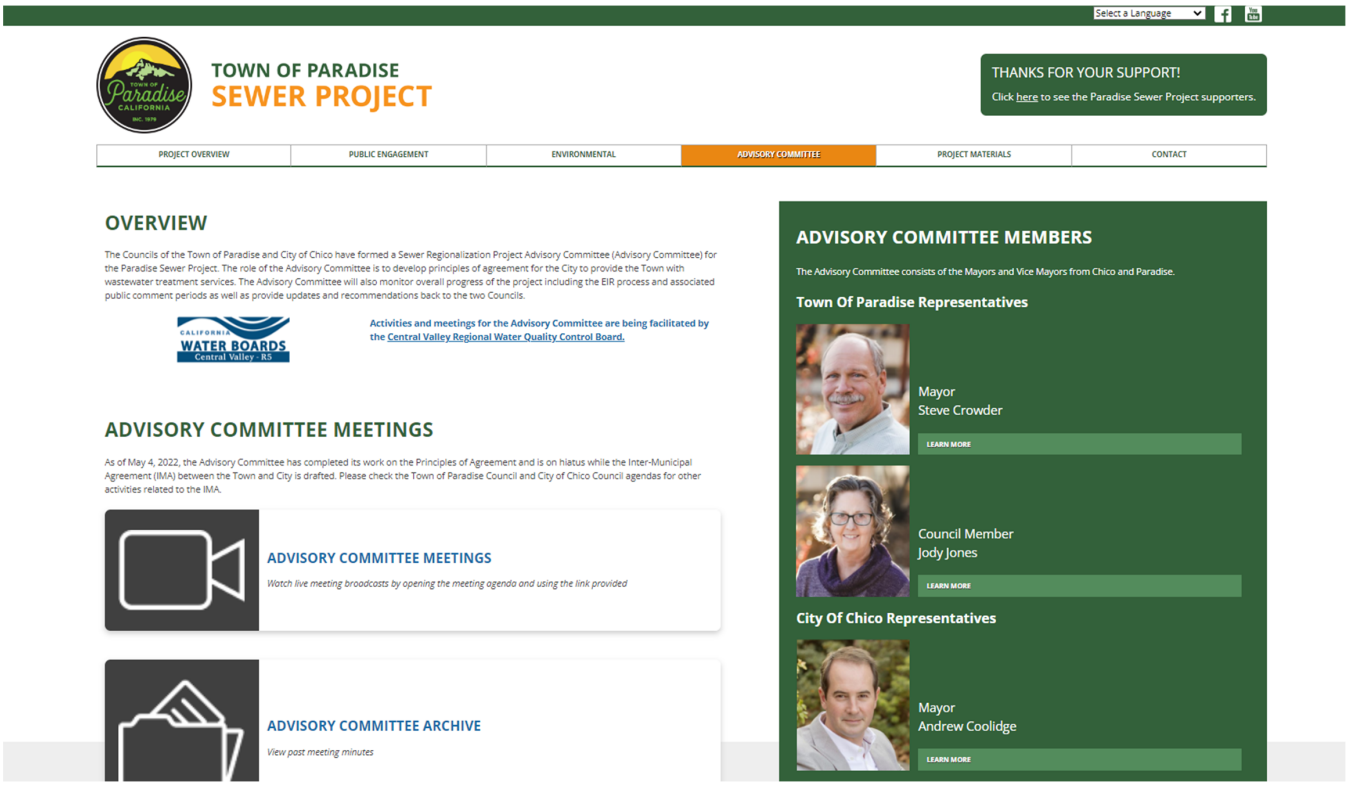
PROJECT OVERVIEW
PUBLIC ENGAGEMENT
ENVIRONMENTAL
ADVISORY COMMITTEE
PROJECT MATERIALS
CONTACT
ENVIRONMENTAL REVIEW
The Paradise Sewer Project is currently in the environmental review phase, wherein the Town of Paradise is preparing an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) to analyze the potential environmental impacts of constructing and operating a sewer connection from the Town to the City of Chico Water Pollution Control Plant (WPCP). The EIR will include an evaluation of resource topics as prescribed by CEQA Guidelines.
The Town welcomes public input throughout the environmental process in addition to formal public comment periods. Make sure to visit the Public Engagement page to stay updated and the Contact page to submit a comment or ask a question.
NOTICE OF PREPARATION – LAUNCHED MAY 3, 2021
A Notice of Preparation (NOP) of an Environmental Impact Report (EIR) launched in early May 2021. Promotion of the NOP included advertisements in local papers (Enterprise Record and Paradise Post), e-blast, press release and social media posts. Suggestions and comments on the scope and content of the EIR were invited from all interested parties for a period of 30 days from May 3 to June 3, 2021. Feedback received during the project's public comment period are currently being reviewed by the project team as a feasible concept is identified. Click here to view the Public Scoping Summary Report.
CEQA PROCESS
The Town, which is serving as the state lead agency pursuant to CEQA, is preparing an EIR to evaluate the potential environmental impacts of construction and operation of the Paradise Sewer Project. The CEQA process steps are described below.


Select a Language
TOWN OF PARADISE
SEWER PROJECT
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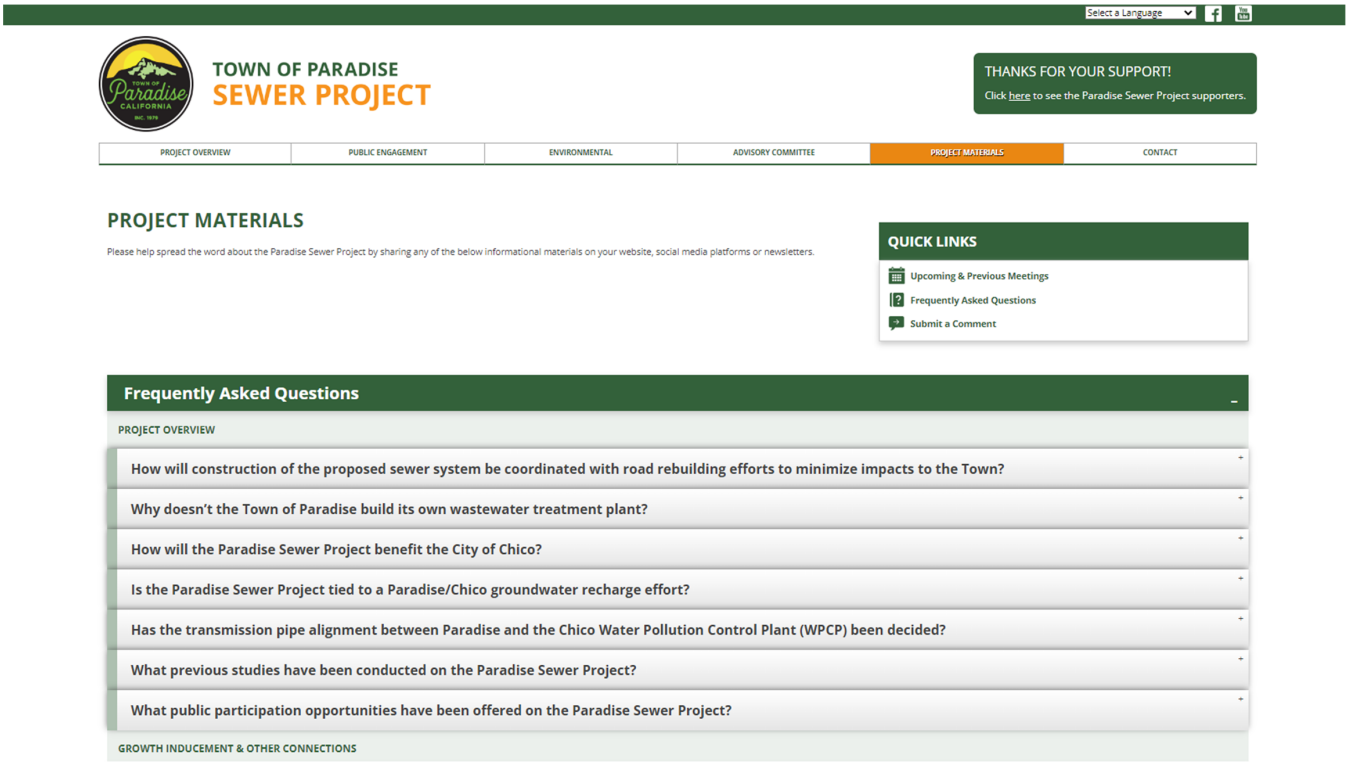
PROJECT OVERVIEW
PUBLIC ENGAGEMENT
ENVIRONMENTAL
ADVISORY COMMITTEE
PROJECT MATERIALS
CONTACT
OVERVIEW
The Councils of the Town of Paradise and City of Chico have formed a Sewer Regionalization Project Advisory Committee (Advisory Committee) for the Paradise Sewer Project. The role of the Advisory Committee is to develop principles of agreement for the City to provide the Town with wastewater treatment services. The Advisory Committee will also monitor overall progress of the project including the EIR process and associated public comment periods as well as provide updates and recommendations back to the two Councils.
CALIFORNIA WATER BOARDS Central Valley - R5
Activities and meetings for the Advisory Committee are being facilitated by the Central Valley Regional Water Quality Control Board.
ADVISORY COMMITTEE MEETINGS
As of May 4, 2022, the Advisory Committee has completed its work on the Principles of Agreement and is on hiatus while the Inter-Municipal Agreement (IMA) between the Town and City is drafted. Please check the Town of Paradise Council and City of Chico Council agendas for other activities related to the IMA.
ADVISORY COMMITTEE MEETINGS
Watch live meeting broadcasts by opening the meeting agenda and using the link provided
ADVISORY COMMITTEE ARCHIVE
View past meeting minutes
ADVISORY COMMITTEE MEMBERS
The Advisory Committee consists of the Mayors and Vice Mayors from Chico and Paradise.
Town Of Paradise Representatives
Mayor
Steve Crowder
LEARN MORE
Council Member
Jody Jones
LEARN MORE
City Of Chico Representatives
Mayor
Andrew Coolidge
LEARN MORE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TOWN OF PARADISE
SEWER PROJECT
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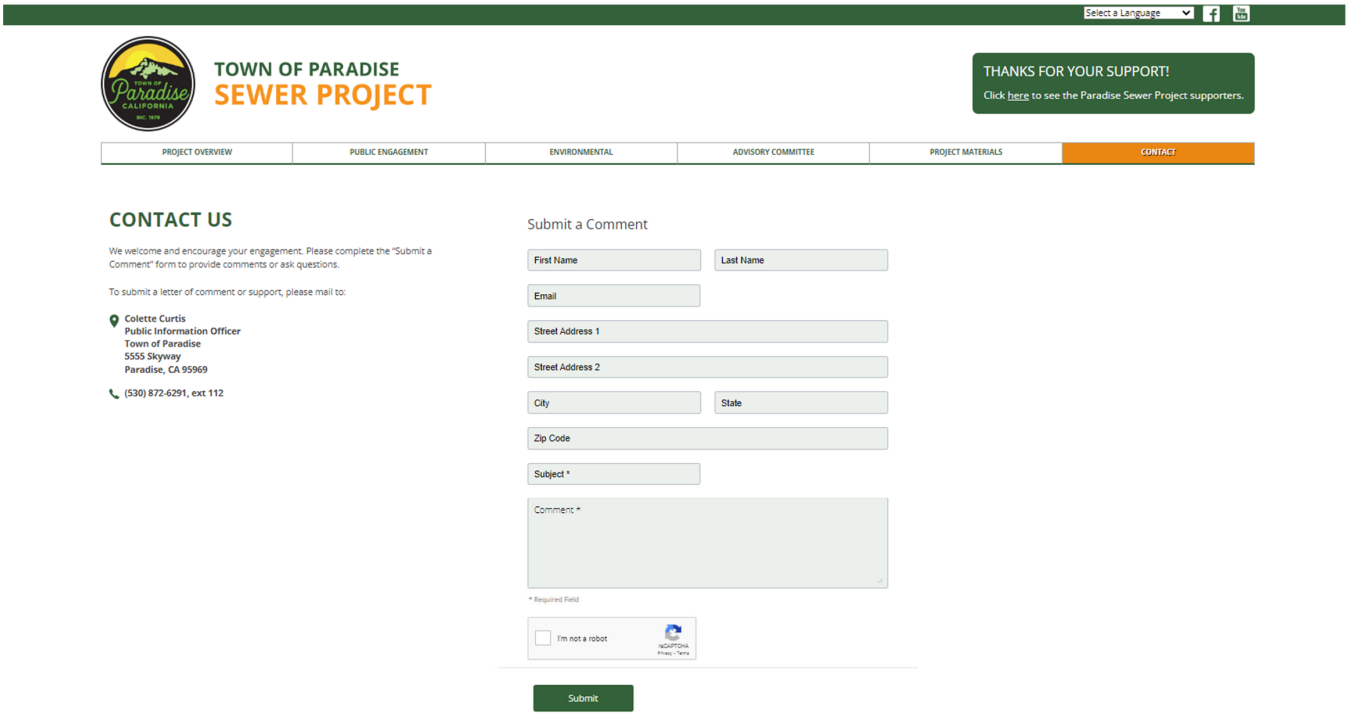
PROJECT OVERVIEW
PUBLIC ENGAGEMENT
ENVIRONMENTAL
ADVISORY COMMITTEE
PROJECT MATERIALS
CONTACT
PROJECT MATERIALS
Please help spread the word about the Paradise Sewer Project by sharing any of the below informational materials on your website, social media platforms or newsletters.
QUICK LINKS
Upcoming & Previous Meetings
Frequently Asked Questions
Submit a Comment
Frequently Asked Questions
PROJECT OVERVIEW
How will construction of the proposed sewer system be coordinated with road rebuilding efforts to minimize impacts to the Town?
Why doesn't the Town of Paradise build its own wastewater treatment plant?
How will the Paradise Sewer Project benefit the City of Chico?
Is the Paradise Sewer Project tied to a Paradise/Chico groundwater recharge effort?
Has the transmission pipe alignment between Paradise and the Chico Water Pollution Control Plant (WPCP) been decided?
What previous studies have been conducted on the Paradise Sewer Project?
What public participation opportunities have been offered on the Paradise Sewer Project?
GROWTH INDUCEMENT & OTHER CONNECTIONS


Select a Language
TOWN OF PARADISE
SEWER PROJECT
THANKS FOR YOUR SUPPORT!
Click here to see the Paradise Sewer Project supporters.
PROJECT OVERVIEW
PUBLIC ENGAGEMENT
ENVIRONMENTAL
ADVISORY COMMITTEE
PROJECT MATERIALS
CONTACT
CONTACT US
We welcome and encourage your engagement. Please complete the "Submit a Comment" form to provide comments or ask questions.
To submit a letter of comment or support, please mail to:
Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969
(530) 872-6291, ext 112
Submit a Comment
First Name
Last Name
Email
Street Address 1
Street Address 2
City
State
Zip Code
Subject *
Comment *
* Required Field
I'm not a robot
Submit

Attachment E
E-Blasts

Send on Monday, May 3, 2021
Subject: Paradise Sewer Project Environmental Scoping & Virtual Public Meetings

TOWN OF PARADISE
SEWER PROJECT

ENVIRONMENTAL SCOPING INFORMATION & VIRTUAL PUBLIC MEETINGS

The Town of Paradise (Town), the California Environmental Quality Act (CEQA) Lead Agency, officially launched the environmental review process for the Paradise Sewer Project with this Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Virtual Public Scoping Meetings. The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR.

LEARN MORE AT UPCOMING VIRTUAL PUBLIC MEETINGS

For your convenience, and to allow participation in a safe environment while social distancing, two virtual public meetings will be held during the project's 30-day scoping period to allow attendees to learn about the project, interact with project team members, ask questions and submit formal comments.

THURSDAY, MAY 13, 2021 | 6 P.M.	**TUESDAY, MAY 25, 2021 | 12 P.M.**
ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg1 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 202 6837	ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg2 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 877 2748

SUBMITTING COMMENTS

Suggestions and comments on the scope and content of the EIR are invited from all interested parties for a period of 30 days (May 3 through June 3, 2021 by 5 p.m. PDT). Written or verbal comments concerning the proposed project's environmental scope should be submitted via the following options.

Website: paradisesewer.com/contact
(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")

Telephone: 530-872-6291, ext. 112

Mail: Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

LEARN MORE ABOUT THE PARADISE SEWER PROJECT

To learn more about the proposed project or to stay updated, visit paradisesewer.com.

Send on Tuesday, May 11, 2021
Subject: Paradise Sewer Project – First Virtual Public Meeting This Week

TOWN OF PARADISE
SEWER PROJECT

REMINDER: FIRST VIRTUAL PUBLIC MEETING HAPPENING THIS WEEK

Don't forget, our first virtual public meeting for the Paradise Sewer Project is this Thursday. Join us to learn more about the project, interact with team members, ask questions and submit formal comments.

JOIN ONLINE OR BY PHONE

You can participate in the meetings online **or** by phone to remain safe while social distancing. **Your participation matters!**

THURSDAY, MAY 13, 2021 | 6 P.M.

ONLINE:
- **Webex:** bit.ly/Paradise_Sewer_Mtg1
- **Webex Password:** Paradise

BY PHONE:
- **Dial-in #:** 408-418-9388
- **Code:** 123 202 6837

TUESDAY, MAY 25, 2021 | 12 P.M.

ONLINE:
- **Webex:** bit.ly/Paradise_Sewer_Mtg2
- **Webex Password:** Paradise

BY PHONE:
- **Dial-in #:** 408-418-9388
- **Code:** 123 877 2748

SUBMITTING COMMENTS

Even if you can't make the meetings, suggestions/comments on the scope and content of the EIR are invited from all interested parties anytime until 5 p.m. on June 3, 2021. Written or verbal comments concerning the proposed project's environmental scope can be submitted via the following options.

Website: paradisesewer.com/contact
(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")

Telephone: 530-872-6291, ext. 112

Mail: Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

LEARN MORE ABOUT THE PARADISE SEWER PROJECT

To learn more about the proposed project or to stay updated, visit paradisesewer.com.

Send week of May 17, 2021
Subject: Paradise Sewer Project – Second Virtual Public Meeting Next Week

TOWN OF PARADISE
SEWER PROJECT

DID YOU MISS LAST WEEK'S VIRTUAL PUBLIC MEETING?

In case you missed our first virtual public meeting last week for the Paradise Sewer Project, we're hosting a second meeting next Tuesday, May 25 at Noon. Your participation and input matters so don't miss the discussion on this important proposed project.

JOIN ONLINE OR BY PHONE

You can participate in the meeting online **or** by phone. Join us to learn more about the project, interact with team members, ask questions and submit formal comments. **We look forward to connecting with you!**

> **TUESDAY, MAY 25, 2021 | 12 P.M.**
>
> ONLINE:
> - **Webex:** bit.ly/Paradise_Sewer_Mtg2
> - **Webex Password:** Paradise
>
> BY PHONE:
> - **Dial-in #:** 408-418-9388
> - **Code:** 123 877 2748

SUBMIT COMMENTS ANYTIME UNTIL JUNE 3

Suggestions and comments on the scope and content of the EIR are invited from all interested parties anytime until 5 p.m. on June 3, 2021. Written or verbal comments concerning the proposed project's environmental scope can be submitted via the following options.

Website: paradisesewer.com/contact
(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")

Telephone: 530-872-6291, ext. 112

Mail: Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

STAY INVOLVED

To learn more about the proposed project or to stay updated, visit paradisesewer.com.

Send on Thursday, May 27, 2021
Subject: Thank You for Attending our Paradise Sewer Project Virtual Public Meetings

TOWN OF PARADISE
SEWER PROJECT

THANK YOU FOR ENGAGING WITH US!

Thank you for joining us this month for our two virtual public scoping meetings for the Paradise Sewer Project. The Town of Paradise appreciates your input during the meetings and ongoing participation in this project.

THERE'S STILL TIME TO SUBMIT COMMENTS

If you didn't get a chance to attend our meetings, please visit our Public Engagement page to view the meeting recordings and PowerPoint. We still welcome your input regarding the scope and content of environmental information to be included in the Environmental Impact Report. You can submit a comment or letter of support through a number of ways during our public comment period that ends at **5 p.m. PDT on June 3, 2021**.

Website: paradisesewer.com/contact
(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")

Telephone: 530-872-6291, ext. 112

Mail: Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

STAY UPDATED

We thank you for your continued interest in the vital proposed project and encourage you to stay updated throughout the various project milestones by visiting paradisesewer.com!

Attachment F
Social Media

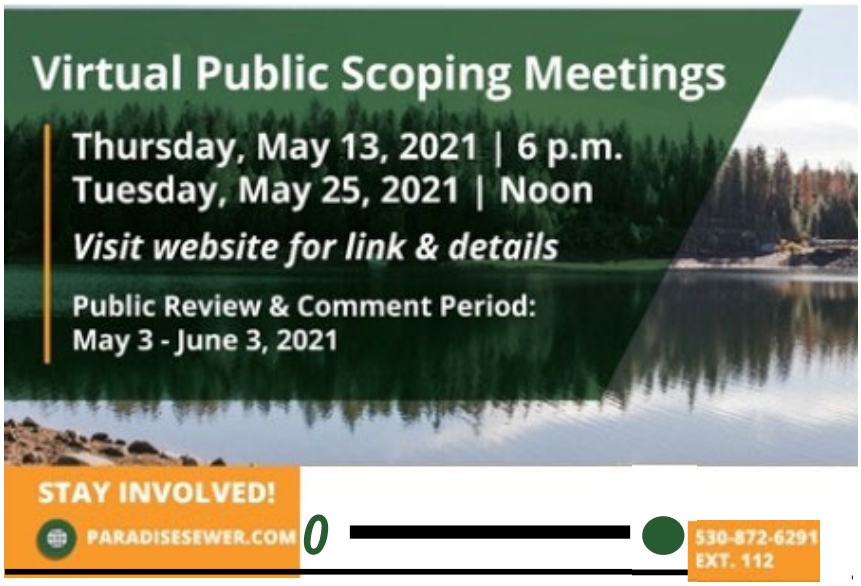
Town of Paradise
May3, 2021

Paradise Sewer Project - Environmental Review Update

We have kicked o ff the environment al review of the Paradise Sewer Project and want your input. This vital proposed Project will provide a long-term solution for wastewater collection, transport and treatment from properties identified in the proposed sewer service area, which is encompassed mostly by Clark Road, Skyway and Pearson Road. This long-term wastewater solution will allow for sustainable housing and business activity in Town, supporting the community's economic recovery and vitality.

Visit paradisesewer.com to learn more about the environmental review process and this initial public comment period that will end at 5 p.m. PDT on June 3.

TOWN OF PARADISE
SEWER PROJECT



0 22 3 Comments 14 Shares

Town of Paradise
May 3, 2021

Paradise Sewer Project Public Scoping Meetings

Don't forget, we're hosting our first of two virtual public meetings this Thursday for the Paradise Sewer Project. Your participation and input matters so join us online or by phone to learn more about this vital proposed project and talk directly with the project team.

Visit www.paradisesewer.com for meeting details or to submit comments during the project's 30-day scoping period, which will end at 5 p.m. PDT on June 3.

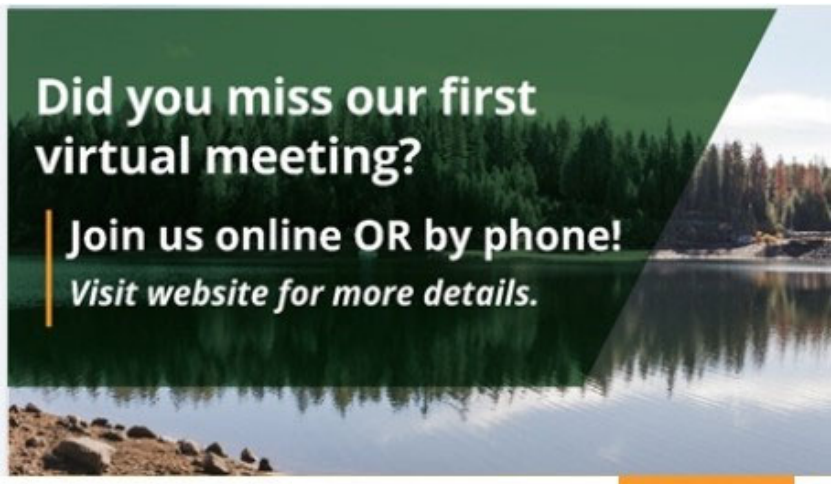
0 10 2 Comments 10 Shares

Town of Paradise
May 2021

If you missed our first virtual public meeting last week for the Paradise Sewer Project don't worry, we're hosting a second meeting next Tuesday, May 25 at Noon. Don't miss the discussion on this important proposed project. We look forward to connecting with you!

Visit www.paradisesewer.com for meeting details or to submit comments during the project's 30-day scoping period, which ends June 3 at 5 p.m. PDT.

TOWN OF PARADISE
SEWER PROJECT



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4 Comments 6 Shares

Town of Paradise
May 27, 2021

Thank you for joining us this month for our two virtual public scoping meetings for the Paradise Sewer Project. If you didn't get a chance to attend our meetings. we still welcome your input regarding the scope and content of environmental information to be included in the Environmental Impact Report.

You can submit a comment or a letter of support through a number of ways during our public comment period that ends at 5 p.m. PDT on June 3, 2021. Send us an email. leave a voicemail, write a letter. or connect with the project team via our website contact page.

We appreciate your ongoing interest in this vital proposed project and encourage you to stay updated throughout the various project milestones by visiting www.paradisesewer.com.

Attachment G
Virtual Public Meeting Presentation

TOWN OF PARADISE

SEWER PROJECT

Public Scoping Meeting for the Environmental Impact Report

Thursday, May 13, 2021 | 6 p.m.

Tuesday, May 25, 2021 | Noon

TOWN OF PARADISE
SEWER PROJECT

Agenda

- Purpose & Introductions
- Meeting Logistics
- Project Overview
- CEQA Overview
- Public Comment

TOWN OF PARADISE
SEWER PROJECT

Meeting Logistics

- Meeting is being recorded for documentation
- Until the Q&A session begins, attendees will be muted for best audio quality
- Opportunity to comment/ask questions during facilitated Q&A session.
  - ***Instructions will be displayed onscreen:***
    - Type questions/comments into Q&A box (chat box will be disabled)
    - Raise hand then wait to be called upon and unmuted
- Time Limit: **2 minutes per person**
- If unable to answer questions or run out of time, will follow-up with all Q&A in writing
- For more information, visit paradisesewer.com

TOWN OF PARADISE
SEWER PROJECT

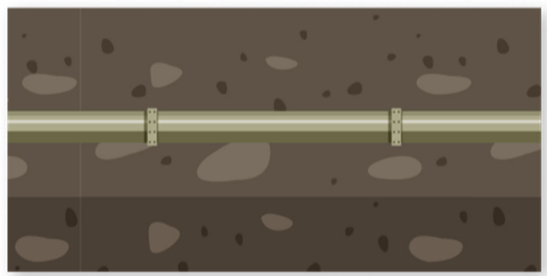
Project Overview

TOWN OF PARADISE
SEWER PROJECT

Project Components

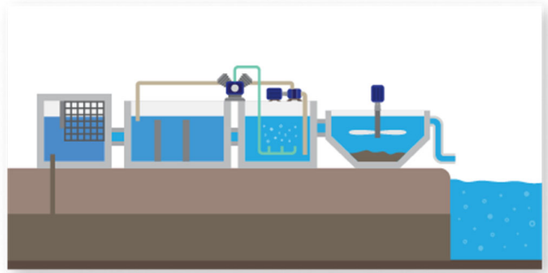
COLLECTION

A series of gravity sewers, small pump stations, and pressure lines will collect wastewater from the Sewer Service Area and convey it to the southwest edge of Paradise.



TRANSPORT

A single pipeline will convey Paradise wastewater down Skyway and across south Chico to the Chico Water Pollution Control Plant (WPCP).

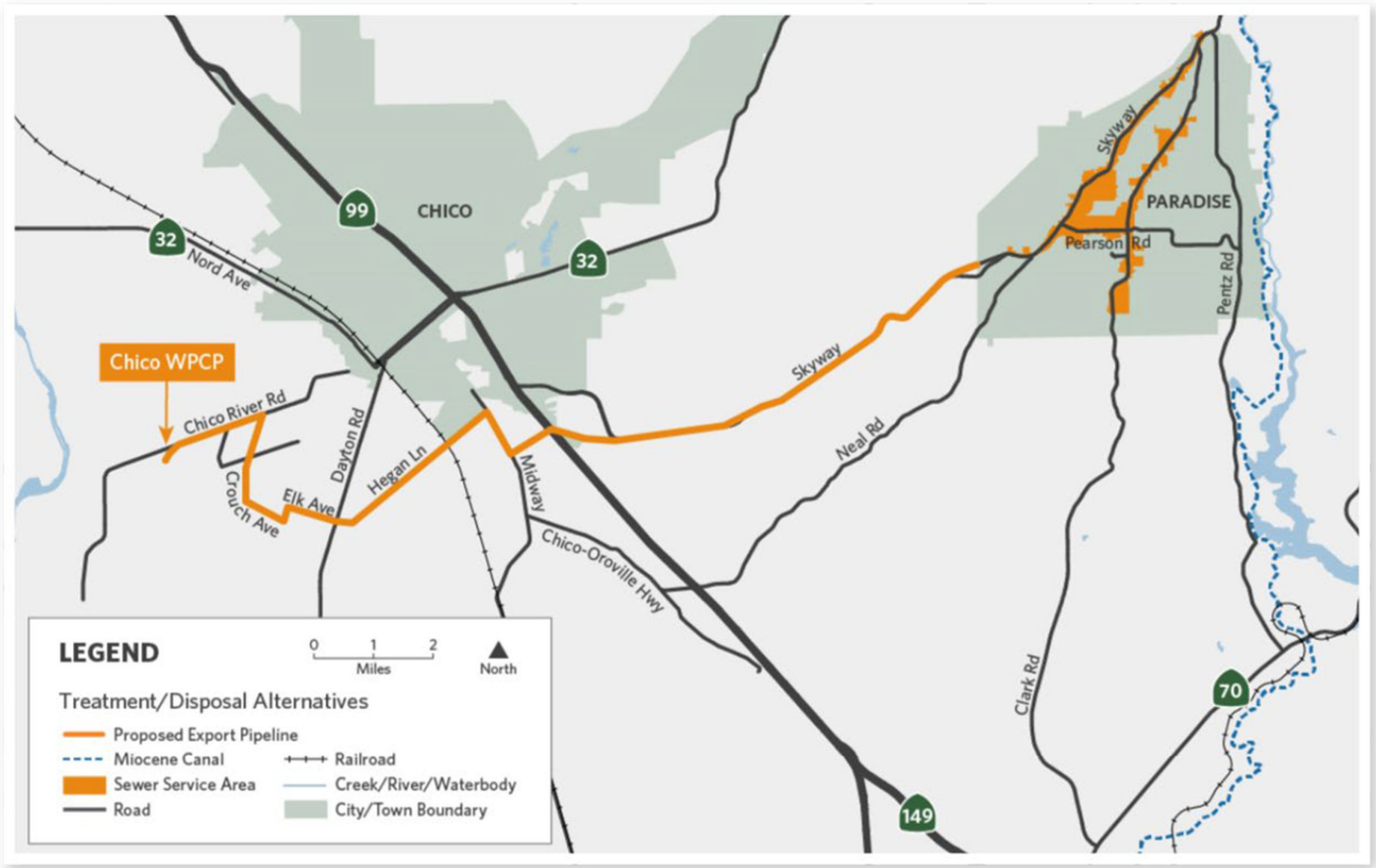


TREATMENT

At the Chico WPCP, Paradise wastewater will blend with Chico wastewater. The combined flow will receive high-level treatment before discharging to the Sacramento River.

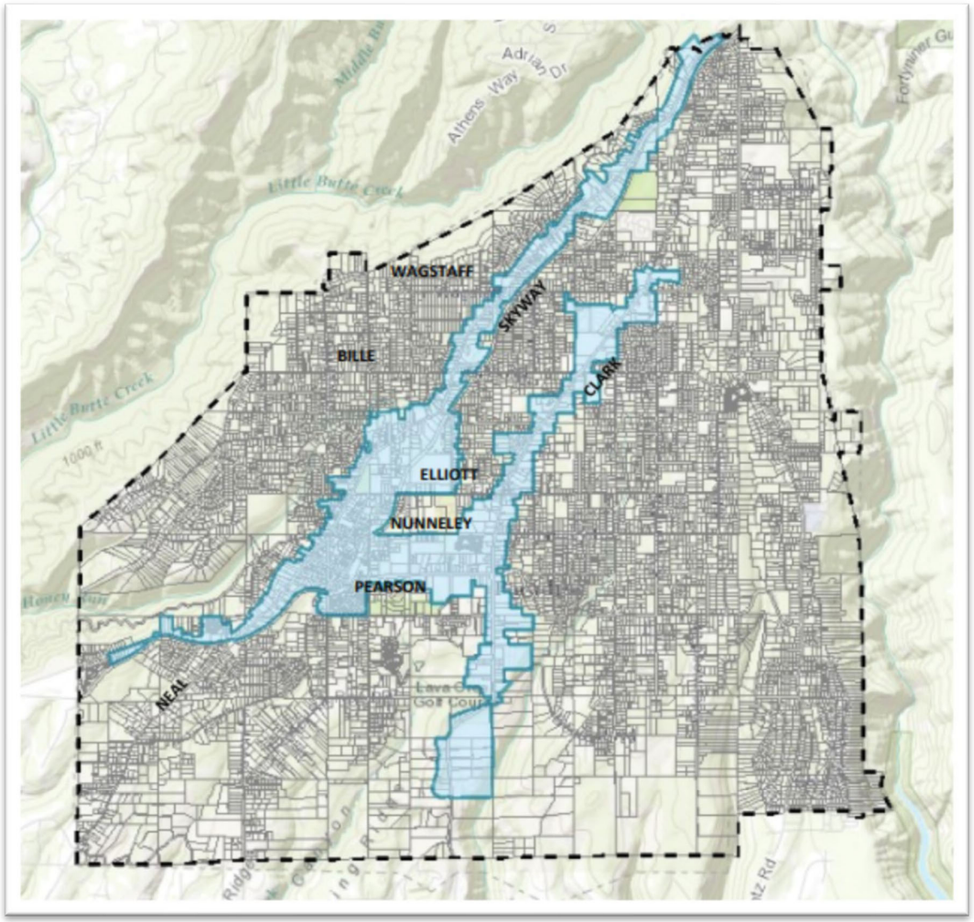
TOWN OF PARADISE
SEWER PROJECT

Project Area Map



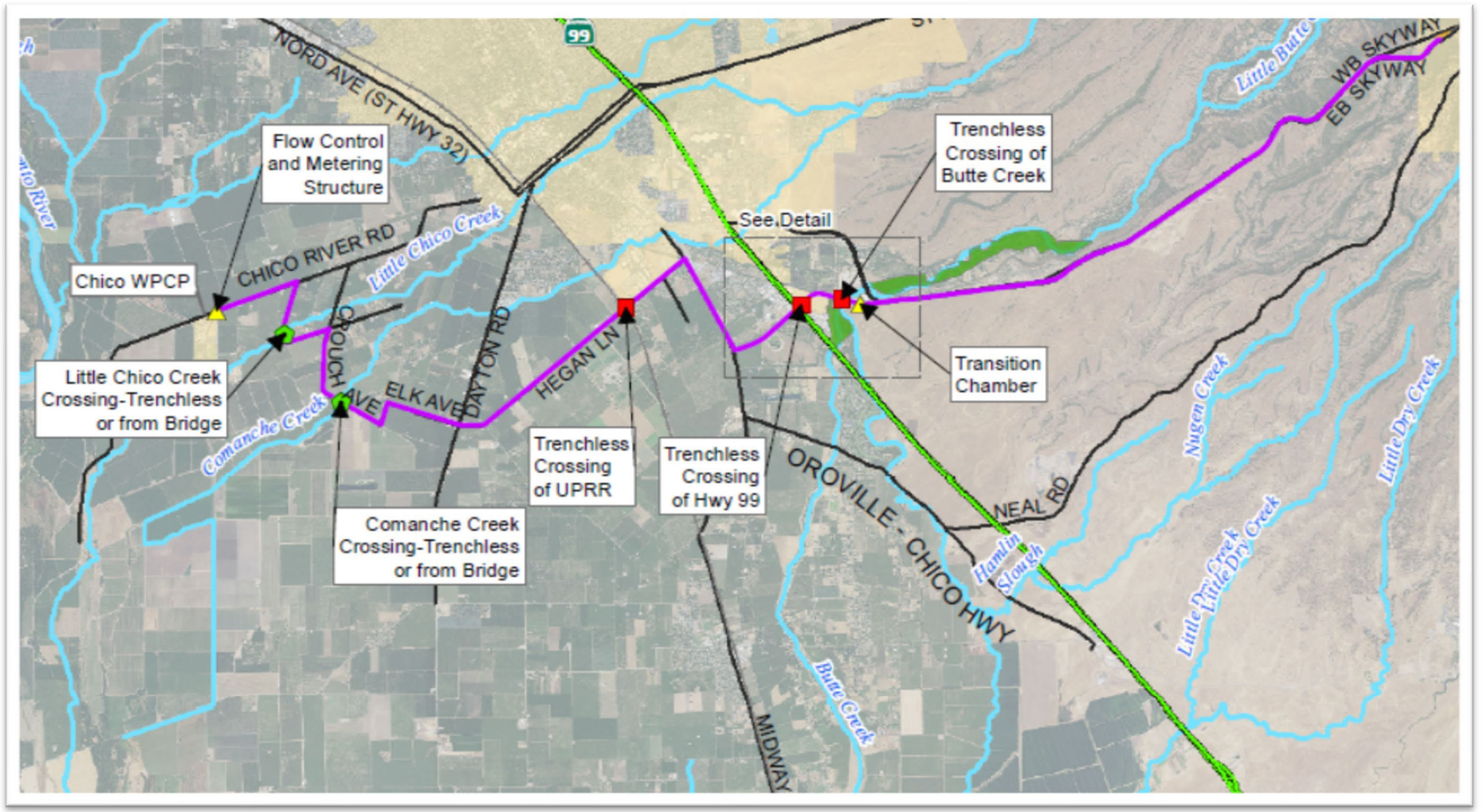
TOWN OF PARADISE
SEWER PROJECT

Sewer Service Area



TOWN OF PARADISE
SEWER PROJECT

Export Pipeline – South Chico Area



TOWN OF PARADISE
SEWER PROJECT

Project Costs

Proposed project currently estimated to cost approximately **$184 million**

$2M

EIR

(*fully funded*)

$30M

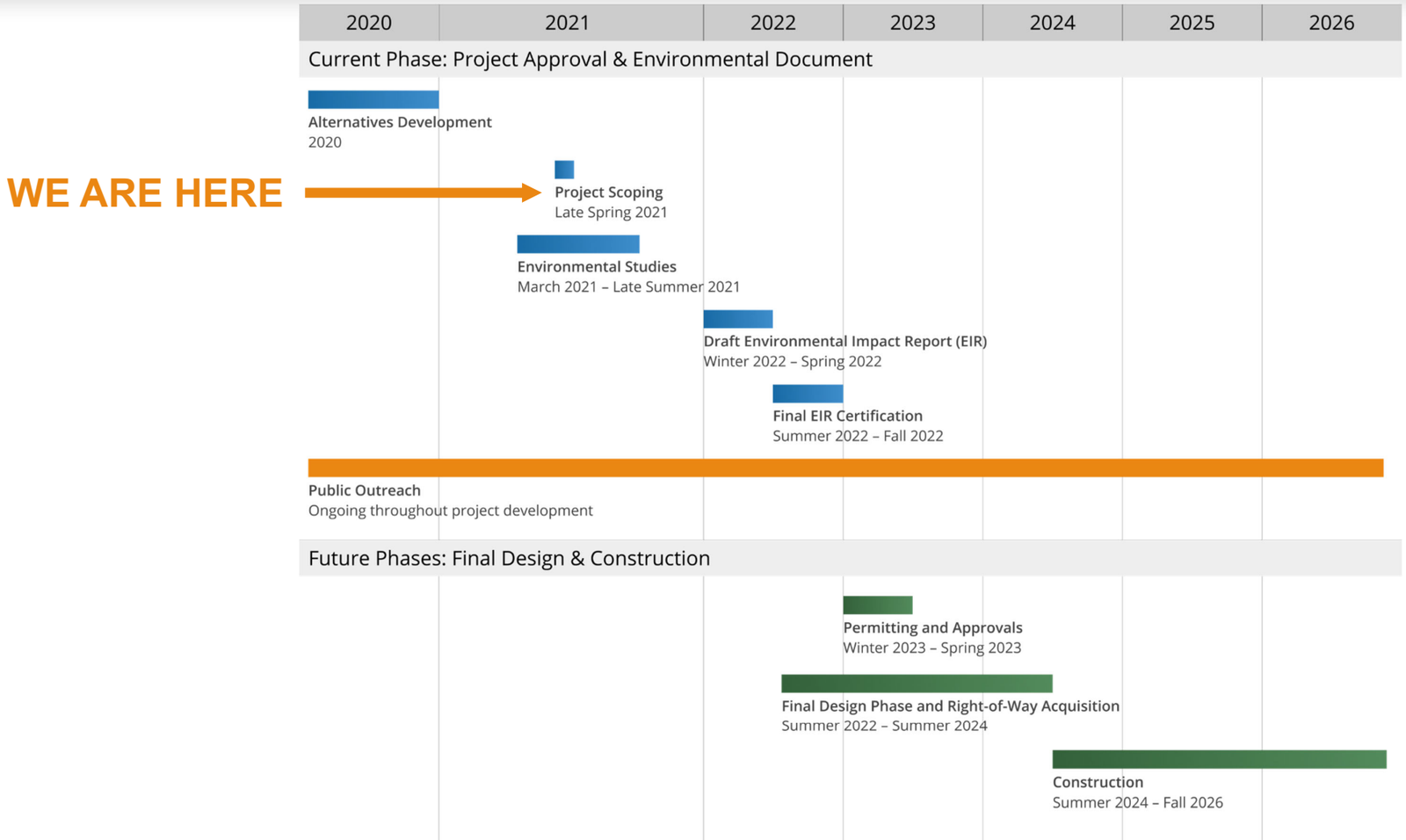
Design and Right-of-way

$152M

Construction

TOWN OF PARADISE
SEWER PROJECT

Project Schedule



TOWN OF PARADISE
SEWER PROJECT

Project Benefits

Paradise Sewer Project will bring many benefits to the region:

Provide wastewater disposal surety to help businesses and jobs return to Paradise and spur economic recovery

Improve Paradise groundwater quality by decreasing septic tank discharges

Allow for more densely-populated residential development in the Town to increase affordable/multi-family housing

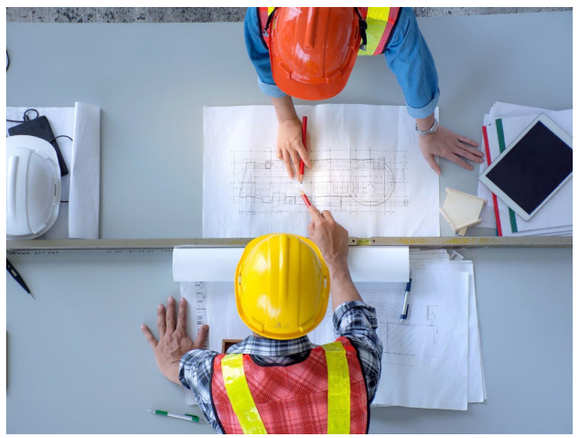
Create a wastewater solution supported by the Central Valley Regional Water Quality Control Board and partner agencies to help create opportunities for additional funding

TOWN OF PARADISE
SEWER PROJECT

CEQA Overview

TOWN OF PARADISE
SEWER PROJECT

California Environmental Quality Act (CEQA)



PROJECT

A discretionary action by a public agency that has the potential to result in a physical change in the environment, either directly or indirectly

TOWN OF PARADISE
SEWER PROJECT

CEQA *(continued)*

Purpose of CEQA

Inform agency decision-makers and the public of significant project environmental effects

Identify feasible ways to avoid or reduce significant impacts, including mitigation measures and alternatives

Provide an opportunity for the public and agencies to comment on the environmental analyses

TOWN OF PARADISE
SEWER PROJECT

CEQA *(continued)*

SIGNIFICANT EFFECT ON THE ENVIRONMENT

A substantial, or potentially substantial, adverse change in physical conditions within the project area

TOWN OF PARADISE
SEWER PROJECT

CEQA *(continued)*

TECHNICAL RESOURCES BEING CONSIDERED:

- Land Use
- Agriculture
- Recreation
- Aesthetics & Visual Resources
- Air Quality
- Greenhouse Gas Emissions
- Noise
- Energy
- Geology and Soils
- Hydrology & Water Quality
- Biological Resources
- Cultural Resources
- Tribal Cultural Resources
- Hazards & Hazardous Materials
- Public Services & Utilities
- Population & Housing
- Transportation
- Wildfire

Other CEQA Topics:

- Growth Inducement
- Cumulative Impacts
- Alternatives
- Impacts Not Significant
- Summary of Impacts

TOWN OF PARADISE
SEWER PROJECT

Key Decision Makers

CEQA LEAD AGENCY

TOWN OF PARADISE CALIFORNIA
Incorporated November 27, 1979

RESPONSIBLE AGENCIES

CITY OF CHICO
INC. 1872

BUTTE LAFCO

Other Responsible or Trustee Agencies may be identified through planning process. The Town has initiated tribal notifications in accordance with Assembly Bill 52.

TOWN OF PARADISE
SEWER PROJECT

CEQA Process

1 Notice of Preparation (NOP) of EIR
LAUNCHED | MAY 3, 2021

2 Scoping & Minimum 30-Day Public Comment Period — Public Scoping Meeting
PUBLIC REVIEW & COMMENT PERIOD | MAY 3 – JUNE 3, 2021

3 Draft EIR Development
MAY / JUNE 2021

4 Draft EIR Minimum 45-Day Circulation for Public/Agency Review & Comment — Public Meeting
PUBLIC ENGAGEMENT OPPORTUNITY | WINTER 2022

5 Final EIR, Mitigation Monitoring & Reporting Program
SUMMER 2022

6 Decision/Notice of Determination — Public Hearing
PUBLIC ENGAGEMENT OPPORTUNITY | SUMMER 2022

TOWN OF PARADISE
SEWER PROJECT

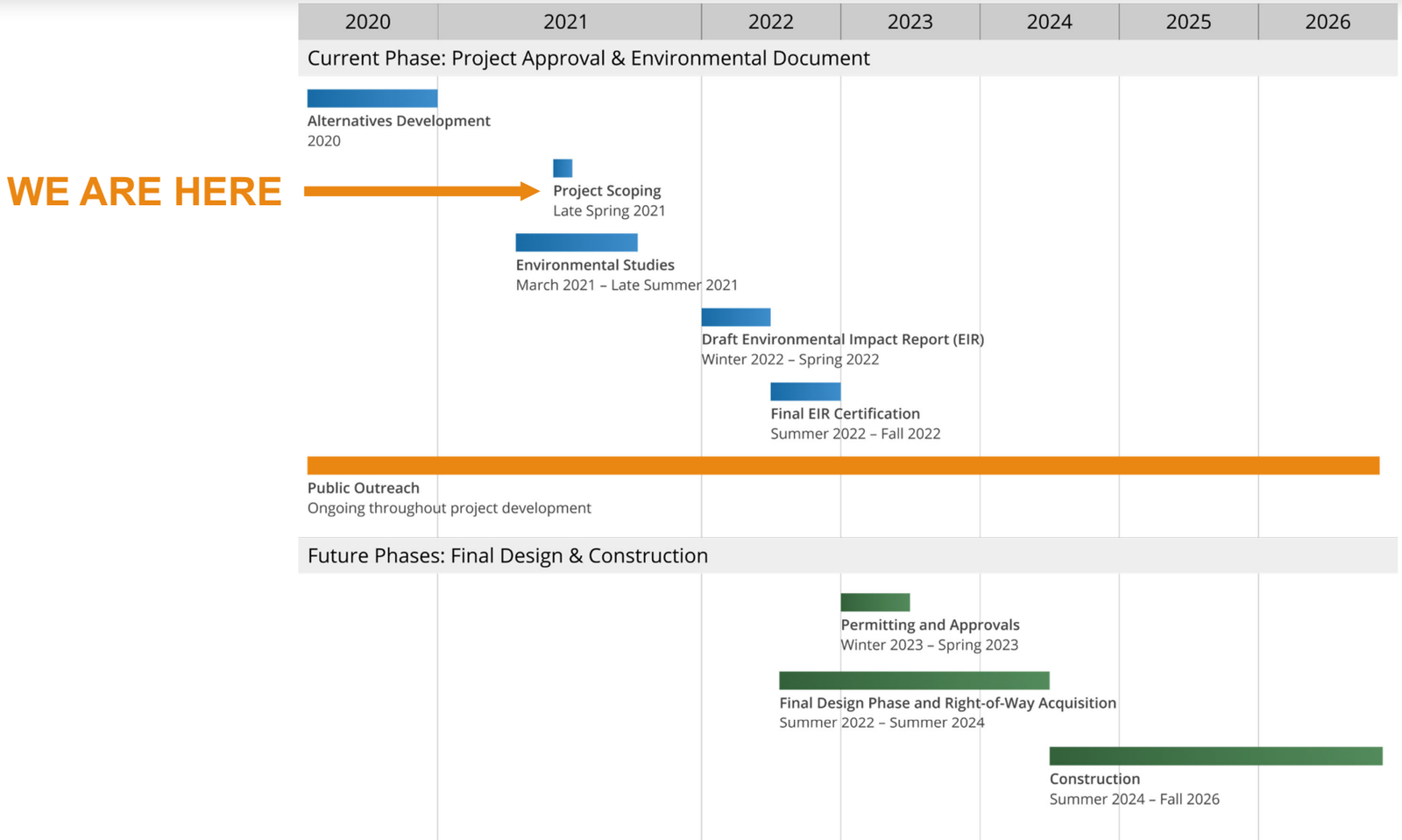
Proactive Public Engagement

Public engagement program designed to:

- Provide convenient and timely information
- Educate and inform about the project
- Seek public participation throughout environmental planning process

TOWN OF PARADISE
SEWER PROJECT

Project Schedule



TOWN OF PARADISE
SEWER PROJECT

How to Provide Comments

Provide comments during today's meeting

paradisesewer.com
(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")

(530) 872-6291, ext. 112

Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

We invite your comments on:

- Environmental issues that should be studied
- Nature and extent of potential environmental impacts
- Methods of analysis
- Measures that could reduce environmental impacts
- Alternatives that could avoid or reduce impacts

Suggestions & comments accepted until 5 p.m. PDT on June 3, 2021

TOWN OF PARADISE
SEWER PROJECT

Q&A Session: How to Participate

RAISE YOUR HAND

- Select raise hand
  - **Internet Browser:** , then
  - **Webex Software:** , then
  - **Mobile App:** , then
- Wait to be called upon and unmuted
- Lower hand after speaking

DIALED-IN BY PHONE

- Press *3 to “Raise/Lower Hand”

TIME LIMIT: 2 minutes per person

SUBMIT QUESTIONS

- Select appropriate icon
  - **Internet Browser:**
  - **Webex Software:** “ Q&A”
  - **Mobile App:** , then
- Type question/comment into Q&A box
- Moderator will read question/comment aloud for panelists’ response
- Chat box will be disabled during meeting

If unable to answer questions or run out of time, we’ll follow-up with all Q&A in writing

TOWN OF PARADISE
SEWER PROJECT

Stay Informed

paradisesewer.com

(530) 872-6291, ext. 112

Town of Paradise
5555 Skyway, Paradise, CA 95969

FOLLOW US ON SOCIAL townofparadise Town of Paradise

Attachment H
Comment Matrix

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
4/8/21 11:06 a.m.	Myron Coleman Coleman Pipelines 6300 Stiffer Rd Magalia, CA 95954 530-413-3490 excavatorhand@gmail.com	Website	Good morning my name is Myron Coleman owner of Coleman Pipelines. I was wondering when will the bids be coming for subcontractors. Any information would be greatly appreciated. Thank you.	
4/20/21 8:26 a.m.	Matt Rogers 1115 E Ewald Ct, Suite A Paradise, CA 95969 matt@rfrcustomfab.com	Website	Good morning. Are there any estimates of how much it will cost individual properties to hook up to the proposed sewer line?	
4/28/21 10:21 a.m.	Jacquelyn 6777 Moore Rd Paradise, CA 95969 jackiemw1224@yahoo.com	Website	My home is being rebuilt at 6777 Moore rd. It looks like I am aligned to get the sewer but have concerns. I am downslope from skyway and worry about hydrologic pressure and needing it to flow uphill. My homes septic is downslope from my house too I worry about what the monthly charge as I am a senior on a fixed income	
5/3/21 12:02 p.m.	Sasha Poe 1043 Central park Dr Paradise, CA 95969 sasha@kmsgrinding.com	Website	I have asked numerous times for our Community Commercial to be included in Sewer Plans. No one has responded. My lot 1043 Central Park should be included in sewer district addresses as it is community commercial!! Please call me 530-327-4949	
5/3/21	Nancy Gonzalez-Lopez Cultural Resources Analyst Native American Heritage Commission 1550 Harbor Boulevard, Suite 100 West Sacramento, CA 95691 (916) 373-3710 Nancy.Gonzalez-Lopez@nahc.ca.gov	Letter	May 3, 2021 Colette Curtis Town of Paradise 5555 Skyway Paradise, CA 95969 **Re: 2021050008, Paradise Sewer Project, Butte County** Dear Ms. Curtis: The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
			need to determine whether there are historical resources within the area of potential effect (APE). CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply. The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws**. <u>AB 52</u> AB 52 has added to CEQA the additional requirements listed below, along with many other requirements: **1.** <u>Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:</u> Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes: **a.** A brief description of the project. **b.** The lead agency contact information.	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
			c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)). **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073). **2.** Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)). **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)). **3.** Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation: **a.** Alternatives to the project**.** **b.** Recommended mitigation measures. **c.** Significant effects**.** (Pub. Resources Code §21080.3.2 (a)). **4.** Discretionary Topics of Consultation: The following topics are discretionary topics of consultation: **a.** Type of environmental review necessary. **b.** Significance of the tribal cultural resources. **c.** Significance of the project's impacts on tribal cultural resources. **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)). **5.** Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
			6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following: **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource. **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)). **7.** Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs: **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)). **8.** Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)). **9.** Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)). **10.** Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources: **a.** Avoidance and preservation of the resources in place, including, but not limited to: **i.** Planning and construction to avoid the resources and protect the cultural and natural context. **ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
			b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following: **i.** Protecting the cultural character and integrity of the resource. **ii.** Protecting the traditional use of the resource. **iii.** Protecting the confidentiality of the resource. **c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places. **d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)). **e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)). **f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991). **11.** Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs: **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2. **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process. **c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)). The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf SB 18 SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal	

Town of Paradise Sewer Project
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DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
			Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf. Some of SB 18's provisions include: **1.** Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)). **2.** No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation. **3.** Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)). **4.** Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which: **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18). Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/. NAHC Recommendations for Cultural Resources Assessments To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
			1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine: **a.** If part or all of the APE has been previously surveyed for cultural resources. **b.** If any known cultural resources have already been recorded on or adjacent to the APE. **c.** If the probability is low, moderate, or high that cultural resources are located in the APE. **d.** If a survey is required to determine whether previously unrecorded cultural resources are present. **2.** If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure. **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center. **3.** Contact the NAHC for: **a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE. **b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures. **4.** Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence. **a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities. **b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
			c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery. If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov. Sincerely, Nancy Gonzalez-Lopez Cultural Resources Analyst cc: State Clearinghouse 2021050008_NAHC Comment.pdf	
5/11/21	Sandra Peltola Box 501 Fort Bragg, CA 95437 Roof1@aol.com	Website	What will be the cost be to each property owner? How will it be charged to the property owners? A tax bond? Do Owners get to vote on whether they want sewers in Paradise? What if they want to opt out, if it goes through? After all the community has been through, I think it should be shelved until at least 10 years has passed since the horrific and life changing fire. Bring it up after people have either been paid by PGE lawsuit, rebuilt, or sold their properties. It would be heartless to expect owners to pay for this measure, and possibly never see the project finished, or be able to use it as they have not re-built. I vote NO on Paradise Sewer Project!	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
5/13/21 4:04 p.m.	Richard Harriman General Counsel Northern California Environmental Defense Center 1078 Via Verona Drive Chico, CA 95973-1031 richardharrimanattorney@gmail.com	Website	1. The most important issues regarding this proposed project are the Project Description and the Alternatives Analysis. 2. The stated purpose of the project is to redevelop the Town of Paradise and restore housing opportunities for the TOP, which will also cause accelerated growth and potentially significant indirect and secondary unplanned adverse environmental effects in the unincorporated areas of the County. However, project consultants have stated in open public meetings that this project will notbe completed for between 5-10 years. 3. This fact raises significant questions regarding the true purpose and intent of the proposed project, which are to accelerate and increase urban growth and development in the City of Chico. This will require a comprehensive update of the City of Chico's General Plan and the certification of a new EIR for the General Plan update. This will require substantially more time to complete the proposed project and will significantly increase the cost of the project, which is currently estimated at approximately $180 million dollars. 4. The project, as proposed, cannot, and will not, achieve the purpose of expediting the redevelopment of the TOP, and will greatly increase unplanned growth in the City of Chico and in the County's jurisdiction surrounding the City of Chico. The project as described is inconsistent with the purpose, goal, and objective of the project. 5. Therefore, the Project Description needs to be re-defined and re-stated to be stable, finite, and ACCURATE. 6. Further, other alternatives for smaller de-centralized specially designed and engineered treatment facilities must be re-analyzed and re-considered and included in the Project Alternatives analysis. 7. Finally, given the fact that the City of Chico's Capital Improvement Program has not publicly disclosed what the cost of the project will be to the residents and rate payers of the City of Chico and how the new infrastructure necessary to provide an increased supply of potable and re-cycled water and transportation infrastructure and Operation & Maintenance expenses will be paid by the residents and rate payers of the City of Chico. Please include these comments in the record of proceedings for the Scoping Meeting for the proposed project. Thank you for the opportunity to comment. Very truly yours.	
5/13/21 6:59 p.m.	Darrell Hilton 117 Summerbreeze Ln Grangeville, Idaho 83530 1biglazyd@gmail.com	Website	My property is on Oak Way off of Billie. According to the service map the service area runs along Skyway and along Clark. But nothing in between skyway & Clark. It would be very helpful to property owners, like myself to be able to see how far off of skyway & off of Clark the service area runs. Listing street names in the general service area between Clark and skyway would be helpful	5/14/21 (3:39 p.m.): M. Norris responded via email: Good morning Darrell,

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
				Thank you for your message. If you follow the link to http://paradisesewer.com/, you can scroll down to our interactive map under "Find My Property". This interactive map will allow you to enter your street address or the Assessor's Parcel Number (APN) to determine if your property is located within the proposed service area. The map allows you to zoom in and explore the limits of the current, proposed boundary area. Please let us know if you have any other questions.
5/13/21 11:26 a.m.	Marion Weer 2277 Crest Drive Fortuna, CA 95540 marion2215@att.net	Website	Can you provide a physical description of the sewer transmission pipeline. What will it look like. What will be its size? Will it be above or below ground. How will it blend with the environment?	
5/13/21	Chris Rehmann carehmann@gmail.com	Virtual Public Meeting #1	Will there be any cost to property owners who are NOT in the sewage collection area?	
5/13/21	Eric Salerno eric.salerno@caloes.ca.gov	Virtual Public Meeting #1	What is your current project funding priority and how can Cal OES be supportive?	
5/13/21	John Stonebraker john@upperridge.info	Virtual Public Meeting #1	Ok, if there's time: the slide showed the Skyway route. is that confirmed? or is the Neal Road route still being considered?	
5/13/21	Karen Heckman sscsheckman@gmail.com	Virtual Public Meeting #1	What is the cost to the property owners? What other future costs to property owners for things like maintenance? How will those properties not in the initial inclusive to public sewer connections be added? And when? Am I understanding correctly, those town of Paradise properties not in the blue area will not ever be included? The town consider the cost of building our own system instead of sending the sewer all the way to Chico? Thank you for holding these meetings.	
5/13/21	Kathy Roessler kkroessler@gmail.com	Virtual Public Meeting #1	Will the line installed be big enough to handle future growth? We think it's short sighted to not anticipate future growth.What if the hospital come back?	
5/13/21	Mevanisko mevanisko@yahoo.com	Virtual Public Meeting #1	Will parcels within the proposed service area be required to connect to the proposed sewer system? How will the construction of the proposed sewer system be coordinated with the road rebuilding efforts to minimize impact to the Town?	

Town of Paradise Sewer Project
Comments Matrix

DATE	CONTACT INFO	SOURCE	COMMENTS/QUESTIONS	RESPONSE/ACTION
5/14/21 3:11 p.m.	Kathy Roessler 5802 Acorn Ridge Dr Paradise, CA 95969 kkroessler@gmail.com	Website	We think that the sewer project should consider future growth and put in a bigger pipe line going down to Chico than what the current needs call for.	
5/20/21 1:52 p.m.	Stephen Lucas Executive Officer Butte Local Agency Formation Commission 1453 Downer Street, Suite C Oroville, CA 95965 530-53806819 slucas@buttecounty.net	Email	Hello Ms. Curtis, Please find attached comments from the Butte LAFCo concerning the Town of Paradise Sewer Service Project EIR Notice of Preparation. Cheers, Steve Submitted Via Website: ccurtis@townofparadise.org Collette Curtis, Public Information Officer Town of Paradise 5555 Skyway Paradise, CA 95969 Re: Town of Paradise Sewer Project – Notice of Preparation of Environmental Impact Report Dear Ms. Curtis: The Butte Local Agency Formation Commission (LAFCo) appreciates the opportunity to provide input for the Town of Paradise Sewer Project – Notice of Preparation of Environmental Impact Report that will support the proposed sewer line extension from the City of Chico Water Pollution Control Plant (WPCP) to the Town of Paradise. This will also require the approval of an extension of services application by LAFCo as the service extension is proposed to be outside of the City's jurisdictional and Sphere of Influence boundaries. The primary concern of LAFCo as a responsible agency with permitting authority is to ensure that the Commission is regularly consulted by affected agencies to avoid the matter *being presented to the Commission for action after important decisions and milestones have been locked in*. It is our understanding that coordination with LAFCo is identified as a Phase 2 implementation issue under the Preparation of an Environmental Impact Report (EIR) covering the selected alternative. **LAFCO's Role** Government Code Section 56133(a)(b)(c) mandates that A city or district may provide new or extended services by contract or agreement outside its jurisdictional boundary **only if it**	

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			first requests and receives written approval from the commission. The commission may authorize a city or district to provide new or extended services outside its jurisdictional boundary outside its jurisdictional boundary and outside its sphere of influence to respond to an existing or impending threat to the health or safety of the public or the residents of the affected territory, if the entity applying for approval has provided the commission with documentation of a threat to the health and safety of the public or the affected residents. The proposal for the City to extend its sewage collection and/or wastewater treatment facilities to the Town falls under the purview of Section 56133 and therefore, LAFCo. Should the sewer service extension be approved by LAFCo for the proposed sewer service area boundary identified by the Town, any future adjustments to that boundary or additional sewer connections will require the consent the City as the contracted provider and LAFCo as the approving authority for the service extension request. Provisions for extension of service requests are found in Government Code §56133 and in Section 4.5 of the Commission Policies and Procedures. Service extensions outside of an agency's Sphere of Influence may only be approved by LAFCo if there is "an existing or impending threat to the health or safety of the public or the residents of the affected territory. (§56133(c)) *Support Documents* The City/Town will need to provide documentation/justification of the existing or impending public health and safety threat the extension of services would address. This is a critical prerequisite to the project as it is the only legally permissible justification available to the LAFCo to approve a service extension request outside of an agency's (Chico) Sphere of Influence. Additionally, the City will have to demonstrate how such an arrangement will not impact its current residents or its responsibility to serve the existing parcels within its jurisdictional boundaries/service area who are not currently sewered and utilize on-site septic systems. This would include the remaining approximately 3,000 parcels that are not currently connected to the City's sewer infrastructure but fall under are under the Chico Urban Area Nitrate Compliance Plan which calls for the termination of on-site septic systems as a contributor to ground water nitrate contamination. It is fundamentally critical that the City ensure that it retains adequate WCPP capacity for future service demands from it residents. Along with a determination of capacity, LAFCo will also have to review the fiscal viability of the proposed extension, particularly the projected cost to Paradise residents of such service and the assurances that City residents do not in any way subsidize the proposed service.	

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			EIR-NOP Observations/Comments: 1. **Project Description** - The proposed project for the purposes of the EIR, should be adequately described to include not only the sewer infrastructure analysis, but the necessary Extension of Services Application that is expected to be initiated by the City of Chico and considered for approval by LAFCo. It is vitally important to recognize that limiting the "project description" to only the sewer infrastructure project will make associated regulatory agency approvals such as LAFCo's more complicated. This raises the important question of just what type of governance is anticipated now by the Town and what type of governance oversight may be useful in the future such a special district or subsidiary district? For the EIR to be of the greatest value, it should consider all alternatives that may be desired now or in the future. 2. **Proposed Sewer Service Area** – The proposal describes the intended Sewer Service Area, which is limited primarily to the commercial and industrial land uses along Skyway, Pearson and Clark Roads. How would future sewer connection requests within the Town Sewer Service Area (not along the pipe to Chico) be addressed? There are small lot residential neighborhoods immediately adjacent to the proposed Town Sewer Service area, It seems reasonable based on early public comments to anticipate that landowners contiguous to the Town's Sewer Service Area/collection system with a developed use and failing septic system would desire to connect rather than repair an existing system. This is a different scenario from new development. Butte County Environmental Health Division regulations require a landowner with a failed septic system to connect to a public sewer if the access is within 250 feet of the affected parcel. How will additional requests for access to sewer services be addressed? 3. **Post Treatment (Recycled) Water** – The Town will be sending significant quantities of effluent to the City's WPCP, which will be treated, and under current conditions, discharged to the Sacramento River. Given the extreme focus on drought planning, the reuse of treated effluent is an ever more important source of scarce water supplies. At some point, the City of Chico may determine that moving to tertiary treatment and reusing this valuable resource is a priority. The question is: Who will retain the rights to treated water discharged from the ChicoWPCP? Will the Town receive credit/compensation for its share of the treated effluent? 4. **WPCP Concerns** – How will the City and Town address future WPCP issues such as plant expansions, conversion to tertiary treatment and violations at the WPCP be addressed. 5. **Administration** - Who will provide overall administration of the proposed sewer extension to the Town? How will customer relations such as billing, maintenance, and new connections be accomplished? 6. **Governance Alternatives** – Should the sewer service extension be found unworkable, or if LAFCo cannot determine a legally supportable exemption from the requirements found in GC56133, what other alternatives would be considered (such as the creation of a separate subsidiary district to provide sewer service to	

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			both cities)? Such a reorganization would make 56133 no longer applicable, as the new district will have its own sphere. 7. **Growth Inducement** - Depending on the design capacity of the pipeline, its location, and its potential users, it is likely that additional development within the Town could become possible. Current on-site wastewater treatment systems greatly limit development potential. Once sewer becomes available, those growth limitations no longer apply. This analysis may be difficult to accurately assess given the age of the Town General Plan adopted in 1994. Ideally, the 1994 General Plan would be updated based on current conditions prior to estimating future sewerage flows. Additionally, other landowners outside the City boundaries in proximity to such a sewer line may request or expect that the development of those lands be permitted to utilize the new sewer line. The potential environmental impacts of such development needs to be analyzed in the EIR unless a firm prohibition on such connections is included in the project, if not, LAFCo may consider conditions of approval that would restrict access to the sewer line to parcels only within the Town's defined sewer service area. 8. **Chico Urban Area Nitrate Compliance Plan** – The Nitrate Compliance Plan was adopted in 2000 as a result of the Central Valley Regional Water Quality Control Board Prohibition Orders No. 90-126 and 905-024 which addressed the nitrate contamination in the groundwater linked to on-site septic systems in the Chico Urban Area. The orders called for existing septic systems be discontinued and connections to the City sewer system be required. Much effort and resources were spent on this program and the City has installed significant new sewage collection infrastructure over the past decade to allow all affected parcels to connect. How will the City ensure that the WPCP maintains/reserves the capacity to accommodate these remaining approximately 3,000 uses on septic systems? 9. **Increased Exposure to Severe Fire Hazard.** Development of the project is intended to encourage the growth and redevelopment of the Town of Paradise. While this has many desirable benefits, the EIR cannot ignore the serious adverse fire risk impact of the project. As the fire demonstrated, Paradise is clearly located in a severe fire zone with limited access for evacuation. Encouraging redevelopment and growth in that area will inevitably result in increased exposure of the new structures and residents to the severe fire risk. This impact is likely to be significant over the long run. It must be analyzed and mitigation measures explored to mitigate the risk. For example, is an additional evacuation route feasible? LAFCo is eager to be cooperative partner in the effort to bring sewer service to the Town as the project is likely to greatly assist the Town to address a serious long-term problem and augment the Town's ability to rebuild a sustainable and viable commercial district. However, we are all bound to comply with the law, even where it may hinder achievement of a desirable objective. We look forward to working with the City and Town and its partners in development of this proposal in order to determine if a legally permissible	

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			path forward can be found for LAFCo to approve the extension of services. Please do not hesitate to contact me should you have any questions Sincerely, Steve Lucas Executive Officer cc: LAFCO Paradise Sewer NOP Comments 5-20	
5/21/21 5:30 p.m.	Pam Galloway 6083 Maxwood Dr Paradise, CA 95969 jpgalloway3@att.net	Website	This project is a waste of time, effort and money for the town and citizens of Paradise. I think the project should be put to stopped as there are better uses of the towns money. Just a concerned citizens comment.	
5/24/21 4 p.m.	Janet Peterson 1080 Buschman Rd Paradise, CA 95969 janetkpeterson@aol.com	Website	I own the property at 1080 Buschman Rd adjacent to the proposed boundary at Clark Rd. I had twenty-four 1 bedroom units which were destroyed in 2018. I tried to rebuild but the costs, slope, ADA requirements made it impossible. The flat land on my parcel is where the septic field is. Being able to have sewer would allow me to build affordable. Can I request to be considered for hookup? Much thanks, Janet Peterson	
5/24/21	Melissa Murphy Senior Environmental Scientist State of California Department of Fish and Wildlife 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (916) 597-6417 melissa.murphy@wildlife.ca.gov	Letter	May 24, 2021 Colette Curtis Town of Paradise 5555 Skyway Paradise, CA 95969 ccurtis@townofparadise.com Subject: Paradise Sewer Project – Notice of Preparation of an Environmental Impact Report SCH# 2021050008 Dear Ms. Curtis: The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Preparation of an Environmental Impact Report (EIR) from the Town of Paradise for the Paradise Sewer Project (Project) in Butte County pursuant the California Environmental Quality Act (CEQA) statute and guidelines. Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish, wildlife, plants and their habitats. Likewise, we appreciate the opportunity to provide comments regarding those	

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			aspects of the Project that CDFW, by law, may need to exercise its own regulatory authority under the Fish and Game Code (Fish & G. Code). **CDFW ROLE** CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802.). Similarly, for purposes of CEQA, CDFW provides, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources. CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code. **PROJECT DESCRIPTION SUMMARY** The Project site is located within the Town of Paradise, the City of Chico, and the sections of unincorporated Butte County that connect Paradise and Chico. The Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico Water Pollution Control Plant (WPCP), and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Project description should include the whole action as defined in the CEQA Guidelines § 15378 and should include appropriate detailed exhibits disclosing the Project area including temporary impacted areas such as equipment stage area, spoils areas, adjacent infrastructure development, staging areas and access and haul roads if applicable. As required by § 15126.6 of the CEQA Guidelines, the EIR should include an appropriate range of reasonable and feasible alternatives that would attain most of the basic Project objectives and avoid or minimize significant impacts to resources under CDFW's jurisdiction.	

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			COMMENTS AND RECOMMENDATIONS CDFW offers the comments and recommendations presented below to assist the Town of Paradise in adequately identifying and/or mitigating the Project's significant, or potentially significant, impacts on biological resources. The comments and recommendations are also offered to enable CDFW to adequately review and comment on the proposed Project with respect to impacts on biological resources. CDFW recommends that the forthcoming EIR address the following: **Assessment of Biological Resources** Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the Project, the EIR should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats. CDFW recommends the EIR specifically include: 1. An assessment of all habitat types located within the Project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following, *The Manual of California Vegetation*, second edition (Sawyer 2009). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions. 2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project. CDFW recommends that the California Natural Diversity Database (CNDDB), as well as previous studies performed in the area, be consulted to assess the potential presence of sensitive species and habitats. A nine United States Geologic Survey (USGS) 7.5-minute quadrangle search is recommended to determine what may occur in the region, larger if the Project area extends past one quad (see *Data Use Guidelines* on the Department webpage www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data). Please review the webpage for information on how to access the database to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the Project. CDFW recommends that CNDDB Field Survey Forms be completed and submitted to CNDDB to document survey results. Online forms can be obtained and submitted at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. Please note that CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in	

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			gathering information about the potential presence of species within the general area of the Project site. Other sources for identification of species and habitats near or adjacent to the Project area should include, but may not be limited to, State and federal resource agency lists, California Wildlife Habitat Relationship (CWHR) System, California Native Plant Society (CNPS) Inventory, agency contacts, environmental documents for other projects in the vicinity, academics, and professional or scientific organizations. 3. A complete and recent inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern and California Fully Protected Species (Fish & G. Code § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. The EIR should include the results of focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable. Species-specific surveys should be conducted in order to ascertain the presence of species with the potential to be directly, indirectly, on or within a reasonable distance of the Project activities. CDFW recommends the lead agency rely on survey and monitoring protocols and guidelines available at: www.wildlife.ca.gov/Conservation/Survey-Protocols. Alternative survey protocols may be warranted; justification should be provided to substantiate why an alternative protocol is necessary. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Some aspects of the Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought or deluge. 4. A thorough, recent (within the last two years), floristic-based assessment of special-status plants and natural communities, following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (see www.wildlife.ca.gov/Conservation/Plants). 5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]). **Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources** The EIR should provide a thorough discussion of the Project's potential direct, indirect, and cumulative impacts on biological resources. To ensure that Project impacts on biological resources are fully analyzed, the following information should be included in the EIR: 1. The EIR should define the threshold of significance for each impact and describe the criteria used to determine whether the impacts are significant (CEQA Guidelines, §	

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			15064, subd. (f)). The EIR must demonstrate that the significant environmental impacts of the Project were adequately investigated and discussed, and it must permit the significant effects of the Project to be considered in the full environmental context. 2. A discussion of potential impacts from lighting, noise, human activity, and wildlife-human interactions created by Project activities especially those adjacent to natural areas, exotic and/or invasive species occurrences, and drainages. The EIR should address Project-related changes to drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site. 3. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the Project footprint, such as nearby public lands (e.g. National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Conservation or Recovery Plan, or other conserved lands). 4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. The EIR should discuss the Project's cumulative impacts to natural resources and determine if that contribution would result in a significant impact. The EIR should include a list of present, past, and probable future projects producing related impacts to biological resources or shall include a summary of the projections contained in an adopted local, regional, or statewide plan, that consider conditions contributing to a cumulative effect. The cumulative analysis shall include impact analysis of vegetation and habitat reductions within the area and their potential cumulative effects. Please include all potential direct and indirect Project-related impacts to riparian areas, wetlands, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and/or special-status species, open space, and adjacent natural habitats in the cumulative effects analysis. **Mitigation Measures for Project Impacts to Biological Resources** The EIR should include appropriate and adequate avoidance, minimization, and/or mitigation measures for all direct, indirect, and cumulative impacts that are expected to occur as a result of the construction and long-term operation and maintenance of the Project. CDFW also recommends the environmental documentation provide scientifically supported discussion regarding adequate avoidance, minimization, and/or mitigation measures to address the Project's significant impacts upon fish and wildlife and their habitat. For individual projects, mitigation must be roughly proportional to the level of impacts, including cumulative impacts, in accordance with the provisions of CEQA (Guidelines § § 15126.4(a)(4)(B), 15064, 15065, and 16355). In order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions. When proposing measures to avoid, minimize, or	

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			mitigate impacts, CDFW recommends consideration of the following: 1. *Fully Protected Species*: Several Fully Protected Species (Fish & G. Code § 3511) have the potential to occur within or adjacent to the Project area, including, but not limited to: white-tailed kite (*Elanus leucurus*), American peregrine falcon (*Falco peregrinus anatum*), bald eagle (*Haliaeetus leucocephalus*), and California blackrail (*Laterallus jamaicensis coturniculus*). Fully protected species may not be taken or possessed at any time. Project activities described in the EIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the Project area. CDFW also recommends the EIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that the Town of Paradise include in the analysis how appropriate avoidance, minimization and mitigation measures will reduce indirect impacts to fully protected species. 2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer 2009). The EIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts. 3. *Mitigation*: CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the EIR should include mitigation measures for adverse Project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of Project impacts. For unavoidable impacts, onsite habitat restoration, enhancement, or permanent protection should be evaluated and discussed in detail. If onsite mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, offsite mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. The EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc. 4. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in the regional ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop	

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			the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought. CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be appropriately timed to ensure the viability of the seeds when planted. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various Project components as appropriate. Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project. Examples may include retention of woody material, logs, snags, rocks, and brush piles. Fish and Game Code sections 1002, 1002.5 and 1003 authorize CDFW to issue permits for the take or possession of plants and wildlife for scientific, educational, and propagation purposes. Please see our website for more information on Scientific Collecting Permits at www.wildlife.ca.gov/Licensing/Scientific-Collecting#53949678-regulations-. 5. *Nesting Birds*: Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). CDFW implemented the MBTA by adopting the Fish and Game Code section 3513. Fish and Game Code sections 3503, 3503.5 and 3800 provide additional protection to nongame birds, birds of prey, their nests and eggs. Sections 3503, 3503.5, and 3513 of the Fish and Game Code afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Fish and Game Code or any regulation made pursuant thereto; section 3503.5 states that is it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the Fish and Game Code or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the	

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			Interior under provisions of the MBTA. Potential habitat for nesting birds and birds of prey is present within the Project area. The Project should disclose all potential activities that may incur a direct or indirect take to nongame nesting birds within the Project footprint and its vicinity. Appropriate avoidance, minimization, and/or mitigation measures to avoid take must be included in the EIR. CDFW recommends the EIR include specific avoidance and minimization measures to ensure that impacts to nesting birds or their nests do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: Project phasing and timing, monitoring of Project-related noise (where applicable), sound walls, and buffers, where appropriate. The EIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site. In addition to larger, protocol level survey efforts (e.g. Swainson's hawk surveys) and scientific assessments, CDFW recommends a final preconstruction survey be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted earlier. 6. *Moving out of Harm's Way*: The Project is anticipated to result in the clearing of natural habitats that support native species. To avoid direct mortality, the Town of Paradise should state in the EIR to require that a qualified biologist with the proper handling permits, will be retained to be onsite prior to and during all ground- and habitat-disturbing activities. Furthermore, the EIR should describe that the qualified biologist with the proper permits may move out of harm's way special-status species or other wildlife of low or limited mobility that would otherwise be injured or killed from Project-related activities, as needed. The EIR should also describe qualified biologist qualifications and authorities to stop work to prevent direct mortality of special-status species. CDFW recommends fish and wildlife species be allowed to move out of harm's way on their own volition, if possible, and to assist their relocation as a last resort. It should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for habitat loss. 7. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as the sole mitigation for impacts to rare, threatened, or endangered species as these efforts are generally experimental in nature and largely unsuccessful. Therefore, the EIR should describe additional mitigation measures utilizing habitat restoration, conservation, and/or preservation, in addition to avoidance and minimization measures, if it is determined that there may be impacts to rare, threatened, or endangered species. The EIR should incorporate mitigation performance standards that would ensure that impacts are reduced to a less-than-significant level. Mitigation measures proposed in the EIR should be made a condition of approval of the Project. Please note that obtaining a	

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			permit from CDFW by itself with no other mitigation proposal may constitute mitigation deferral. CEQA Guidelines section 15126.4, subdivision (a)(1)(B) states that formulation of mitigation measures should not be deferred until some future time. To avoid deferring mitigation in this way, the EIR should describe avoidance, minimization and mitigation measures that would be implemented should the impact occur. **California Endangered Species Act** CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to the California Endangered Species Act (CESA). CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (Fish & G. Code § 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of state-listed CESA species, either through construction or over the life of the Project. State-listed species with the potential to occur in the area include, but are not limited to: foothill yellow-legged frog (*Rana boylii*), cascades frog (*Rana cascadae*), Sierra Nevada yellow-legged frog (*Rana sierrae*), Swainson's hawk (*Buteo swansonii*), giant garter snake (*Thamnophis gigas*), least bell's vireo (*Vireo bellii pusillus*), tricolored blackbird (*Agelaius tricolor*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), willow flycatcher (*Empidonax traillii*), bald eagle (*Haliaeetus leucocephalus*), California black rail (*Laterallus jamaicensis coturniculus*), bank swallow (*Riparia riparia*), spring-run Chinook salmon (*Oncorhynchus tshawytscha*), Butte County meadowfoam (*Limnanthes floccosa ssp. californica*), and slender Orcutt grass (*Orcuttia tenuis*). The EIR should disclose the potential of the Project to take State-listed species and how the impacts will be avoided, minimized, and mitigated. Please note that mitigation measures that are adequate to reduce impacts to a less-than significant level to meet CEQA requirements may not be enough for the issuance of an ITP. To facilitate the issuance of an ITP, if applicable, CDFW recommends the EIR include measures to minimize and fully mitigate the impacts to any state-listed species the Project has potential to take. CDFW encourages early consultation with staff to determine appropriate measures to facilitate future permitting processes and to engage with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service to coordinate specific measures if both State and federally listed species may be present within the Project vicinity. **Native Plant Protection Act** The Native Plant Protection Act (Fish & G. Code §1900 et seq.) prohibits the take or possession of state-listed rare and endangered plants, including any part or product thereof, unless authorized by CDFW or in certain limited circumstances. Take of state- listed rare and/or endangered plants due to Project activities may only be permitted through an ITP or other authorization issued by CDFW pursuant to California Code of Regulations, Title 14, section 786.9 subdivision (b).	

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			Lake and Streambed Alteration Program The EIR should identify all perennial, intermittent, and ephemeral rivers, streams, lakes, other hydrologically connected aquatic features, and any associated biological resources/habitats present within the entire Project footprint (including utilities, access and staging areas). The environmental document should analyze all potential temporary, permanent, direct, indirect and/or cumulative impacts to the above-mentioned features and associated biological resources/habitats that may occur because of the Project. If it is determined the Project will result in significant impacts to these resources the EIR shall propose appropriate avoidance, minimization and/or mitigation measures to reduce impacts to a less-than-significant level. Section 1602 of the Fish and Game Code requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. If CDFW determines that the Project activities may substantially adversely affect an existing fish or wildlife resource, a Lake and Streambed Alteration (LSA) Agreement will be issued which will include reasonable measures necessary to protect the resource. CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if one is necessary, the EIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the Project may avoid or reduce impacts to fish and wildlife resources. To obtain an LSA notification package, please go to https://www.wildlife.ca.gov/Conservation/LSA/Forms. Please note that other agencies may use specific methods and definitions to determine impacts to areas subject to their authorities. These methods and definitions often do not include all needed information for CDFW to determine the extent of fish and wildlife resources affected by activities subject to Notification under Fish and Game Code section1602. Therefore, CDFW does not recommend relying solely on methods developed specifically for delineating areas subject to other agencies' jurisdiction (such as United States Army Corps of Engineers) when mapping lakes, streams, wetlands, floodplains, riparian areas, etc. in preparation for submitting a Notification of an LSA. CDFW relies on the lead agency environmental document analysis when acting as a	

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			responsible agency issuing an LSA Agreement. CDFW recommends lead agencies coordinate with us as early as possible, since potential modification of the proposed Project may avoid or reduce impacts to fish and wildlife resources and expedite the Project approval process. The following information will be required for the processing of an LSA Notification and CDFW recommends incorporating this information into any forthcoming CEQA document(s) to avoid subsequent documentation and Project delays: 1. Mapping and quantification of lakes, streams, and associated fish and wildlife habitat (e.g., riparian habitat, freshwater wetlands, etc.) that will be temporarily and/or permanently impacted by the Project, including impacts from access and staging areas. Please include an estimate of impact to each habitat type. 2. Discussion of specific avoidance, minimization, and mitigation measures to reduce Project impacts to fish and wildlife resources to a less-than-significant level. Please refer to section 15370 of the CEQA Guidelines. Based on review of Project materials, aerial photography and observation of the site from public roadways, the Project site supports Butte Creek, Comanche Creek, and Little Chico Creek, unnamed tributaries to these creeks, and their associated riparian habitats. CDFW recommends the EIR fully identify the Project's potential impacts to these streams and/or their associated vegetation and wetlands. **ENVIRONMENTAL DATA** CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be submitted online or mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. **FILING FEES** The Project, as proposed, would have an effect on fish and wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code § 711.4; Pub. Resources Code, § 21089.) **CONCLUSION** Pursuant to Public Resources Code sections 21092 and 21092.2, CDFW requests written	

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			notification of proposed actions and pending decisions regarding the Project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670. CDFW appreciates the opportunity to comment on the NOP of the EIR for the Paradise Sewer Project and recommends that the Town of Paradise address CDFW's comments and concerns in the forthcoming EIR. CDFW personnel are available for consultation regarding biological resources and strategies to minimize impacts. If you have any questions regarding the comments provided in this letter or wish to schedule a meeting and/or site visit, please contact Melissa Murphy, Senior Environmental Scientist (Specialist) at (916) 597-6417 or melissa.murphy@wildlife.ca.gov. Sincerely, Kelley Barker Environmental Program Manager ec: Juan Torres, Senior Environmental Scientist (Supervisory) Melissa Murphy, Senior Environmental Scientist (Specialist)] *Department of Fish and Wildlife* Office of Planning and Research, State Clearinghouse, Sacramento Literature Cited Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/	
5/25/21	Anonymous (Caller)	Virtual Public Meeting #2	Hi, thank you for taking my call and I apologize if this was covered. I missed a portion of your presentation. If the location that we currently have is within the proposed service area, but it's currently under septic, what advice are you providing to the property owners or what websites or information areas do you recommend in order to understand what would be the proper steps in evaluating whether or not we are required to connect with the sewer system versus having the existing septic system function? That's the biggest question I guess for a lot of people that I know is what are our requirements versus what what's nice to have versus what's required to do.	
5/25/21	Anonymous (Caller)	Virtual Public Meeting #2	I'm actually calling from Lane County, emergency management over here in Oregon and so if it's a better conversation to have offline, I'm happy to do that, but really you guys are so much farther ahead than we are with fire recovery. I was just looking to get a better understanding of pitfalls and hurdles that we might be looking out for in the future as we move towards getting a little bit closer to where you guys are, because you guys have been inspirational in your recovery process.	

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5/25/21	Mike Garcia-Forterra Pipe & Precast	Virtual Public Meeting #2	Have the pipe material options been listed, and if so, are you eliminating thermoplastic pipes due to issues of flammable concerns.	
5/25/21 12:10 p.m.	Dennis Ivey creare@comcast.net cc: Gwen Nordgren gwennord8@gmail.com	Email	Mark - Sorry that I couldn't join you today. I wan unable to load your meeting software on my Mac - probably a Boomer thing! I submitted a question to the consultants regarding connection fees and payment. To date, I've not heard back. I'm asking on behalf of Paradise Lutheran Church on Luther Drive, next to Terry Ashe Park. I assume it is still too early to know the dollar amount of the connection fee, but can you tell me how they will be determined and the anticipated payment policy for the connection fees. Your answer will be helpful to the church as they move forward in their recovery process. Thank you for your time and assistance.	5/25/21 (1:33 p.m.): M. Mattox responded via email: Good afternoon Dennis! Great question – we actually received one just like it during the webinar… In short, we do not have the answer…yet. What I mean is that as we are in the EIR phase, we do not have certainty the project will indeed move forward. However, if it does, administration of items like this are key in project success. Our goal would be to provide a heavily incentivized opportunity to connect at the initial startup construction. Absent of that, we would be tough to find another approach other than requiring connections at a time when the system fails… Meaning if you install a system in 2021 and it doesn't fail until 2041, a connection may not be required until 2041. From the lens of recovery and planning today, it may be most prudent to assume no project and move forward – although, I have heard of property owners installing a stubbed lateral which could be intertied in the future, this may be attractive for the church. Hope this helps! Best of luck!

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5/27/21	Paula M. Daneluk Director Butte County Department of Development Services 7 County Center Drive Oroville, California 95965 T: 530-552-3700 F: 530-538-7785 buttecounty.net/dds T: 530-552-3656 PDaneluk@buttecounty.net	Letter	May 27, 2021 Colette Curtis Public Information Officer Town of Paradise 5555 Skyway Rd. Paradise, CA 95969 Subject: Notice of Preparation of an Environmental Impact Report for the Paradise Sewer Project Dear Ms. Curtis, We have reviewed the above-referenced Notice of Preparation (NOP), dated April 30, 2021. The following statements and comments have been prepared pursuant to Butte County's authority as a Responsible Agency with jurisdiction over land affected by the project. The Paradise Sewer Project comprises three components: a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico Water Pollution Control Plant (WPCP), and a connection to the WPCP facility. The export pipeline would be located between the Town of Paradise and the City of Chico, the majority of this development area falling under Butte County's jurisdiction. The following are issues that should be included and analyzed in the EIR for the Paradise Sewer Project: 1. The project description for the "Export Pipeline" component of the project within the above- referenced NOP is lacking critical information required for a full and thorough analysis. Technical details regarding the export pipeline should be provided within the EIR. Specific information such as the pipeline's dimensions (including length and diameter of the pipe), the number of proposed lift or pump stations, as well as the alignment of the pipeline need to be identified to adequately describe the project for analysis. 2. Due to a lack of spatial information, the extent to which the export pipeline will be contained within the County right-of-way (ROW) as opposed to crossing private land is unclear. There is concern about the potential necessity of cross-country alignments outside of the ROW. Will the pipeline cross agricultural lands or the Agricultural "Green Line", which could result in potentially significant impacts to prime agricultural land? Clarification is needed to clearly site this component in relation to the ROW and agricultural resources. 3. Clearly describe in detail any and all proposed undergrounding of the export pipeline. Analysis should include potential impacts to aesthetics if not undergrounded and geological impacts if undergrounded. 4. The environmental analysis should address water quality and the proposed export	

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			pipeline's impacts to Butte Creek, vernal pools, and multiple water basins across the project alignment, as well as analysis of leak potential and resulting impacts. The biological resources analysis should include a wetland delineation and analysis of impacts to the area and any associated riparian habitats. 5. Noise analysis should identify lift stations and associated generator noise impacts to biological resources as well as sensitive receptors along the route. 6. Specify in the project description any easements proposed across areas with existing recreational or trail systems. 7. Analyze the impacts of possible contamination from leaks or spills due to long-term operation of the export pipeline and short-term construction. 8. The Butte County Department of Public Works will require either a franchise agreement or encroachment maintenance agreement. Additionally, the County will require pavement restoration to bring the impacted roadways to an as-equal or better condition. Please include details within the project description analyzing these impacts. We appreciate the opportunity to comment on the NOP. Questions regarding this letter should be directed to Paula M. Daneluk, AICP at 530.552.3656 or PDaneluk@buttecounty.net. Sincerely, Paula M. Daneluk, AICP Director, Butte County Department of Development Services	
5/27/21 5:33 p.m.	Sasha Poe 1043 Central Park Dr Paradise, CA 95969 530-326-4949 ssaasshhaa@hotmail.com	Website	I have emailed 5 times asking for my commercial property to be added to the sewer plan.	6/2/21 (1:15 p.m.): M. Mattox responded via email: Hi Sasha: I apologize for the delayed response. We have received your request for the project to include your property. At this moment, we are unable to administratively add this to the area – however, we will keep your request in the public comment file and be sure to explore it further. Thanks for reaching out!
5/28/21	Andrea Buckley Environmental Services and Land Management Branch Chief Central Valley Flood Protection Board 3310 El Camino Ave., Ste. 170 Sacramento, CA 95821 916-574-0609	Letter	May 28, 2021 Mr. Marc Mattox Town of Paradise 5555 Skyway Paradise, CA 95969	

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	James Herota 916-574-0651 James.Herota@cvflood.ca.gov		**Subject: Comments on the Paradise Sewer Project, Notice of Preparation of an Environmental Impact Report (SCH No. 2021050008)** Dear Mr. Mattox, The Central Valley Flood Protection Board (Board) appreciates the opportunity to comment on the Notice of Preparation of an Environmental Impact Report for the proposed Paradise Sewer Project. The EIR will be prepared to disclose and address potential environmental impacts associated with the proposed project. The proposed project is located in Butte County and involves construction of a sewer pipeline crossing the Butte Creek and Little Chico Creek. **Responsibility of the Central Valley Flood Protection Board** The Board is the State's regulatory agency responsible for ensuring appropriate standards are met for the construction, maintenance, and operation of the flood control system that protects life, property, and habitat in California's Central Valley. The Board serves as the State coordinator between local flood management agencies and the federal government, with the goal of providing the highest level of flood protection possible to California's Central Valley. The Board operates under authorities as described in California Water Code (Water Code), which requires the Board to oversee future modifications or additions to facilities of the State Plan of Flood Control (SPFC). In addition, pursuant to assurances provided to the United States Army Corps of Engineers (USACE) by the Board on behalf of the State, the USACE Operation and Maintenance Manuals, Code of Federal Regulations, Title 33, § 208.10, and United States Code, Title 33, § 408, the Board is responsible for the operation and maintenance of the SPFC facilities. The USACE requires the Board to serve as the lead non-Federal sponsor for projects to improve or alter facilities of the SPFC pursuant to Code of Federal Regulations, Title 33, § 408. The State's objectives include fulfilling the USACE's expectations pursuant to the assurances provided to the USACE. **Encroachment Permit** Per California Code of Regulations, Title 23, Waters, Division 1 (Title 23), Section 6, approval by the Board is required for all proposed work or uses, including the alteration oflevees within any area for which there is an Adopted Plan of Flood Control within the Board's jurisdiction. In addition, Board approval is required for all proposed encroachments within a floodway, on adjacent levees, and within any Regulated Stream identified in Title 23, Table 8.1. Specifically, Board jurisdiction includes the levee section, the waterward area between project levees, a minimum 10-foot-wide strip adjacent to thelandward levee toe, the area within 30 feet from the top of bank(s) of Regulated Streams, and inside Board's Designated Floodways. Activities outside of these limits which could adversely affect Federal-State flood control facilities, as determined by Board staff, are also under the Board's jurisdiction. Permits may also be required for existing unpermitted encroachments or where it is necessary to establish the conditions normally imposed by permitting, including where responsibility for the encroachment has not been clearly established or ownership or uses have been changed. This proposed project is located within the Board's permitting authority, thereby requiring an encroachment permit.	

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			Federal permits, including USACE Section 404 and Section 10 regulatory permits and Section 408 Permission, in conjunction with a Board permit, may be required for the proposed project. In addition to federal permits, state and local agency permits, certification, or approvals may also be required. State approvals may include, but are not limited to, California Department of Fish and Wildlife's Lake and Streamed Alteration Agreement and Regional Water Quality Control Board's Section 401 Water Quality Certification. The Applicant must obtain all authorizations that the proposed project may require. **Flood Impacts Analysis** Pursuant to Section 15 of Title 23, the Board may deny an encroachment permit if the proposed project could: • Jeopardize directly or indirectly the physical integrity of levees or other works; • Obstruct, divert, redirect, or raise the surface level of design floods or flows, or the lesser flows for which protection is provided; • Cause significant adverse changes in water velocity or flow regimen; • Impair the inspection of floodways or project works; • Interfere with the maintenance of floodways or project works; • Interfere with the ability to engage in flood fighting, patrolling, or other flood emergency activities; • Increase the damaging effects of flood flows; • Be injurious to, or interfere with, the successful execution, functioning, or operation of any adopted plan of flood control; or • Adversely affect the State Plan of Flood Control, as defined in the California Water Code. As a responsible agency under the California Environmental Quality Act (CEQA), the Board will need to have adequate information in order to evaluate whether to issue a permit at a future date. Accordingly, please be prepared to provide specific analyses to determine if the proposed project could result in any potential impacts listed above. This includes direct impacts to facilities under construction, as well as indirect impacts from the project to surrounding facilities. This encompasses any proposed work that contemplates modifications to a SPFC Facility, Lower San Joaquin Levee District Facility, or operation of any adopted plan of flood control or the hydrology of the water ways including increases or decreases in water surface elevation due to construction activities and encroachments; any work including dewatering and vibrations from both pile driving and heavy machinery that may destabilize the SPFC levees; and potential levee damage resulting from heavy machinery construction activities and associated haul routes. It is therefore recommended that the environmental document include a specific flood facility impacts analysis section. **Document Specific Comments**	

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			According to page 4, Figure 1 Paradise Export Pipeline, shows that the proposed pipeline is within Butte Creek and Little Chico Creek. Title 23 provides standards that govern the design and construction of projects that affect the flood control works and floodways. Board staff recommends that you review Title 23 Standards, including but not limited to Sections 115 (Dredged, Spoil, and Waste Material), 120 (Levees), and 130 (Patrol Roads and Access Ramps), 123 (Pipelines, Conduits, and Utility Lines). Any deviation (or variation) from these standards will require approval from the Board. **Closing** The potential risks to public safety, including increased flood risks, need to be considered when developing proposed projects that seek to modify flood control works or the hydrology of the water ways. Board staff is available to discuss any questions you have regarding the above comments. Please contact James Herota at (916) 574-0651, or via email at James.Herota@CVFlood.ca.gov if you have any questions. Sincerely, Andrea Buckley Environmental Services and Land Management Branch Chief cc: Office of Planning and Research | State.Clearinghouse@opr.ca.gov	
6/3/21 2:59 p.m.	Nick Avdis 455 Capitol Mall, Suite 801 Sacramento, CA 95814 navdis@thomaslaw.com	Website	This firm represents Tuscan Ridge Associates LLC and their interests in the development projects known as "Tuscan Ridge" located at 3100 Skyway in unincorporated Butte County. The Tuscan Ridge project to has submitted an initial planning application with Butte County. The EIR for the Town of Paradise to City of Chico sewer project should include analysis of providing sewer service to the Tuscan Ridge project. Please put me on the notification list for any upcoming meetings or otherwise. Thank you.	
6/4/21	Tom Lando District Manager, Paradise Irrigation District Paradise Irrigation District 6332 Clark Rd Paradise, CA 95969 530-877-4971	Letter	June 4, 2021 Colette Curtis, Public Information Officer Town of Paradise 5555 Skyway Paradise, CA 95969 RE: Request for comments regarding the scope of the EIR for a proposed sewer system Paradise Irrigation District (“PID”) is informed that the Town of Paradise is seeking a formal wastewater treatment solution and has identified a proposed sewer service area. The proposed sewer service area includes geographic areas within PID’s current water distribution service area. As an irrigation district, PID has latent authority to own, operate and maintain a sewer system. Additionally, PID has the equipment and infrastructure to manage the proposed project as well as the personnel, expertise and administrative	

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			framework to manage billing and customer service. PID respectfully asks that its participation in the Project be considered as part of the scope of EIR and that any environmental effects of potentially having PID operate and maintain the Project be assessed. Sincerely, Tom Lando District Manager, Paradise Irrigation District sewerCommentsPID.pdf	
6/24/21 5:31 p.m.	APN is 053-101-001-000	Phone Call	C. Curtis spoke with a resident today who is interested in adding her property to the Sewer Service Area. Her APN is 053-101-001-000 – it is located off Clark Rd and is adjacent to properties that are part of the SSA. Additionally her property is zoned for multi-family and if it is in the SSA she plans to develop multi-family housing there in the future. Please let me know if you need any additional information.	
6/25/21 8:58 a.m.	Rhonda Berndt 6221 Clark Road Paradise, CA 95969 RLBDEP@Gmail.com	Website	Why does the sewer plan avoid access to sewer for the Multifamily parcels on James Drive and Camino? It seems like that would benefit the community in the long run and is located inside the sewer area already.	6/28/21 (9:37 a.m.): M. Mattox responded via email: Good morning Rhonda: Thank you for your inquiry relating to the SSA excluding James Drive and Camino Lane. We will consider the impacts of this request along with others to increase the size of the sewer service area within the Town of Paradise. Thank you!

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2/8/21	Media Article			ACTION NEWS NOW · Coverage you can count on! **CHICO, PARADISE SEWER PROJECT UNANIMOUSLY REACHES SECOND PHASE** Paradise Sewer Project moves on to an 18-month Environmental Impact Review and will be grant-funded. Posted: Feb 8, 2021 7:43 PM | Brandon Downs **PARADISE, Calif.** - Chico City Council unanimously voted to analyze and study the current and future needs for the Chico Water Pollution Control Plant (WPCP) to develop a regional sewer connection to Paradise, according to the Town of Paradise. The connection will be from a specified area in Paradise, called the Sewer Service Area, and will include many parcels along Skyway, Pearson, and Clark Road. Chico City Council appointed their Mayor and Vice Mayor to a Sewer Regionalization Project Advisory Committee. This includes the Mayor and Vice Mayor of Paradise and will be facilitated by the Regional Water Quality Control board over the course of the planned 18-month Environmental Impact Review (EIR). “We look forward to seeing what develops during this 18-month EIR process and certainly support efforts to improve our regional economy and the wastewater infrastructure in Chico,” said Chico Mayor Andrew Coolidge. The Town of Paradise said the Paradise Sewer Project has been studied for over 50 years and is a Tier 1 Town-Led Priority Project in the Long-Term Community Recovery Plan. The EIR will be phase II of the project and is fully funded by a grant. This will not cost the City of Chico or Town of Paradise. A copy of the Phase I report can be found here. “Now, with the Phase II Environmental Impact Review process of a regional sewer connection between Paradise and Chico, we are just beginning the true vetting process with a Cooperative Work Agreement with the Town and a grant-funded opportunity to study the impacts and opportunities for Chico’s Water Pollution Control Plant,” said Mayor Coolidge. Paradise has been in need of wastewater solutions for years due to high groundwater, limited land available and poor soils. This restricts multi-family housing and commercial operations that rely on water usage, like restaurants.

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				"The Paradise Sewer Project is vitally important for the recovery of Paradise after the Camp Fire," said Paradise Mayor Steve Crowder. "There are also substantial benefits for the City of Chico to regionalize their Water Pollution Control Plant." The Paradise Sewer Project is one of the largest infrastructure projects in California. It is the largest in the Central Valley Region and the largest, by far, in the North State. For more information and regular updates on the Paradise Sewer Project, including committee meeting dates and times, visit www.paradisesewer.com. https://www.actionnewsnow.com/content/news/Chico-Paradise-sewer-project-unanimously-reaches-second-phase-573755081.html
3/7/21	Media Article			*Serving Chico and the north state since 1853* ENTERPRISE-RECORD **Study the sewer, PID pipes then decide what's next** By **EDITORIAL BOARD** | March 7, 2021 at 3:16 a.m. When the Camp Fire roared through Butte County in 2018, destroying 90 percent of the structures within its path and burning more than 153,000 acres, the Paradise Irrigation District lost all of its customer base. The Town of Paradise and Paradise Unified School District each got backfill funding from the state for three years to stay afloat. Additionally, the town got $250 million in damages from PG&E. The PID, which has yet to receive any settlement funding from PG&E, received its backfill funding contingent upon a plan to create new revenue to make up for the lost customer base. At a minimum, the PID needed to show the state it was working towards a solution to the problem. One solution that was proposed was an intertie from Paradise to Chico. It is an idea that the PID wanted to study, along with Butte County. In 2019, in order to get the study started, the county needed a 4/5ths vote from the Butte County Board of Supervisors because it was a budget adjustment. It was an adjustment that at first supervisor Debra Lucero supported, but changed her mind after saying the Board of Supervisors was not given vital documents prior to the initial vote. That vote, along with Tami Ritter's "no" vote, sank the study.

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				Since then a Sacramento State University study has begun on the issue and is a mandated requirement to ensure that PID can obtain funding for its drinking water system improvements from the California State Legislature. It's important to note that nothing is going to be built, whether it be a sewer or a PID pipe, unless the studies prove that they can work. From there the local entities, the town of Paradise, PID, City of Chico and LAFCO have to agree — and much of that depends on public support. Not only has PID been working towards a pipe to Chico but so has the town of Paradise. The Paradise sewer pipe would be connected to Chico's wastewater plant west of Chico. The other option that was in front of the town council was building a wastewater plant within the town limits. But the Chico option has always been favored by town and city staff because it is a cheaper option. The sewer pipe has the support of the Central Valley Regional Water Quality Control Board, which is in fact leading a board made up of councilors from both cities — and that meets for the first time this coming week. Studying the pipes to Chico is worth doing and in fact, Chico appears to agree. The town of Paradise has been struggling to develop a viable business community, particularly those surrounding restaurants, for decades — long before the Camp Fire. Its rebuild might well rest on both a sewer and PID pipe. But it's only by studying both options that can we learn if they are beneficial financially or environmentally for the county as a whole. And in the end it is the science that comes out of the environmental impact reports and Sacramento State University study that should guide our next moves. https://www.chicoer.com/2021/03/07/study-the-sewer-pid-pipes-then-decide-whats-next/

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DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
5/1/21	Public Notice Advertisement (Paradise Post)			**PUBLIC NOTICE** **NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND PUBLIC SCOPING MEETING NOTICE** The Town of Paradise (Town) as the Lead Agency for the Paradise Sewer Project (Proposed Project) has issued this Notice of Preparation (NOP) pursuant to the California Environmental Quality Act (CEQA) to notify responsible and trustee agencies and other interested parties that an Environmental Impact Report (EIR) will be prepared to evaluate potential environmental impacts of the Proposed Project. The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR. The NOP provides information about the public review and comment period, project location, project description, and the probable environmental effects of the Proposed Project, and is posted on the Town's website at **paradisesewer.com**. **PUBLIC REVIEW & COMMENT PERIOD:** May 3 to June 3, 2021 ***PROJECT OVERVIEW*** Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. The Town has supported numerous studies to address its need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022. The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico WPCP, and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and rate payers as a result of the Proposed Project. ***POTENTIAL ENVIRONMENTAL IMPACTS*** The EIR process will assess the potential environmental impacts of the proposed Project on the physical, human, and natural environment. A wide variety of resource areas will be studied during the environmental review to identify potential impacts, including aesthetics, agriculture and forestry resources, air quality and greenhouse gas emissions, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, wildfire, and additional topics as required by the CEQA Guidelines including significant irreversible environmental changes, growth inducement, cumulative impacts, and alternatives. Measures to avoid, minimize, and mitigate any potential adverse impacts will be identified and evaluated in the EIR. ***VIRTUAL PUBLIC SCOPING MEETINGS*** A 30-day public scoping process is being initiated with this notice. Responsible and Trustee Agencies, involved federal agencies, interest groups, and members of the public are invited to participate and provide valuable input into the scope of the EIR. For your convenience, and to allow participation in a safe environment while social distancing, two virtual public scoping meetings will be held during the project's 30-day scoping period. Please join us at one of the following meetings to learn about the project, interact with project team members, ask questions, and submit formal comments. **THURSDAY, MAY 13, 2021 | 6 P.M.** **Webex:** bit.ly/Paradise_Sewer_Mtg1 **Webex Password:** Paradise **Dial-in #:** 408-418-9388 | **Code:** 123 202 6837 **TUESDAY, MAY 25, 2021 | 12 P.M.** **Webex:** bit.ly/Paradise_Sewer_Mtg2 **Webex Password:** Paradise **Dial-in #:** 408-418-9388 | **Code:** 123 877 2748 ***SUBMITTING COMMENTS*** Submission of comments on the environmental scope of the Project are invited from all interested parties from May 3, 2021 until **5 p.m. PST on June 3, 2021**. Comments can be submitted via the website at **paradisesewer.com/contact** (from subject dropdown menu, select "Submit a comment on Environmental Impact Report") or via the following options: **Telephone:** 530-872-6291, ext. 112 **Mail:** Colette Curtis, Public Information Officer Town of Paradise 5555 Skyway, Paradise, CA 95969 ***SPECIAL MEETING ACCOMMODATIONS*** For additional accessibility preferences, please submit a message on the project website at **paradisesewer.com/contact** (from subject dropdown menu, select "Submit a comment on Environmental Impact Report"). Persons who are deaf, hard of hearing, or speech impaired (TDD) may contact the California Relay Service TTY and/or Voice Line at 1-800-735-2929, or 711.

Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
5/3/21	State Clearinghouse 2021050008			**SCH Number:** 2021050008 **Lead Agency:** Town of Paradise **Document Title:** Paradise Sewer Project **Document Type:** NOP - Notice of Preparation **Received:** 5/3/2021 **Present Land Use:** Agricultural, Industrial, Public, Residential, Conservation Area **Document Description:** The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico WPCP, and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and rate payers as a result of the Proposed Project. **Contact Information** Marc Mattox Town of Paradise Lead/Public Agency 5555 Skyway Paradise, CA 95969 Phone : (530) 872-6291 ext. 125 mmattox@townofparadise.com **Cities:** Chico, Paradise **Counties:** Butte **Regions:** Citywide Countywide **Cross Streets:** Highway 99, Midway, Dayton Road, Pearson Road **State Highways:** Highways 32 and 99 **Railways:** Union Pacific Railroad **Airports:** Ranchaero Airport **Schools:** Chapman Elementary School, Little Chico Creek Elementary School **Waterways:** Feather River, Little Butte Creek, Big Chico Creek, Little Chico Creek, Sacramento River

Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
				Review Period Start: 5/3/2021 **Review Period End:** 6/3/2021 Paradise Draft NOP_20210423_OCR SCDD_Bizhub21042815340_OCR.pdf SCDD_Bizhub21042815341_OCR.pdf
5/3/21	Press Release			**Town of Paradise Launches Environmental Review for Paradise Sewer Project** ***Public input solicited on environmental scope and content of EIR*** **Paradise, CA –** On Monday, May 3, the Town of Paradise (Town), and the California Environmental Quality Act (CEQA) Lead Agency, officially launched the environmental review process for the Paradise Sewer Project with a **Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Virtual Public Scoping Meetings.** The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR. **PROJECT OVERVIEW** Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. Numerous studies have supported the need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022. A map of the proposed sewer service area can be found on the project website here. The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico Water Pollution Control Plant (WPCP), and connection to the WPCP — and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and existing Chico WPCP rate payers as a result of the Proposed Project. This long-term wastewater solution will allow for sustainable

Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
				housing and business activity in Town, supporting the community's economic recovery and vitality. **LEARN MORE AT UPCOMING VIRTUAL PUBLIC SCOPING MEETINGS** As an initial step within the CEQA process, project scoping allows the Town to seek public and stakeholder input on the environmental scope of the project. To provide convenient participation in a safe environment while social distancing, the Town is hosting two virtual public scoping meetings during the project's 30-day public comment period to allow attendees to learn about the project, interact with project team members, ask questions and submit formal comments. **THURSDAY, MAY 13, 2021 | 6 P.M.** ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg1 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 202 6837 **TUESDAY, MAY 25, 2021 | 12 P.M.** ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg2 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 877 2748 *For additional accessibility preferences, please submit a message on the project website at paradisesewer.com/contact (from subject dropdown menu, select "Submit a comment on Environmental Impact Report"). Persons who are deaf, hard of hearing, or speech impaired (TDD) may contact the California Relay Service TTY and/or Voice Line at 1-800-735-2929, or 711.* **SUBMITTING COMMENTS** Suggestions and comments on the scope and content of the EIR are invited from all interested parties for a period of 30 days (May 3 through June 3, 2021 by 5 p.m. PDT). Written or verbal comments concerning the Proposed Project's environmental scope should be submitted via the following options. **Website:** paradisesewer.com/contact *(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")* **Mail:** Colette Curtis, Public Information Officer, Town of Paradise, 5555 Skyway, Paradise, CA 95969 **Telephone:** 530-872-6291, ext. 112 **LEARN MORE ABOUT THE PARADISE SEWER PROJECT:** To learn more about the proposed project or to stay updated, visit paradisesewer.com. # # #

Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
5/3/21	E-blast			TOWN OF PARADISE SEWER PROJECT **ENVIRONMENTAL SCOPING INFORMATION & VIRTUAL PUBLIC MEETINGS** The Town of Paradise (Town), the California Environmental Quality Act (CEQA) Lead Agency, officially launched the environmental review process for the Paradise Sewer Project with this Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Virtual Public Scoping Meetings. The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR. **LEARN MORE AT UPCOMING VIRTUAL PUBLIC MEETINGS** For your convenience, and to allow participation in a safe environment while social distancing, two virtual public meetings will be held during the project's 30-day scoping period to allow attendees to learn about the project, interact with project team members, ask questions and submit formal comments. **THURSDAY, MAY 13, 2021 | 6 P.M.** ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg1 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 202 6837 **TUESDAY, MAY 25, 2021 | 12 P.M.** ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg2 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 877 2748 **SUBMITTING COMMENTS** Suggestions and comments on the scope and content of the EIR are invited from all interested parties for a period of 30 days (May 3 through June 3, 2021 by 5 p.m. PDT). Written or verbal comments concerning the proposed project's environmental scope should be submitted via the following options. **Website:** paradisesewer.com/contact *(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")* **Mail:** Colette Curtis Public Information Officer Town of Paradise 5555 Skyway Paradise, CA 95969 **Telephone:** 530-872-6291, ext. 112 **LEARN MORE ABOUT THE PARADISE SEWER PROJECT** To learn more about the proposed project or to stay updated, visit paradisesewer.com.

Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
5/3/21	Public Notice Advertisement (Enterprise-Record)			**PUBLIC NOTICE** **NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND PUBLIC SCOPING MEETING NOTICE** The Town of Paradise (Town) as the Lead Agency for the Paradise Sewer Project (Proposed Project) has issued this Notice of Preparation (NOP) pursuant to the California Environmental Quality Act (CEQA) to notify responsible and trustee agencies and other interested parties that an Environmental Impact Report (EIR) will be prepared to evaluate potential environmental impacts of the Proposed Project. The Town is soliciting public input regarding the scope and content of environmental information to be included in the EIR. The NOP provides information about the public review and comment period, project location, project description, and the probable environmental effects of the Proposed Project, and is posted on the Town's website at **paradisesewer.com**. **PUBLIC REVIEW & COMMENT PERIOD:** May 3 to June 3, 2021 ***PROJECT OVERVIEW*** Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. The Town has supported numerous studies to address its need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022. The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico WPCP, and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and rate payers as a result of the Proposed Project. ***POTENTIAL ENVIRONMENTAL IMPACTS*** The EIR process will assess the potential environmental impacts of the proposed Project on the physical, human, and natural environment. A wide variety of resource areas will be studied during the environmental review to identify potential impacts, including aesthetics, agriculture and forestry resources, air quality and greenhouse gas emissions, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, wildfire, and additional topics as required by the CEQA Guidelines including significant irreversible environmental changes, growth inducement, cumulative impacts, and alternatives. Measures to avoid, minimize, and mitigate any potential adverse impacts will be identified and evaluated in the EIR. ***VIRTUAL PUBLIC SCOPING MEETINGS*** A 30-day public scoping process is being initiated with this notice. Responsible and Trustee Agencies, involved federal agencies, interest groups, and members of the public are invited to participate and provide valuable input into the scope of the EIR. For your convenience, and to allow participation in a safe environment while social distancing, two virtual public scoping meetings will be held during the project's 30-day scoping period. Please join us at one of the following meetings to learn about the project, interact with project team members, ask questions, and submit formal comments. **THURSDAY, MAY 13, 2021 | 6 P.M.** **Webex:** bit.ly/Paradise_Sewer_Mtg1 **Webex Password:** Paradise **Dial-in #:** 408-418-9388 | **Code:** 123 202 6837 **TUESDAY, MAY 25, 2021 | 12 P.M.** **Webex:** bit.ly/Paradise_Sewer_Mtg2 **Webex Password:** Paradise **Dial-in #:** 408-418-9388 | **Code:** 123 877 2748 ***SUBMITTING COMMENTS*** Submission of comments on the environmental scope of the Project are invited from all interested parties from May 3, 2021 until **5 p.m. PST on June 3, 2021**. Comments can be submitted via the website at **paradisesewer.com/contact** (from subject dropdown menu, select "Submit a comment on Environmental Impact Report") or via the following options: **Telephone:** 530-872-6291, ext. 112 **Mail:** Colette Curtis, Public Information Officer Town of Paradise 5555 Skyway, Paradise, CA 95969 ***SPECIAL MEETING ACCOMMODATIONS*** For additional accessibility preferences, please submit a message on the project website at **paradisesewer.com/contact** (from subject dropdown menu, select "Submit a comment on Environmental Impact Report"). Persons who are deaf, hard of hearing, or speech impaired (TDD) may contact the California Relay Service TTY and/or Voice Line at 1-800-735-2929, or 711.

Town of Paradise Sewer Project
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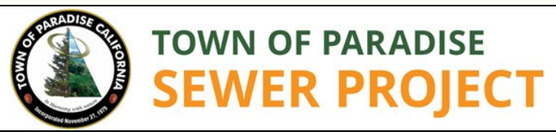
DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
5/3/21	Social Media Post			We have kicked off the environmental review of the Paradise Sewer Project and want your input. This vital proposed Project will provide a long-term solution for wastewater collection, transport and treatment from properties identified in the proposed sewer service area, which is encompassed mostly by Clark Road, Skyway and Pearson Road. This long-term wastewater solution will allow for sustainable housing and business activity in Town, supporting the community's economic recovery and vitality. Visit paradisesewer.com to learn more about the environmental review process and this initial public comment period that will end at 5 p.m. PDT on June 3.
5/11/21	E-blast			

Town of Paradise Sewer Project
Outreach/Media Log

<table>
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<tr><td></td><td></td><td></td><td></td><td>
REMINDER: FIRST VIRTUAL PUBLIC MEETING HAPPENING THIS WEEK

Don’t forget, our first virtual public meeting for the Paradise Sewer Project is this Thursday. Join us to learn more about the project, interact with team members, ask questions and submit formal comments.

JOIN ONLINE OR BY PHONE
You can participate in the meetings online <u>or</u> by phone to remain safe while social distancing. Your participation matters!

THURSDAY, MAY 13, 2021 | 6 P.M.
ONLINE:
• Webex: bit.ly/Paradise_Sewer_Mtg1
• Webex Password: Paradise

BY PHONE:
• Dial-in #: 408-418-9388
• Code: 123 202 6837

TUESDAY, MAY 25, 2021 | 12 P.M.
ONLINE:
• Webex: bit.ly/Paradise_Sewer_Mtg2
• Webex Password: Paradise

BY PHONE:
• Dial-in #: 408-418-9388
• Code: 123 877 2748

SUBMITTING COMMENTS
Even if you can’t make the meetings, suggestions/comments on the scope and content of the EIR are invited from all interested parties anytime until 5 p.m. on June 3, 2021. Written or verbal comments concerning the proposed project’s environmental scope can be submitted via the following options.

Website: paradisesewer.com/contact (from subject dropdown menu, select “Submit a comment on Environmental Impact Report”)

Mail: Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

Telephone: 530-872-6291, ext. 112

LEARN MORE ABOUT THE PARADISE SEWER PROJECT
To learn more about the proposed project or to stay updated, visit paradisesewer.com.
</td></tr>
<tr><td>5/12/21</td><td>Social Media Post</td><td></td><td></td><td>
Don’t forget, we’re hosting our first of two virtual public meetings this Thursday for the Paradise Sewer Project. Your participation and input matters so join us online or by phone to learn more about this vital proposed project and talk directly with the project team.

Visit paradisesewer.com for meeting details or to submit comments during the project’s 30-day scoping period, which will end at 5 p.m. PDT on June 3.
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Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
5/13/21	Virtual Public Meeting #1	40 Total 29 Attendees (4 callers) 11 Panelists	Thursday, May 13, 2021 | 6 p.m. Webex: bit.ly/Paradise_Sewer_Mtg1 Webex Password: Paradise Dial-in #: 408-418-9388 Code: 123 202 6837	Questions/comments: • What is the cost to Paradise property owners within the SSA? Outside of the SSA but within the Town limits? • What other future costs to property owners for things like maintenance? • Will properties outside of the SSA but within the Town limits ever be served in the future? • Will there be any cost to property owners who are NOT in the sewage collection area? • Am I understanding correctly that those town of Paradise properties not in the blue area will not ever be included? • Is the Skyway route confirmed or is the Neal Road route still being considered? • Will parcels within the proposed service area be required to connect to the proposed sewer system?

Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
				• Will the line installed be big enough to handle future growth? [Need to look at existing FAQs and see if one can be expanded to address this.] • How will the construction of the proposed sewer system be coordinated with road rebuilding efforts to minimize impact to the Town? • We think it's short sighted to not anticipate future growth. What if the hospital comes back? • Has the Town consider the cost of building our own system instead of sending the sewer all the way to Chico? • What is your current project funding priority and how can Cal OES be supportive?
5/17/21	E-blast			**TOWN OF PARADISE** **SEWER PROJECT** **DID YOU MISS LAST WEEK'S VIRTUAL PUBLIC MEETING?** In case you missed our first virtual public meeting last week for the Paradise Sewer Project, we're hosting a second meeting next Tuesday, May 25 at Noon. Your participation and input matters so don't miss the discussion on this important proposed project. **JOIN ONLINE OR BY PHONE** You can participate in the meeting online **or** by phone. Join us to learn more about the project, interact with team members, ask questions and submit formal comments. **We look forward to connecting with you!** **TUESDAY, MAY 25, 2021 | 12 P.M.** ONLINE: • **Webex:** bit.ly/Paradise_Sewer_Mtg2 • **Webex Password:** Paradise BY PHONE: • **Dial-in #:** 408-418-9388 • **Code:** 123 877 2748 **SUBMIT COMMENTS ANYTIME UNTIL JUNE 3** Suggestions and comments on the scope and content of the EIR are invited from all interested parties anytime until 5 p.m. on June 3, 2021. Written or verbal comments concerning the proposed project's environmental scope can be submitted via the following options.

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DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
				Website: paradisesewer.com/contact *(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")* **Mail:** Colette Curtis, Public Information Officer, Town of Paradise, 5555 Skyway, Paradise, CA 95969 **Telephone:** 530-872-6291, ext. 112 **STAY INVOLVED** To learn more about the proposed project or to stay updated, visit paradisesewer.com.
5/20/21	Social Media Post			If you missed our first virtual public meeting last week for the Paradise Sewer Project, don't worry, we're hosting a second meeting next Tuesday, May 25 at Noon. Don't miss the discussion on this important proposed project. We look forward to connecting with you! Visit paradisesewer.com for meeting details or to submit comments during the project's 30-day scoping period, which ends June 3 at 5 p.m. PDT.

Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
5/25/21	Virtual Public Meeting #2	31 Total 14 Attendees (5 callers) 12 Panelists	Tuesday, May 25, 2021 | Noon Webex: bit.ly/Paradise_Sewer_Mtg2 Webex Password: Paradise Dial-in #: 408-418-9388 Code: 123 877 2748	• Hi, thank you for taking my call and I apologize if this was covered. I missed a portion of your presentation. If the location that we currently have is within the proposed service area, but it's currently under septic, what advice are you providing to the property owners or what websites or information areas do you recommend in order to understand what would be the proper steps in evaluating whether or not we are required to connect with the sewer system versus having the existing septic system function? That's the biggest question I guess for a lot of people that I know is what are our requirements versus what what's nice to have versus what's required to do.

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DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
				• I'm actually calling from Lane County, emergency management over here in Oregon and so if it's a better conversation to have offline, I'm happy to do that, but really you guys are so much farther ahead than we are with fire recovery. I was just looking to get a better understanding of pitfalls and hurdles that we might be looking out for in the future as we move towards getting a little bit closer to where you guys are, because you guys have been inspirational in your recovery process. • Have the pipe material options been listed, and if so, are you eliminating thermoplastic pipes due to issues of flammable concerns.
5/27/21	E-blast			TOWN OF PARADISE SEWER PROJECT **THANK YOU FOR ENGAGING WITH US!** Thank you for joining us this month for our two virtual public scoping meetings for the Paradise Sewer Project. The Town of Paradise appreciates your input during the meetings and ongoing participation in this project. **THERE'S STILL TIME TO SUBMIT COMMENTS** If you didn't get a chance to attend our meetings, please visit our Public Engagement page to view the meeting recordings and PowerPoint. We still welcome your input regarding the scope and content of environmental information to be included in the Environmental Impact Report. You can submit a comment or letter of support through a number of ways during our public comment period that ends at **5 p.m. PDT on June 3, 2021**. **Website:** paradisesewer.com/contact *(from subject dropdown menu, select "Submit a comment on Environmental Impact Report")* **Mail:** Colette Curtis, Public Information Officer, Town of Paradise, 5555 Skyway, Paradise, CA 95969 **Telephone:** 530-872-6291, ext. 112 **STAY UPDATED** We thank you for your continued interest in the vital proposed project and encourage you to stay updated throughout the various project milestones by visiting paradisesewer.com!
5/27/21	Social Media Post			Thank you for joining us this month for our two virtual public scoping meetings for the Paradise Sewer Project. If you didn't get a chance to attend our meetings, we still

Town of Paradise Sewer Project
Outreach/Media Log

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You can submit a comment or a letter of support through a number of ways during our public comment period that ends at 5 p.m. PDT on June 3, 2021. Send us an email, leave a voicemail, write a letter, or connect with the project team via our website contact page.

We appreciate your ongoing interest in this vital proposed project and encourage you to stay updated throughout the various project milestones by visiting paradisesewer.com!

TOWN OF PARADISE
SEWER PROJECT

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<tr><td>6/7/21</td><td>E-blast</td><td></td><td></td><td>TOWN OF PARADISE
SEWER PROJECT</td></tr>
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Town of Paradise Sewer Project
Outreach/Media Log

DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES
				THANK YOU FOR YOUR INPUT DURING PROJECT SCOPING! The Town of Paradise would like to extend a big THANK YOU to our community for your interest in the proposed Paradise Sewer Project. We appreciate your participation and input during the formal 30-day project scoping period from May 3 to June 3, 2021. **WHAT'S NEXT?** Based on all the valuable feedback received during the public comment period, the Town of Paradise is now preparing the Draft Environmental Impact Report (EIR) that will highlight results of the alternatives analysis, environmental impacts and identification of mitigation measures. The next key project milestone will be the release of the Draft EIR for public review in early 2022. Although the project's scoping period has ended, we welcome public input throughout the environmental process in addition to the formal public comment periods. We will continue to keep you informed throughout each project milestone. **STAY UPDATED** Visit paradisesewer.com to stay in the know about this long-term wastewater solution that will allow for sustainable housing and business activity in Paradise, supporting the community's economic recovery and vitality.
6/7/21	Social Media Post			We would like to extend a big THANK YOU to our community for your interest in the proposed Paradise Sewer Project. We appreciate your participation and input during the formal 30-day project scoping period from May 3 to June 3, 2021. Based on all the valuable feedback received, the project team is now preparing the Draft Environmental Impact Report, which will be released for public review in early 2022. Visit paradisesewer.com to stay in the know about this long-term wastewater solution that will allow for sustainable housing and business activity in Paradise, supporting the community's economic recovery and vitality.

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DATE	OUTREACH TYPE	# OF CONTACTS	MEETING INFO	NOTES

B

Town of Paradise 1994 General Plan Resolution and Amendments

INDEX
GENERAL PLAN AMENDMENTS

RESOLUTION NUMBER	DATE ADOPTED	TYPE OF AMENDMENT	APPLICANT	AMENDMENT NUMBERS
RES. 82-22	04-07-82	RESOLUTION ADOPTING THE GENERAL PLAN	TOWN OF PARADISE	N/A
RES. 82-40	08-18-82	LAND USE MAP	TOWN OF PARADISE	UNKNOWN
RES. 83-16	04-05-83	LAND USE MAP	TOWN OF PARADISE	GPA-03-82(b), GPA-01-83, GPA-03-83, GPA-04-83
RES. 83-55	12-06-83	LAND USE MAP	ANDY MITAL AND OTHERS	GPA-12-83
RES. 84-38	08-21-84	LAND USE MAP	TOWN OF PARADISE	GPA-04-84
RES. 85-02	01-02-85	LAND USE MAP	TOWN OF PARADISE	GPA-05-84
RES. 85-56	12-10-85	LAND USE MAP	TOWN OF PARADISE	GPA-01-85, GPA-02-85, GPA-03-85A, GPA-03-85B, GPA-03-85C, GPA-03-85D, GPA-04-85, GPA-05-85
RES. 87-20	05-19-87	LAND USE MAP	TOWN OF PARADISE	GPA-01-87, GPA-02-87, GPA-03-87, GPA-04-87
RES. 90-23	06-16-90	LAND USE MAP	CLIFFORD LARSEN	GPA/RZ-09-89
RES. 91-09	05-21-91	LAND USE MAP	JOHANN KLEMPA KAROLY KASZA	GPA/RZ-04-90 GPA/RZ-03-90
RES. 92-07	04-07-92	LAND USE MAP	TEN SEVENTY CORP.	GPA/RZ-01-91
RES. 94-42	10-04-94	ADOPTION OF GENERAL PLAN	TOWN OF PARADISE	N/A
RES. 95-28	11-21-95	LAND USE MAP	OUR SAVIOR LUTHERAN CHURCH and OTHERS	GA-95-001
RES. 96-05	05-07-96	LAND USE MAP	YOUNGBLOOD ET. AL. JUBILEE ON THE RIDGE ET. AL. RICK SOUZA ET AL	GA-96-001 GA-96-002 GA-96-002

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GENERAL PLAN AMENDMENTS

RESOLUTION NUMBER	DATE ADOPTED	TYPE OF AMENDMENT	APPLICANT	AMENDMENT NUMBERS
RES. 97-07	03-04-97	LAND USE MAP	DWIGHT and BONNIE MILLER	GA-96-003
RES. 97-24	10-07-97	LAND USE MAP	ROMAN CATHOLIC BISHOP OF CA	GA-97-001 and GR-96-001
RES. 98-25	09-15-98	HOUSING ELEMENT	TOWN OF PARADISE	GA-98-0001
RES. 99-10	04-06-99	LAND USE MAP	LARRY KNIFONG	GR-99-001
RES. 00-15	05-23-00	LAND USE MAP and SAFETY ELEMENTS	TOWN OF PARADISE	GA-00-001
RES. 01-07	02-27-01	LAND USE MAP	DREW SYPHERD	GR-00-002 and GR-00-005
RES. 01-11	04-10-01	LAND USE MAP	FRANK FILER	GR-00-004
RES. 01-31	09-25-01	LAND USE MAP	ROBERT WOODWORTH	GR-01-001
RES. 01-37	11-27-01	LAND USE MAP	TOWN OF PARADISE	GR-01-04
RES. 02-22	05-14-02	LAND USE MAP	LARRY KNIFONG	GR-01-05
RES. 02-66	12-10-02	LAND USE MAP	PARADISE CEMETERY DISTRICT	GR-02-01
RES. 03-28	06-10-03	LAND USE MAP	PATRICK CORRIGAN	GR-02-03
RES. 04-07	02-10-04	LAND USE MAP	MORRIS, ANDERS, SELKO/ TOWN OF PARADISE	GR-03-05
RES. 04-23	06-03-04	LAND USE MAP	FHK COMPANIES	GR-01-02
RES. 05-03	01-11-05	LAND USE MAP	CREW	GR-04-03 and GR-04
RES. 05-20	06-28-05	LAND USE MAP	FEATHER RIVER HOSPITAL SWANLUND	GR-05-02 GR-05-04
RES. 05-34	09-27-05	LAND USE MAP	BRANDI WYMAN	GR-04-05 and GR-05-01
RES. 05-35	09-27-05	HOUSING ELEMENT	TOWN OF PARADISE	GA-03-04

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GENERAL PLAN AMENDMENTS

RESOLUTION NUMBER	DATE ADOPTED	TYPE OF AMENDMENT	APPLICANT	AMENDMENT NUMBERS
RES. 05-50	12-13-05	CIRCULATION DIAGRAM OF THE CIRCULATION ELEMENT	TOWN OF PARADISE	GA-05-01
RES. 06-08	03-28-06	LAND USE MAP	GALLI / DEROMEDI TURMAN	GR-05-05 GR-05-06
RES. 06-52	10-24-06	AMENDMENT TO LUP-47 OF THE LAND USE ELEMENT	TOWN OF PARADISE	GA-06-01
RES. 07-06	02-13-07	HOUSING ELEMENT	TOWN OF PARADISE	GA-06-02
RES. 07-12	05-08-07	LAND USE MAP and LAND USE ELEMENT	BARKLEY TOWN OF PARADISE	GA-06-01 GA-07-03
RES. 07-22	07-10-07	LAND USE MAP	TOWN OF PARADISE	GR-04-02
RES. 07-43	10-23-07	LAND USE MAP	FRATERNAL ORDER OF EAGLES	GR-07-001
RES. 08-04	01-08-08	IMPLEMENTATION MEASURE OCEI-3 OF THE OPEN SPACE / CONSERVATION ELEMENT	TOWN OF PARADISE	GA-07-04
RES. 08-20	05-13-08	LAND USE MAP	SONNTAG	GR-08-01
RES. 08-23	05-13-08	LAND USE MAP	NIBLETT	GR-07-02
RES. 08-46	08-12-08	LAND USE MAP	RICKARDS-ANDERSON	GR-07-05
RES. 08-58	10-28-08	LAND USE MAP	MCGREGOR	GR-08-02
RES. 09-05	01-27-09	LAND USE MAP	SONNTAG TOWN OF PARADISE	GR-08-06 GR-08-07
RES. 09-67	12-08-09	HOUSING ELEMENT TO BE CONSISTENT WITH THE RHNP and CURRENT STATE LAW	TOWN OF PARADISE	N/A
RES. 10-27	08-10-10	AMENDMENT TO LUO-22(a) OF THE LAND USE ELEMENT	TOWN OF PARADISE	N/A

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GENERAL PLAN AMENDMENTS

RESOLUTION NUMBER	DATE ADOPTED	TYPE OF AMENDMENT	APPLICANT	AMENDMENT NUMBERS
RES. 10-34	09-14-10	LAND USE MAP	FEATHER RIVER HOSPITAL AND RINEHART	PL10-00260-FRH PL10-00194 Rinehart
RES. 12-29	08-07-12	LAND USE MAP	GRAND SIERRA LODGE	PL12-00075
RES. 13-58	12-10-13	LAND USE MAP	GILKEY	PL12-00020
RES. 14-22	06-10-14	HOUSING ELEMENT 2014	TOWN OF PARADISE	N/A
RES. 18-23	07-10-18	LAND USE MAP	BALASEK	PL18-00063
RES. 18-38	09-11-18	LAND USE MAP	SONNTAG	PL18-00151
RES. 19-43	12-20-19	LAND USE MAP	MCAFEE	PL19-00227
RES. 20-45	12-08-20	LAND USE MAP	PUSD	PL20-00261

MEMORANDUM

AGENDA NO: 6(a)

FROM: Craig Baker, Community Development Director

TO: Lauren Gill, Interim Town Manager
Dwight Moore, Town Attorney

DATE: August 12, 2013

SUBJECT: Consideration of a Resolution Document Finding that the 1994 Paradise General Plan Substantially Complies With the Statutory Mandates of Government Code Section 65302

COMMISSION ACTION REQUESTED: Adopt Resolution No. 13-04, "A Resolution of the Town of Paradise Planning Commission Finding the 1994 Paradise General Plan Substantially Complies with the Statutory Mandates Under Government Code Section 65302."

BACKGROUND: The general plan is at the top of a city or county's land use regulation hierarchy. Each California city and county is required to have a comprehensive, long-term general plan that includes specific mandatory elements which set forth the objectives, policies, principals, standards and plan proposals for the physical development of the city or county. Pursuant to Government Code section 65302, each general plan must include the following elements:

- Land Use
- Circulation
- Housing
- Conservation
- Open Space
- Noise
- Safety

The 1994 Paradise General Plan was adopted by the Paradise Town Council on October 4, 1994. The process of developing the new, revised plan took approximately four years of work by the Town's hired consultant, five separate citizen subcommittees, the Planning Commission, the Town Council and Town staff. The document is the third general plan adopted by the Town since its incorporation in 1979 and is organized into three separate volumes: Volume I – Policy Document, Volume II - Environmental Impact Report and Volume III – Environmental Setting. Volume I, the Policy Document, contains a comprehensive assemblage of all mandatory general plan elements and an additional, non-mandatory Education and Social Services element. The 1994 plan was intended to chart and direct future land use decision making for the Town of Paradise over a fifteen year period to October, 2009.

With the exception of the Housing Element, no comprehensive updates have been completed since the plan's adoption in 1994, although the Town has adopted ten focused text amendments and twenty-six individual General Plan Land Use Map amendments since then. Pursuant to

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Government Code section 65588(b) the Housing Element is required to be updated every five years. The 1994 Paradise General Plan Housing Element was last revised in 2009 and is not due for another revision until June 30, 2014. Town staff is currently developing a request for proposals (RFP) for the purpose of selecting a consultant to assist in that work effort.

Government Code section 65400 requires every local planning agency to annually review and provide a report to the local legislative body (Town Council) concerning progress achieved toward the implementation of its general plan and a separate review and report specifically concerning progress toward the implementation of its general Housing Element. Town staff has developed these reports on an annual basis for review by the Planning Commission, acceptance by the Town Council and submittal to the California Department of Housing and Community Development as required by section 65400. In addition, Government Code section 65103(a) requires the Town Planning Commission to periodically review and revise the general plan, as necessary.

ANALYSIS

Government Code statutes associated with the requirements for a legally adequate general plan do not provide a mandatory minimum timeframe for revision of elements, except for the housing element. In order to be found to be legally adequate, a general plan must first be complete. As discussed previously, the 1994 Paradise General Plan is comprised of all seven required general plan elements and is therefore complete from that perspective.

Secondly, general plans must be internally consistent. That is, all elements must be integrated and compatible. The generation of annual implementation status reports not only satisfies a State requirement for tracking implementation, but also provides the Town with a periodic opportunity to examine the document for inconsistencies or conflicts. The latest annual reports for 2013 not only failed to identify any notable inconsistencies or conflicting policy directives, objectives or implementation measures, Town staff was also able to conclude that, despite periodic and at times chronic funding and staffing shortages, the 1994 Paradise General Plan continues to be increasingly implemented.

Although the Town does collect a 12% surcharge on most building, planning and wastewater permits to be used for updating the general plan, the fund balance is not currently sufficient at this time. However, there is sufficient funding from this source to complete the required housing element update.

Included within the various findings necessary to be made by a planning agency when approving a development project is a finding that the project is compatible with the objectives, policies, general land uses and programs specified in the agency's general plan.

A planning agency's general plan should be a reflection of the character of the community for which it was prepared and adopted. The Town of Paradise still bears substantial similarity to the community that existed here in 1994, and perhaps before. There have been no significant annexations since the general plan was adopted. The Town boundary is essentially the same as

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in 1994 and, in fact, bears a remarkable resemblance to the 1994 boundary of the Paradise Irrigation District. Based upon U.S. Census data, the Town's population increased by only 3% between 1990 and 2010 (Interestingly, the 1994 Paradise General Plan predicted that the Town's population would increase by approximately 20% by the year 2008). There is still no large-scale wastewater disposal system serving the community. Since 1989, traffic counts have remained fairly static in most areas but show a general decline from 2003 to 2010 over the last ten years (Butte County Association of Governments). These observations lend support to the notion that the Paradise community has not changed to any great degree in terms of its character, environmental setting and function since 1994 and that the Town's current general plan can still be found to be adequate as a document to guide the future development of the community.

CONCLUSION AND RECOMMENDATION

It is the position of the Town Planning Director and the Town Attorney that based upon the circumstances outline within the preceding discussion, the 1994 General Plan is not outdated or legally inadequate. In consideration of this finding, the attached Planning Commission Resolution No. 13.04 has been prepared for your consideration and recommended adoption. Planning Commission adoption of the resolution document is intended to formally affirm the relevance and adequacy of the 1994 Paradise General Plan. Please be prepared to discuss this matter with staff and other Planning Commission members. Town Attorney Dwight Moore will be in attendance at the meeting to provide guidance and assistance and to answer questions that may arise during the discussion.

TOWN COUNCIL
Meeting Minutes

6:00 PM – April 12, 2022

1. OPENING

The Regular meeting of the Paradise Town Council was called to order by Mayor Crowder at 6:06 p.m. in the Town Council Chamber located at 5555 Skyway, Paradise, California who led the Pledge of Allegiance to the Flag of the United States of America. An invocation was offered by Council Member Steve "Woody" Culleton.

COUNCIL MEMBERS PRESENT: Greg Bolin, Steve "Woody" Culleton, Jody Jones, Rose Tryon and Steve Crowder, Mayor.

COUNCIL MEMBERS ABSENT: None

STAFF PRESENT: Town Manager Kevin Phillips, Town Attorney Scott E. Huber, Town Clerk Dina Volenski, Town Engineer/Public Works Director Marc Mattox, Finance Director/Town Treasurer Ross Gilb, Community Development Director Susan Hartman, Community Development Director Tony Lindsey, Information Systems Director Luis Marquez, Business and Housing Manager Kate Anderson, Recovery and Economic Development Director Colette Curtis, Police Chief Eric Reinbold, Police Lieutenant Cameron Kovacs and Police Lieutenant Anthony Borgman.

1e. Mayor Crowder read the proclamation recognizing Congressman Doug LaMalfa, Senator Dianne Feinstein and Senator Alex Padilla for their assistance in securing funding to benefit the Paradise Police Department. (180-40-027)

Congressman LaMalfa accepted the Proclamation in person.

1f. Mayor Crowder read the Proclamation recognizing Jake Early for creating the new seal representing the Town of Paradise. (180-40-027)

1g. Camp Fire Recovery Updates - Written reports are included in the agenda packet.

- Colette Curtis, Recovery and Economic Development Director - Recovery projects, Advocacy, Economic Recovery and Development, Communications and Emergency Operations.
- Marc Mattox, Public Works Director/Town Engineer - Infrastructure and Sewer Update.
- Tony Lindsey, CDD-Building and Code Enforcement Update.

2. CONSENT CALENDAR

MOTION by Bolin, seconded by Culleton, approved consent calendar items 2a through 2j with the addition to item 2j to include compensation of $1,000 for each easement. Roll call vote was unanimous.

2a. Approved minutes of the March 8, 2022 Special and Regular Town Council meetings.

2b. Approved March 2022 Cash Disbursements in the amount of $3,262,687.15. (310-10-034)

2c. Waived second reading of the entire Town Ordinance No. 615 and approved reading by title only; and, Adopted Town Ordinance No. 615, "An Ordinance Adding Section 9.70 to the Paradise Municipal Code Relating to Military Equipment Use." (540-16-184)

- 2d. 1. Concurred with staff's recommendation of Northstar and Rolls Anderson Rolls to perform On Call Surveying Services for the Town's survey needs to support Public Works and Development services; and, 2. Approved the Professional Services Agreement with Northstar Engineering and Rolls Anderson Rolls and authorized the Town Manager to execute a two-year contract, with three one-year optional extensions. (510-20-339 & 510-20-340)

2e. Approved Program Supplement Agreements for Emergency Relief projects to Administering Agency-State Agreement for Federal-Aid Projects, Agreement No. 03-5425F15:

- PSA No. F028 for Project ER-38Y0(014) Emergency Opening Guardrail Repair (950-40-065)
- PSA No. F029 for Project ER-38Y0(015) Emergency Opening Culvert Repair; and, (950-40-066)

Adopted Resolution No. 2022-17, A Resolution of the Town Council of the Town of Paradise authorizing the Town Manager, or designee, to sign the above listed Program Supplement Agreement to Administering Agency-State Agreement for Federal-Aid Projects, Agreement No. 03-5425F15.

2f. Authorized the Town Manager to enter into a three-year agreement for financial audit services with Richardson & Company, LLP. (510-20-341)

2g. Adopted Town of Paradise Resolution No. 2022-18, "Resolution of the Town Council of the Town of Paradise requesting extension of the Vehicle Abatement Program and associated fees and authorizing continued participation in a Service Authority for Abandoned Vehicle Abatement pursuant to California Vehicle Code section 9250.7 and 22710." (540-15-012)

2h. Adopted Resolution No.22-19, A Resolution of the Town Council of the Town of Paradise approving the plans and specifications for the Off-

System Culvert Replacement Project and authorizing advertisement for bids on the project. (950-40-060 & 910-30-004)

2i. Adopted Resolution No. 2022-20, A Resolution of the Town Council of the Town of Paradise accepting Contract No. 9380.CON, Ponderosa Elementary Safe Routes to School Project, performed by All-American Construction, Inc., Live Oak, CA. (950-40-032 & 510-20-299)

2j. Adopted Resolution No. 2022-21, A Resolution of the Town Council of the Town of Paradise authorizing a permanent easement at 6225 and 6295 Skyway to Pacific Gas and Electric Company with compensation of $1,000 for each easement. (950-90-004, 850-20-011)

3. ITEMS REMOVED FROM CONSENT CALENDAR - None

4. PUBLIC COMMUNICATION

1. Ed Schilling would like to see the Bike Path beautified and thinks the Town should have its own sewer plant, doesn't think the connection to Chico makes sense.

2. Jon Remalia would like to see the Planning Commissioners page on the Town Website updated.

5. PUBLIC HEARINGS

5a. Business and Housing Manager Kate Anderson provided the Town Council with an overview of the Draft 2022-2023 Annual Action Plan and requested Council to conduct the second public hearing to solicit comments and/or suggestions regarding the Draft 2022-2023 Annual Action Plan; and, Adopt the Draft 2022-2023 Annual Action Plan as submitted; or, Revise the Draft 2022-2023 Annual Action Plan as submitted; and, Authorize staff to submit the adopted 2022-2023 Annual Action Plan to the U.S. Department of Housing and Urban Development should no public comment be received.

Mayor Crowder opened the public hearing at 6:43 p.m.

There were no public comments.

Mayor Crowder closed the public hearing at 6:44 p.m.

MOTION by Jones, seconded by Bolin, adopted the Draft 2022-2023 Annual Action Plan as submitted and authorized staff to submit the adopted 2022-2023 Annual Action Plan to the U.S. Department of Housing and Urban Development since there were no public comments. Roll call vote was unanimous. (710-10-100)

5b. Community Development Director Susan Hartman provided the Town Council with an overview of the Updated Design Standards for the Downtown and Clark Road/Community Commercial Development Areas and Rescinding the Greater RDA Project Area Design District Standards that no long exist due to the dissolution of the RDA in 2012 and requested the Town Council to conduct the duly noticed and scheduled public hearing regarding the Updated Design Standards.

Mayor Crowder opened the public hearing at 7:01 p.m.

1. Jon Remalia thinks there's an issue if someone has a zero setback lot and they have to provide landscaping from the side they lose a lot of property.

Mayor Crowder closed the public hearing at 7:02 p.m.

MOTION by Bolin, seconded by Jones, concurred with the project "CEQA determination" finding presented and considered by the Planning Commission on March 15, 2022, and embodied within Planning Commission Resolution No. 2022-01; and, concurred with the project recommended adoption and zoning ordinance amendment adopted by the Planning Commission on March 15, 2022, and embodied within Planning Commission Resolution No. 2022-01; and, Adopted Town of Paradise Resolution No. 2022-22, "A Resolution of the Town Council of the Town of Paradise Adopting Updated Design Standards for the Downtown and Clark Road/Community Commercial Development Areas of the 2010 Design Standards and Rescinding the Greater RDA Project Area Design District Standards", and, waived the first reading of Town Ordinance No.616 and read by title only; and, Introduced Town of Paradise Ordinance No.616, "An Ordinance Amending Text Regulations with Paradise Municipal Code Chapter 17.41 [Design Standards and Design Review] Relative to Updated Adoption Dates". Roll call vote was unanimous. (710-80-012 & 540-16-185)

6. COUNCIL CONSIDERATION

6a. Chief Reinbold introduced Lieutenant Kovacs who provided Council with an overview of the proposed purchase of Body Worn Cameras, Vehicle Cameras and Data Management Products and Services for Bodyworn by Utility Associates. Lt. Kovacs introduced David Burns from Bodyworn by Utility Associates, Inc. who provided additional information to the Council about the products.

MOTION by Crowder, seconded by Culleton, adopted Resolution No. 2022-23, a Resolution of The Town Council of The Town of Paradise Making Findings Concerning Sole Vendor For The Purchase of Body Worn Cameras, Vehicle Cameras, and Data Management Products and Services from Bodyworn, by Utility Associates, Inc. Body Worn Cameras, Vehicle Cameras, and Data Management Products and Services from

Bodyworn, by Utility Associates, Inc. Pursuant To Paradise Municipal Code Sections 2.45.070B, 245.070C, and 245.070G. Roll call vote was unanimous. (480-35-002)

6b. **MOTION by Jones, seconded by Culleton,** authorized the Town Manager to enter into a contract with CDX Wireless for Project Management of the Town's two-way radio system restoration. Roll call vote was unanimous. (480-35-002)

6c. **MOTION by Culleton, seconded by Jones,** authorized the Police Department to purchase three (3) 2022 or 2023 Chevrolet Tahoe PPV vehicles under California State Contract pricing through Elk Grove Auto / Winner Chevrolet; and, authorized the Police Department to purchase required upfit and emergency equipment from Lehr, under the existing, publicly bid, Placer County contract with Lehr Auto, to upfit the Tahoes into two (2) Patrol vehicles and one (1) K9 Patrol vehicle. Roll call vote was unanimous. (480-35-002)

6d. **MOTION by Jones, seconded by Crowder,** adopted Town of Paradise Resolution No. 2022-24, "A Resolution of the Town Council of the Town of Paradise Adopting CEQA Findings, Adopting the Town of Paradise's Statement of Overriding Considerations, and Thereafter Approving Its Vehicle Miles Traveled Policies." Roll call vote was unanimous. (720-10-002, 770-40-009)

6e. **MOTION by Bolin, seconded by Crowder** concurred with staff recommendation to award communication services contract to Blue Flamingo Marketing; and, authorized the Town Manager to execute a 3-year contract with Blue Flamingo Marketing. Roll call vote was unanimous. (510-20-234)

6f. Community Development Director Tony Lindsey provided the Town Council with and overview of the proposed Ordinance amending Section 8.58.080 of the Paradise Municipal Code relating to Defensible Space and Hazardous Fuel Management that would allow an issued Certificate of Compliance to remain valid for 90 days from the inspection date.

MOTION by Bolin, seconded by Culleton, waived the first reading of Town Ordinance No. 617 and read by title only; and, Introduced Town Ordinance No. 617. "An Ordinance Amending Paradise Municipal Code Section 8.58.060 Relating to Defensible Space and Hazardous Fuel Management". Roll call vote was unanimous. (480-35-002)

6g. At 8:24 p.m. Vice Mayor Greg Bolin recused himself from the dais regarding this agenda item due to a potential conflict of interest.

Public Works Director/Town Engineer Marc Mattox provided the Town Council with an overview of the Draft Principals of Agreement between the

Town of Paradise and the City of Chico that the Sewer Regionalization Project Advisory Committee has been working on.

Council discussed the Draft Principals Agreement between the Town of Paradise and City of Chico developed by the Sewer Regionalization Project Advisory Committee and provide no additional comments.
Vice Mayor Bolin returned to the dais at 8:48 p.m.

7. COUNCIL INITIATED ITEMS AND REPORTS

7a. Council initiated agenda items

7a1. Consider discussing road construction projects in Town and requesting identifying plaques for the contractors and putting construction maps on social media so citizens can see where road construction is in Town. (CULLETON)

Council Member Culleton talked with PG&E and they stated there are other contractors working on the roadways in Paradise; PG&E now provides a map of where construction is going on in Town so the public can be informed of what the best routes are for driving in town. The Town is also working on identifying where other contractors are working in Town.

Marc Mattox stated that Paradise is one of the largest construction sites in the country and temporary construction sites are difficult to manage because job sites change on a daily basis, but the Town is working on providing more information to the public.

7a2. Discuss changes to Ordinance 612 regarding citations issued to property owners instead of violators living on the property. (CULLETON)

Council Member Culleton was concerned with the Ordinance only citing the property Owner and not the actual violator on the property, but had a discussion with staff and learned that the Ordinance allows staff the ability and tools to cite the property owner and violator.

7b. Council reports on committee representation

Council Member Jones attended Sewer Regional Project Advisory Committee (SRPAC), Butte County Association of Governments and Butte County Air Quality Management District meetings.

Council Member Culleton attended Solid Waste Committee and CDBG Partnership program to award money to Service organizations

Council Member Tryon attended meetings with Broad and Guzman, CDBG Partnership Program, Waste Management; and announced that potentially the green waste yard, buy back center and Household Hazardous Waste (HHW) center could be available in the near future.

Mayor Crowder attended SRPAC, Congressman LaMalfa press conference, labor negotiations with Generals and POA and Chamber Business walk.

7c. Future Agenda Items - None

8. STAFF COMMUNICATION

8a. Town Manager Report

Town Manager Phillips reported on meeting with PASH; ICS 300 training with Jim Broshears; Counselors of Real Estate meeting; discussion to enhance Yellowstone Kelly trail with mountain biking amenities; announced the Town will be hosting HUD for a Roundtable meeting/discussion and will be hosting the Sacramento Valley City Mangers meeting.

Town Manger Phillips announced the City Clerks Association of California 2022 Clerk of the Year award was presented to Town Clerk Dina Volenski in San Francisco.

Community Development Director (CDD) Update

CDD Director Tony Lindsey informed the Town Council that the department has been hosting Stakeholders meetings on the first Monday of each month; Community Enhancement Outreach Team has contacted 40 community members last month and generated 85 clients for the Business and Housing Department; exploring opportunities for residents to receive affordable insurance through IBHS which focus on Wildfire preparedness and is supported by National Institute of Standards and Technology (NIST); and, introduced an interactive Wildfire Ready app to assist residents.

9. CLOSED SESSION - None

10. ADJOURNMENT

Mayor Crowder adjourned the meeting at 9:27 p.m.

Date approved: May 10, 2022

By: Attest:

_____ _____

Steve Crowder, Mayor Dina Volenski, CMC, Town Clerk

TOWN OF PARADISE
PLANNING COMMISSION

RESOLUTION NO. 13-04

A RESOLUTION OF THE TOWN OF PARADISE PLANNING COMMISSION FINDING THE 1994 PARADISE GENERAL PLAN SUBSTANTIALLY COMPLIES WITH THE STATUTORY MANDATES UNDER GOVERNMENT CODE SECTION 65302

WHEREAS, each California city and county is required to have a general plan that includes specific mandatory elements, which set forth the objectives, policies, principles, standards and plan proposals for the physical development of the city or county. See Government Code sections 65300 and 65302 attached. There are seven mandatory general plan elements that must be included in each general plan; and

WHEREAS, under Government Code section 65302, the general plan is required to include the following elements:

(a) **Land Use** – designates proposed general location, distribution and extent of land uses; includes standards of population density and building intensity.

(b) **Circulation** – consists of general location and extent of transportation facilities and public utilities all correlated with the land use element.

(c) **Housing** – provides for housing development, improvement and site adequacy for all economic segments of the community.

(d) **Conservation** – for the conservation, development, and utilization of all natural resources.

(e) **Open Space** – plans for open space for preservation and managed production of natural resources, outdoor recreation and public health and safety.

(f) **Noise** – identification and appraisal of noise problems in the community. It shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. Noise contours shall be used as a guide for establishing a pattern of land uses in the land use element.

(g) **Safety** – protection of community from fires, seismic and geological hazards; and

WHEREAS, pursuant to Government Code section 65103(a), the Planning Commission, as the Town of Paradise planning agency, is required to periodically review and revise, as necessary, the Town General Plan; and

WHEREAS, the Community Development Director has reviewed the Town's 1994 General Plan for the purpose of determining whether it still substantially complies with all the requirements of Government Code section 65302; and

WHEREAS, as a result of the Community Development Director's review, he has determined that the Town's 1994 General Plan and the current Housing Element substantially satisfy the statutory mandates under Government Code section 65302; and

WHEREAS, if there are no amendments to the 1994 General Plan, the determination would not be a project under the California Environmental Quality Act.

NOW, THEREFORE, THE TOWN OF PARADISE PLANNING COMMISSION hereby resolves as follows:

Section 1. The above statements are true and correct.

Section 2. The Planning Commission has reviewed the staff report relating to the status of the Town's 1994 General Plan.

Section 3. Based on such review, the Planning Commission hereby finds that the Town's 1994 General Plan contains all of the mandatory elements required by State law, including the current Housing Element, and that it substantially complies with the requirements of Government Code section 65302.

Section 4. The Planning Commission hereby determines that the adoption of this resolution is not a "project" under Public Resources Code section 21065 and Title 14 CCR section 15378 of the CEQA Guidelines based on the fact it is merely a finding that the Town's 1994 General Plan substantially complies with State law.

Section 5. The Planning Commission directs the Community Development Director to post a Notice of Determination relating to the exemption from the requirements of the California Environmental Quality Act.

PASSED AND ADOPTED by the Planning Commission of the Town of Paradise this 27th day of August, 2013, by the following vote:

AYES:	Stephanie Neumann, Dan Wentland, Michael Zuccolillo and Jody Jones, Chair
NOES:	None
ABSENT:	James Clarkson
NOT VOTING:	None

Jody Jones
Jody Jones, Chair

ATTEST: 8/28/2013

Joanna Gutierrez
Joanna Gutierrez, Town Clerk

ARTICLE 5. Authority for and Scope of General Plans [65300. - 65303.4.]
(Article 5 added by Stats. 1965, Ch. 1880.)

65300.

Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning. Chartered cities shall adopt general plans which contain the mandatory elements specified in Section 65302.

(Amended by Stats. 1984, Ch. 1009, Sec. 3.)

(Added by Stats. 1980, Ch. 837.)

65302.

The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The plan shall include the following elements:

(a) A land use element that designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The location and designation of the extent of the uses of the land for public and private uses shall consider the identification of land and natural resources pursuant to paragraph (3) of subdivision (d). The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall identify and annually review those areas covered by the plan that are subject to flooding identified by flood plain mapping prepared by the Federal Emergency Management Agency (FEMA) or the Department of Water Resources. The land use element shall also do both of the following:

(1) Designate in a land use category that provides for timber production those parcels of real property zoned for timberland production pursuant to the California Timberland Productivity Act of 1982 (Chapter 6.7 (commencing with Section 51100) of Part 1 of Division 1 of Title 5).

(2) Consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace.

(A) In determining the impact of new growth on military readiness activities, information provided by military facilities shall be considered. Cities and counties shall address military impacts based on information from the military and other sources.

(B) The following definitions govern this paragraph:

(i) "Military readiness activities" mean all of the following:

(I) Training, support, and operations that prepare the men and women of the military for combat.

(II) Operation, maintenance, and security of any military installation.

(III) Testing of military equipment, vehicles, weapons, and sensors for proper operation or suitability for combat use.

(ii) "Military installation" means a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the United States Department of Defense as defined in paragraph (1) of subsection (e) of Section 2687 of Title 10 of the United States Code.

(b) (1) A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, any military airports and ports, and other local public utilities and facilities, all correlated with the land use element of the plan.

(2) (A) Commencing January 1, 2011, upon any substantive revision of the circulation element, the legislative body shall modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan.

(B) For purposes of this paragraph, "users of streets, roads, and highways" mean bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.

(c) A housing element as provided in Article 10.6 (commencing with Section 65580).

(d) (1) A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The conservation element shall consider the effect of development within the jurisdiction, as described in the land use element, on natural resources located on public lands, including military installations. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies, including flood management, water conservation, or groundwater agencies that have developed, served, controlled, managed, or conserved water of any type for any purpose in the county or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5, if that information has been submitted by the water agency to the city or county.

(2) The conservation element may also cover all of the following:

(A) The reclamation of land and waters.

(B) Prevention and control of the pollution of streams and other waters.

(C) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.

(D) Prevention, control, and correction of the erosion of soils, beaches, and shores.

(E) Protection of watersheds.

(F) The location, quantity and quality of the rock, sand, and gravel resources.

(3) Upon the next revision of the housing element on or after January 1, 2009, the conservation element shall identify rivers, creeks, streams, flood corridors, riparian habitats, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management.

(e) An open-space element as provided in Article 10.5 (commencing with Section 65560).

(f) (1) A noise element that shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:

(A) Highways and freeways.

(B) Primary arterials and major local streets.

(C) Passenger and freight online railroad operations and ground rapid transit systems.

(D) Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.

(E) Local industrial plants, including, but not limited to, railroad classification yards.

(F) Other ground stationary noise sources, including, but not limited to, military installations, identified by local agencies as contributing to the community noise environment.

(2) Noise contours shall be shown for all of these sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (Ldn). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified in paragraphs (1) to (6), inclusive.

(3) The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise.

(4) The noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standards.

(g) (1) A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.

(2) The safety element, upon the next revision of the housing element on or after January 1, 2009, shall also do the following:

(A) Identify information regarding flood hazards, including, but not limited to, the following:

(i) Flood hazard zones. As used in this subdivision, "flood hazard zone" means an area subject to flooding that is delineated as either a special hazard area or an area of moderate or minimal hazard on an official flood insurance rate map issued by the Federal Emergency Management Agency (FEMA). The identification of a flood hazard zone does not imply that areas outside the flood hazard zones or uses permitted within flood hazard zones will be free from flooding or flood damage.

(ii) National Flood Insurance Program maps published by FEMA.

(iii) Information about flood hazards that is available from the United States Army Corps of Engineers.

(iv) Designated floodway maps that are available from the Central Valley Flood Protection Board.

(v) Dam failure inundation maps prepared pursuant to Section 8589.5 that are available from the California Emergency Management Agency.

(vi) Awareness Floodplain Mapping Program maps and 200-year flood plain maps that are or may be available from, or accepted by, the Department of Water Resources.

(vii) Maps of levee protection zones.

(viii) Areas subject to inundation in the event of the failure of project or nonproject levees or floodwalls.

(ix) Historical data on flooding, including locally prepared maps of areas that are subject to flooding, areas that are vulnerable to flooding after wildfires, and sites that have been repeatedly damaged by flooding.

(x) Existing and planned development in flood hazard zones, including structures, roads, utilities, and essential public facilities.

(xi) Local, state, and federal agencies with responsibility for flood protection, including special districts and local offices of emergency services.

(B) Establish a set of comprehensive goals, policies, and objectives based on the information identified pursuant to subparagraph (A), for the protection of the community from the unreasonable risks of flooding, including, but not limited to:

(i) Avoiding or minimizing the risks of flooding to new development.

(ii) Evaluating whether new development should be located in flood hazard zones, and identifying construction methods or other methods to minimize damage if new development is located in flood hazard zones.

(iii) Maintaining the structural and operational integrity of essential public facilities during flooding.

(iv) Locating, when feasible, new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities or identifying construction methods or other methods to minimize damage if these facilities are located in flood hazard zones.

(v) Establishing cooperative working relationships among public agencies with responsibility for flood protection.

(C) Establish a set of feasible implementation measures designed to carry out the goals, policies, and objectives established pursuant to subparagraph (B).

(3) Upon the next revision of the housing element on or after January 1, 2014, the safety element shall be reviewed and updated as necessary to address the risk of fire for land classified as state responsibility areas, as defined in Section 4102 of the Public Resources Code, and land classified as very high fire hazard severity zones, as defined in Section 51177. This review shall consider the advice included in the Office of Planning and Research's most recent publication of "Fire Hazard Planning, General Technical Advice Series" and shall also include all of the following:

(A) Information regarding fire hazards, including, but not limited to, all of the following:

(i) Fire hazard severity zone maps available from the Department of Forestry and Fire Protection.

(ii) Any historical data on wildfires available from local agencies or a reference to where the data can be found.

(iii) Information about wildfire hazard areas that may be available from the United States Geological Survey.

(iv) General location and distribution of existing and planned uses of land in very high fire hazard severity zones and in state responsibility areas, including structures, roads, utilities, and essential public facilities. The location and distribution of planned uses of land shall not require defensible space compliance

measures required by state law or local ordinance to occur on publicly owned lands or open space designations of homeowner associations.

(v) Local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services.

(B) A set of goals, policies, and objectives based on the information identified pursuant to subparagraph (A) for the protection of the community from the unreasonable risk of wildfire.

(C) A set of feasible implementation measures designed to carry out the goals, policies, and objectives based on the information identified pursuant to subparagraph (B) including, but not limited to, all of the following:

(i) Avoiding or minimizing the wildfire hazards associated with new uses of land.

(ii) Locating, when feasible, new essential public facilities outside of high fire risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identifying construction methods or other methods to minimize damage if these facilities are located in a state responsibility area or very high fire hazard severity zone.

(iii) Designing adequate infrastructure if a new development is located in a state responsibility area or in a very high fire hazard severity zone, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.

(iv) Working cooperatively with public agencies with responsibility for fire protection.

(D) If a city or county has adopted a fire safety plan or document separate from the general plan, an attachment of, or reference to, a city or county's adopted fire safety plan or document that fulfills commensurate goals and objectives and contains information required pursuant to this paragraph.

(4) After the initial revision of the safety element pursuant to paragraphs (2) and (3), upon each revision of the housing element, the planning agency shall review and, if necessary, revise the safety element to identify new information that was not available during the previous revision of the safety element.

(5) Cities and counties that have flood plain management ordinances that have been approved by FEMA that substantially comply with this section, or have substantially equivalent provisions to this subdivision in their general plans, may use that information in the safety element to comply with this subdivision, and shall

summarize and incorporate by reference into the safety element the other general plan provisions or the flood plain ordinance, specifically showing how each requirement of this subdivision has been met.

(6) Prior to the periodic review of its general plan and prior to preparing or revising its safety element, each city and county shall consult the California Geological Survey of the Department of Conservation, the Central Valley Flood Protection Board, if the city or county is located within the boundaries of the Sacramento and San Joaquin Drainage District, as set forth in Section 8501 of the Water Code, and the California Emergency Management Agency for the purpose of including information known by and available to the department, the agency, and the board required by this subdivision.

(7) To the extent that a county's safety element is sufficiently detailed and contains appropriate policies and programs for adoption by a city, a city may adopt that portion of the county's safety element that pertains to the city's planning area in satisfaction of the requirement imposed by this subdivision.

(Amended by Stats. 2012, Ch. 311, Sec. 2. Effective January 1, 2013.)

Town of Paradise
Planning Commission
Special Meeting Agenda
6:00 PM – May 24, 2022

Town of Paradise Council Chamber – 5555 Skyway, Paradise, CA

Planning Commission Staff:
Susan Hartman, Community Development Director

Planning Commission Members:
Carissa Garrard, Chair
Ron Lassonde, Vice Chair
Lynn Costa, Commissioner
Kim Morris, Commissioner
Zeb Reynolds, Commissioner

In accordance with the Americans with Disabilities Act, if you need a special accommodation to participate, please contact Community Development Director Hartman, at 872-6291 ext. 417 at least 48 hours in advance of the meeting. Hearing assistance devices for the hearing impaired are available from the Presiding Clerk. Members of the public may address the Planning Commission on any agenda item. If you wish to address the Planning Commission on any matter on the Agenda, it is requested that you complete a "Request to Address Council/Commission" card and give it to the Presiding Clerk prior to the beginning of the Meeting. All writingsor documents which are related to any item on an open session agenda and which are distributed to a majorityof the Planning Commission within 72 hours of a Regular Meeting will be available for public inspection at theTown Hall in the Town Clerk or Community Development Services Department located at 5555 Skyway, at thetime the subject writing or document is distributed to a majority of the subject body. Regular business hoursare Monday through Thursday from 8:00 a.m. to 5:00 p.m.

CALL TO ORDER

PLEDGE OF ALLEGIANCE TO THE FLAG OF THE UNITED STATES OF AMERICA

ROLL CALL

1. PUBLIC HEARING

*** * * PUBLIC HEARING PROCEDURE * * ***

A. Staff comments
B. Open the hearing to the public
   1.Project applicant
   2.Parties for the project
   3.Parties against the project
   4.Rebuttals
C. Close hearing to the public
D. Commission discussion
E. Motion
F. Vote

NOTE: Pursuant to Planning Commission Resolution No. 96-001, any person may speak before the Commission regarding the matter under consideration for **a maximum of five minutes** unless granted additional time by the Chair. "In accordance with the Americans with Disabilities Act, if you need a special accommodation to participate, please contact the Community Development Dept., at 872-6291 at least 48 hours in advance of the meeting."

1a. 1. Conduct the duly noticed and scheduled public hearing regarding the proposed Town of Paradise Housing Element 2022 update; and,

2. Consider adopting Planning Commission Resolution No. 2022-02, thereby recommending that the Town Council take the following actions: a) Certify and adopt the proposed Initial Study and Negative Declaration document as it relates to the proposed Town of Paradise Housing Element 2022 Update, and b) Adopt the amendments to the Housing (2022-2030 Housing Element) of the 1994 Paradise General Plan known as the Town of Paradise Housing Element 2022 Update in order to make the Paradise Housing Element consistent with the RHNA and current State housing element law. (ROLL CALL VOTE)

2. ADJOURNMENT

STATE OF CALIFORNIA) SS.
COUNTY OF BUTTE)

I declare under penalty of perjury that I am employed by the Town of Paradise in the Town Clerk's Department and that I posted this Agenda on the bulletin Board both inside and outside of Town Hall on the following date:

_____

_____
TOWN/ASSISTANT TOWN CLERK SIGNATURE

Town of Paradise

Planning Commission Agenda Summary **Agenda Item: 1(a)**

Date: May 24, 2022

ORIGINATED BY: Susan Hartman, Community Development Director – Planning & Wastewater

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Review the Final Revised 2022-2030 Housing Element Update and Consider Adoption of a Resolution Recommending Town Council Adoption of a Town of Paradise 2022-2030 Housing Element Update and Certification of its Associated Negative Declaration Environmental Document

COMMISSION ACTION REQUESTED:

1. Conduct the duly noticed and scheduled public hearing regarding the proposed Town of Paradise Housing Element 2022 update; and, 2. Consider adopting Planning Commission Resolution No. 2022-02, thereby recommending that the Town Council take the following actions: a) Certify and adopt the proposed Initial Study and Negative Declaration document as it relates to the proposed Town of Paradise Housing Element 2022 Update, and b) Adopt the amendments to the Housing (2022-2030 Housing Element) of the 1994 Paradise General Plan known as the Town of Paradise Housing Element 2022 Update in order to make the Paradise Housing Element consistent with the RHNA and current State housing element law. (ROLL CALL VOTE)

Background:

The Housing Element is one of seven mandatory elements that comprise a local agency's General Plan according to Section 65302(c) of the California Government Code. The Housing Element is considered to be the primary policy document for a community to guide the development, rehabilitation and preservation of its housing for all economic segments of the local population.

In February 2021, Urban Planning Partners, Inc. (UPP) was selected as the Town's consultant and began the process of reviewing the 2014-2022 Housing Element, collecting, and analyzing housing data such as population, housing and employment characteristics, the regional allocation of housing units, the characteristics of the housing market, and the housing needs of special populations to begin the preparation of the 2022-2030 Housing Element.

On December 3, 2021, the Public Draft Housing Element was made available for public review and comment with written comments being accepted through 5:00 p.m., January 4, 2022. Only grammatical corrections/typos were received from the public during that timeframe.

On January 18, 2022, the Draft Housing Element was forwarded to the State Dept of Housing & Community Development (HCD) for their initial 90-day review. A virtual meeting was conducted

with HCD staff regarding their preliminary review worksheet on March 18, 2022. As a result of that conversation, additional information was provided to HCD for their housing element review. Their final draft comments were received by staff on April 18, 2022. Two subsequent virtual meetings were held with HCD to review the comments in detail before beginning on the additional data analysis required in order to secure final certification of the Housing Element from HCD.

On April 15, 2022, the 30-day review period began for the Initial Study and Negative Declaration which was noticed in the newspaper and uploaded to the State Clearinghouse. The Initial Study & Negative Declaration covered both the Housing Element & the Safety Element Updates (still in initial review with Cal Fire). Comments were accepted until 12:00 p.m. on Monday May 16, 2022. There were no comments received from the public.

Analysis:

The draft housing element letter from HCD staff, received on April 18, 2022, indicated that the draft 2022-2030 Housing Element update would meet the statutory requirements of State Housing Element law with the additional analysis and program timeframe updates requested. Therefore, a final version of the Housing Element update is being presented to the Planning Commission, incorporating those items, for consideration and a recommendation to the Town Council for its adoption. Upon adoption, the Final Housing Element will be submitted to HCD for final certification.

Attached with the staff report for your review and consideration are copies of 1) the proposed final Town of Paradise 2022-2030 Housing Element Update and 2) its related proposed Initial Study and Negative Declaration document dated April 2022. In addition, a Planning Commission Resolution and several other documents are attached for your review and consideration.

Financial Impact:

There is no financial impact to the Town's General Fund to adopt a Resolution recommending Town Council adoption of the 2022-2030 Housing Element Update and associated Negative Declaration environmental document. If ultimately adopted by the Town Council, the cost associated with filing the Notice of Determination with the County Clerk for the Negative Declaration will be paid for out of the General Plan Update fund.

Attachments:

- Notice of the Planning Commission meeting of May 24, 2022.
- Notice of Intent to Adopt a Negative Declaration/Initial Study for the Housing & Safety Elements.
- Planning Commission Resolution No. 2022-02.
- Initial Study and Negative Declaration environmental document.
- Final Adoption Draft of the Town of Paradise Updated 2022-2030 Housing Element.

NOTICE OF PUBLIC HEARING
PARADISE PLANNING COMMISSION

NOTICE IS HEREBY GIVEN BY THE Paradise Planning Commission that a public hearing will be held on **May 24, 2022 at 6:00 p.m.** in the Paradise Town Council Chambers at Paradise Town Hall located at 5555 Skyway, Paradise, CA regarding the matter described below:

a. Item for which a Negative Declaration is proposed to be adopted

Town of Paradise Housing Element Update – The Planning Commission will hold a public hearing regarding the proposed Final Town of Paradise General Plan Housing Element update. The updated Housing Element is intended to address the housing needs of the Town of Paradise from 2022 to 2030. The State of California requires periodic updates of Housing Elements to address the necessary conditions for developing and preserving an adequate supply of housing for all income categories. The proposed Final Housing Element update analyzed the post-fire housing needs of the Town and aimed to develop goals, policies, and programs which create a more wildfire resilient housing inventory. It is the intent of Town staff to seek Town Council adoption of the updated Housing Element by June 15, 2022, and subsequently submit the adopted 2022-2030 Housing Element Update to the California State Department of Housing and Community Development for final certification.

The draft Housing Element and associated environmental document can be found online at https://www.townofparadise.com/planning/page/housing-element-2022 or a public view copy is available at the Building Resiliency Center located at 6295 Skyway. If you challenge this project in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Paradise Planning Commission at, or prior to, the public hearing. For further information please contact the Planning Division at (530) 872-6291, extension 424.

Susan Hartman
Community Development Director

TOWN OF PARADISE

Date: April 13, 2022

Notice of Intent to Adopt a Negative Declaration/Initial Study for the Paradise Housing Element & Safety Element Update Projects

NOTICE IS HEREBY GIVEN by the Planning Director that a public hearing will be held on Tuesday, May 24, 2022 at 6:00 p.m. in the Town Hall Council Chambers, 5555 Skyway, Paradise, California, regarding the following project:

Lead Agency: Town of Paradise
5555 Skyway
Paradise, CA 95969

Project Title: **Town of Paradise Housing Element Update**

Project Location: The Town of Paradise is located in north central Butte County where the western slopes of the Cascade and Sierra Nevada ranges meet. The topography in the area is composed of mostly steeper canyons from the major drainages. The Town is situated at an elevation of between 1,500 and 2,200 feet.

Project Description: The Town of Paradise Housing Element update would revise the Town's Housing Element consistent with the requirements of state law.

Findings/Determination: The Town has reviewed and considered the proposed project and has determined that the project will not have a significant effect on the environment, with substantial supporting evidence provided in the Initial Study. The Town hereby prepares and proposes to adopt a Negative Declaration for this project.

Public Review Period: A 30-day public review period for the Negative Declaration/ Initial Study, which covers both the Housing Element & Safety Element updates, commenced on April 15, 2022 and will end on May 15, 2022 for interested individuals and public agencies to submit written comments on the document. Written comments on the Initial Study/ Negative Declaration should be sent to the attention of Susan Hartman, Community Development Director and must be received at 5555 Skyway, Paradise, CA 95969 by 12:00 PM on May 16, 2022. Copies of the Negative Declaration/Initial Study and the draft Town of Paradise Housing Element Update are available for review at the Town of Paradise Building Resiliency Center at 6295 Skyway, Paradise, CA 95969 or online at www.townofparadise.com/planning/page/housing-element-2022.

PARADISE PLANNING COMMISSION
RESOLUTION NO. 2022-02

A RESOLUTION OF THE PLANNING COMMISSION OF THE TOWN OF PARADISE RECOMMENDING TOWN COUNCIL ADOPTION OF THE TEXT AMENDMENT TO THE HOUSING ELEMENT (2022-2030 HOUSING ELEMENT) OF THE 1994 PARADISE GENERAL PLAN (Town of Paradise Housing Element 2022 Update)

WHEREAS, on December 10, 2020, the Butte County Association of Governments (BCAG) adopted the Butte County Regional Housing Needs Plan (RHNP): December 31, 2021 – June 15, 2030, establishing a housing allocation for the Town of Paradise that needs to be incorporated and appropriately addressed within the Housing Element of the 1994 Paradise General Plan, and;

WHEREAS, existing State housing element law requires the Town of Paradise to amend the Housing Element of its 1994 Paradise General Plan not only to make it consistent with the RHNP but also to become consistent with changes to State housing element law adopted from 2014 to 2022; and

WHEREAS, it is in the best interests of the Paradise citizenry that the 1994 Paradise General Plan include a Housing Element that is updated to be consistent with the RHNP and that has been determined by the State Department of Housing and Community Development (HCD) to be in compliance with State housing element law; and

WHEREAS, town staff with the assistance of a planning consultant hired by the Town of Paradise has generated a proposed 1994 Paradise General Plan amendment document (Housing Element 2022 Update) that proposes adoption of the 2022-2030 Housing Element as a text amendment to the 2014-2022 Housing Element in order to make it consistent with the RHNP and in compliance with current State housing element law; and

WHEREAS, the proposed 2022-2030 Housing Element has been circulated for review by the public and HCD consistent with the requirements of State housing element law; and

WHEREAS, the Town of Paradise determined that the Housing Element Update was subject to the California Environmental Quality Act (CEQA) and circulated a Notice of Intent to Adopt a Negative Declaration for the Housing Element and an Initial Study for public review; and

WHEREAS, the Paradise Planning Commission has conducted a public hearing, pursuant to California planning and zoning law concerning a proposed amendment to the 2014-2022 Housing Element text of the 1994 Paradise General Plan; and

WHEREAS, such public hearing also included review of potential environmental impacts associated with said amendment to the Paradise General Plan, pursuant to the requirements of the California Environmental Quality Act (CEQA); and

TOWN OF PARADISE
PARADISE PLANNING COMMISSION
RESOLUTION NO. 2022-02

WHEREAS, California Government Code Sections 65353 and 65354 require the Planning Commission to conduct a public hearing and notify the Town Council in writing of its recommendation; and

WHEREAS, the Planning Commission has considered the analysis and recommendations of town staff; has considered the 2022-2030 Housing Element, as revised in response to recent comments received from the State Department of Housing and Community Development; and has considered comments made at a public hearing conducted by the Planning Commission; and on the basis thereof has determined pursuant to Government Code Section 65358 that a certain amendment to the 1994 Paradise General Plan that would replace the 2014-2022 Housing Element with the 2022-2030 Housing Element in order to attain compliance consistency with the RHNP as well as with current State housing element law is not only in the public interest but also would be internally consistent with the remainder of the Paradise General Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE PARADISE PLANNING COMMISSION AS FOLLOWS:

SECTION 1. The Planning Commission hereby recommends that the Town Council certify and adopt the proposed Initial Study and Negative Declaration document as it relates to the proposed Town of Paradise Housing Element 2022 Update; and

SECTION 2. The Planning Commission further recommends that the Town Council adopt the amendment to the Housing Element (2022-2030 Housing Element) of the 1994 Paradise General Plan known as Town of Paradise Housing Element 2022 Update in order to make the Paradise Housing Element consistent with the RHNP and current State housing element law, which amendment is set forth in Exhibit "A" attached hereto.

PASSED AND ADOPTED by the Planning Commission of the Town of Paradise this 24th day of May, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Carissa Garrard, Chair

ATTEST:

By:_____
Dina Volenski, Town Clerk

Town of Paradise
Town Council Meeting Agenda
6:00 PM – June 14, 2022

Town of Paradise Council Chamber – 5555 Skyway, Paradise, CA

Mayor, Steve Crowder
Vice Mayor, Greg Bolin
Council Member, Steve "Woody" Culleton
Council Member, Jody Jones
Council Member, Rose Tryon

Town Manager, Kevin Phillips
Town Attorney, Scott E. Huber
Town Clerk, Dina Volenski
CDD, Planning & Onsite, Susan Hartman
CDD, Building & Code Enforcement, Tony Lindsey
Finance Director/Town Treasurer – Ross Gilb
Public Works Director/Town Engineer, Marc Mattox
Division Chief, CAL FIRE/Paradise Fire, Garrett Sjolund
Chief of Police, Eric Reinbold
Recovery & Economic Development Director, Colette Curtis
Human Resources & Risk Management Director, Crystal Peters
Information Systems Director, Luis Marquez

Meeting Procedures

I. The Mayor is the Presiding Chair and is responsible for maintaining an orderly meeting. The Mayor calls the meeting to order and introduces each item on the agenda.

II. The Town staff then provides a report to Council and answers questions from the Council.

III. Citizens are encouraged to participate in the meeting process and are provided several opportunities to address Council. Any speaker addressing the Council is limited to three minutes per speaker - fifteen minutes per agenda item

A. If you wish to address the Council regarding a specific agenda item, please complete a "Request to Address Council" card and give it to the Town Clerk prior to the beginning of the meeting. This process is voluntary and allows for citizens to be called to the speaker podium in alphabetical order. Comments and questions from the public must be directed to the Presiding Chair and Town Council Members (please do not address staff.) Town staff is available to address citizen concerns Monday through Thursday at Town Hall between the hours of 8am and 5pm.

B. If you wish to address Council regarding an item not on the agenda, you may do so under Item 4, "Public Communication." Again, please fill out a card and give it to the Town Clerk before the meeting. State Law prohibits Council action on items not listed on a public agenda.

In compliance with the Americans with Disabilities Act (ADA) Compliance, persons who need special accommodations to participate in the Town Council meeting may contact the Town Clerk at least three business days prior to the date of the meeting to provide time for any such accommodation.

1. OPENING

1a. Call to Order
1b. Pledge of Allegiance to the Flag of the United States of America
1c. Invocation
1d. Roll Call

1e. Presentation by CalFire/Paradise Fire Chief - Patrick Purvis

1f. Camp Fire recovery updates - Written reports are included in the agenda packet:

P5 Colette Curtis, Recovery and Economic Development Director - Recovery projects, Advocacy, Economic Recovery and Development, Communications and Emergency Operations.

P8 Marc Mattox, Public Works Director/Town Engineer - Infrastructure and Sewer Update

p10Tony Lindsey, CDD-Building and Code Enforcement - Code Enforcement Update

2. CONSENT CALENDAR

One roll call vote is taken for all items. Consent items are considered to be routine business that does not call for discussion.

2a. p14 Approve minutes from the May 10, 2022, Special and Regular meetings and the May 31, 2022 Special meeting.

2b. p25 Approve May 2022 Cash Disbursements in the amount of $3,398,869.57.

2c. p33 1. Adopt Resolution No. 2022-____, “A Resolution of Intention of the Town Council of the Town of Paradise to Set a Public Hearing to Consider Naming an Existing Private Access Easement off Pentz Road, Located in the Town of Paradise. Petitioner: Travis Thomsen, et al”; or, 2. Adopt a motion to continue the matter to a date certain and direct staff to provide any additional desired information pertaining to the requested road name; or, 3. Adopt a motion to deny adoption of Town Resolution No. 2022-____.

2d. p37 Waive second reading of Town Ordinance No. 618 and approve reading by title only; and, Adopt Town Ordinance No. 618, "An Ordinance Amending Chapter 8.58.060 to the Paradise Municipal Code Relating to Defensible Space and Hazardous Fuel Management".

2e. Approve an amended and restated professional services agreement with Kevin Phillips for Town Manager services with an expiration date of June 30, 2025 and authorize the Mayor to execute the agreement.

3. ITEMS REMOVED FROM CONSENT CALENDAR

4. PUBLIC COMMUNICATION

For matters that are not on the Council business agenda, speakers are allowed three (3) minutes to address the Council. The Town Council is prohibited from taking action on matters that are not listed on the public agenda. The Council may briefly respond for clarification and may refer the matter to the Town staff.

5. PUBLIC HEARINGS

For items that require a published legal notice and/or a mailed notice.

Public Hearing Procedure:

A. Staff Report
B. Mayor opens the hearing for public comment in the following order:
    i. Project proponents (in favor of proposal)
    ii. Project opponents (against proposal)
    iii. Rebuttals – if requested
C. Mayor closes the hearing
D. Council discussion and vote

5a. p46 1. Conduct the duly noticed and scheduled public hearing and concur with the recommended actions adopted by the Planning Commission of May 24, 2022, and embodied within Planning Commission Resolution No. 2022-02; and, 2. Certify and adopt the proposed Initial Study and Negative Declaration document as it relates to the proposed 2022-2030 Town of Paradise Housing Element Update; and, 3. Adopt Town of Paradise Resolution No. 2022-_____, "A Resolution of the Town Council of the Town of Paradise Adopting an Amendment to the Housing Element (2022-2030 Housing Element) of the 1994 Paradise General Plan"; or, 4. Provide alternative direction to town staff. (ROLL CALL VOTE)

6. COUNCIL CONSIDERATION

Action items are presented by staff and the vote of each Council Member must be announced. A roll call vote is taken for each item on the action calendar. Citizens are allowed three (3) minutes to comment on agenda items.

6a. p. 424 After discussion consider waiving the first reading of Town Ordinance No. ____ and read by title only [roll call vote]; and, 1. Introduce Town Ordinance No. ____, "An Ordinance of the Town Council of the Town of Paradise Amending Text Regulations within Paradise Municipal Code Chapter 8.08 [Solid Waste] and Adding Article 1 Regarding Mandatory Municipal MSW, Recyclable Material, and Organic Waste Disposal Reduction Consistent with New State Law Requirements"; or 2. Provide alternative direction to town staff. (ROLL CALL VOTE)

6b. p474 Discuss and consider concurring with staff's recommendation to select P31 Enterprises of Oroville, CA to perform arborist services for the Category 4 Tree Removal Program; and, approve the attached Professional Services Agreement with P31 Enterprises and authorize the Town Manager and Town Mayor to execute the agreement. (ROLL CALL VOTE)

6c. p491 Discuss and consider approving the Principals of Agreement between the Town of Paradise and City of Chico developed by the Sewer Regionalization Project Advisory Committee. The Inter-Municipal Agreement between the Town and City will utilize the approved Principals of Agreement. (ROLL CALL VOTE)

6d. p503 Consider approving the 2022 Storm Drain Master Plan (SDMP) prepared by Wood Rodgers, including deliverables of the Town-wide Master Drainage Study, field evaluation and monitoring of storm drain systems and drainageways, Flood Risk Modeling, field condition

assessment, data computation, project prioritization criteria, updating and expanding flood risk modeling for 10 and 100-year storm events (Special Permit Zones), the evaluation of drainage system condition and capacity deficiencies, and a prioritized project list and costs. (ROLL CALL VOTE) The Storm Drain Master Plan is too large to include in the agenda packet. Below is a link to review the document online. A public view copy is available at the Town Clerk's window at Town Hall, 5555 Skyway, Paradise, CA 95969, for review. Link to the SDMP: https://bit.ly/3trfPEB

6e. p509 Consider adopting the attached Resolution No. 2022- ___, "A Resolution of the Town Council of the Town of Paradise Declaring An Emergency And Authorizing Repair or Replacement of The Stearns Road 72" Culvert Without Observance Of Public Bidding Requirements"; and Authorize the Town Manager to execute agreements for a contractor and/or materials for the subject project. (ROLL CALL VOTE)

6f. p516 Consider adopting Resolution No. 2022-__, "A resolution of the Town Council of the Town of Paradise Awarding Contract No. 7303.21.CON, On-System Roadway Rehabilitation –Skyway (Phase 1) to Baldwin Contracting Company, Inc. dba Knife River Construction in the amount of their base bid plus additive bid #1; and, Authorize the Town Manager to execute an agreement with Baldwin Contracting Company, Inc. dba Knife River Construction in the amount of their base bid plus additive bid #1 relating to Contract No. 7303.1.CON and to approve contingency expenditures not exceeding 10%. (ROLL CALL VOTE)

7. COUNCIL INITIATED ITEMS AND REPORTS

7a. Council initiated agenda items

7a1. Discuss changing the Town of Paradise Ordinance No. 618 prohibiting the use of power tools, potentially defined as metal bladed power tools that could cause combustion during a red flag warning issued by the Weather Service. (CROWDER)

7b. Council reports on committee representation

7c. Future Agenda Items

8. STAFF COMMUNICATION

8a. Town Manager Report

8b. Community Development Director

9. CLOSED SESSION - None

10. ADJOURNMENT

STATE OF CALIFORNIA) SS.
COUNTY OF BUTTE)

I declare under penalty of perjury that I am employed by the Town of Paradise in the Town Clerk's Department and that I posted this Agenda on the bulletin Board both inside and outside of Town Hall on the following date:

_____

_____
TOWN/ASSISTANT TOWN CLERK SIGNATURE

TOWN OF PARADISE
RESOLUTION NO. 2022-39

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE ADOPTING AN AMENDMENT TO THE HOUSING ELEMENT (2022-2030 HOUSING ELEMENT) OF THE 1994 PARADISE GENERAL PLAN: TOWN OF PARADISE HOUSING ELEMENT 2022

WHEREAS, on December 10, 2020, the Butte County Association of Governments (BCAG) adopted the Butte County Regional Housing Needs Plan (RHNP): December 31, 2021 – June 15, 2030, establishing a housing allocation for the Town of Paradise that needs to be incorporated and appropriately addressed within the Housing Element of the 1994 Paradise General Plan, and;

WHEREAS, existing State housing element law requires the Town of Paradise to amend the Housing Element of its 1994 Paradise General Plan not only to make it consistent with the RHNP but also to become consistent with changes to State housing element law adopted from 2014 to 2022; and

WHEREAS, it is in the best interests of the Paradise citizenry that the 1994 Paradise General Plan include a Housing Element that is updated to be consistent with the RHNP and that has been determined by the State Department of Housing and Community Development (HCD) to be in compliance with State housing element law; and

WHEREAS, town staff with the assistance of a planning consultant hired by the Town of Paradise has generated a proposed 1994 Paradise General Plan amendment document (2022-2030 Housing Element) that proposes adoption of the 2022-2030 Housing Element as a text amendment to the 2014-2022 Housing Element in order to make it consistent with the RHNP and in compliance with current State housing element law; and

WHEREAS, the Paradise Planning Commission and the Paradise Town Council have conducted public hearings, pursuant to California planning and zoning law concerning a proposed amendment to the 2014-2022 Housing Element text of the 1994 Paradise General Plan; and

WHEREAS, such public hearing also included review of potential environmental impacts associated with said amendment to the Paradise General Plan, pursuant to the requirements of the California Environmental Quality Act (CEQA); and

WHEREAS, California Government Code Sections 65358 allows a legislative body to amend its General Plan; and

WHEREAS, the action of the Town Council is pursuant to the requirements of Government Code Sections 65090 and 65355; and

WHEREAS, the Town Council has considered the analysis and recommendations of town staff; has received and considered the recommendation of the Planning Commission via adopted Planning Commission Resolution No. 2022-02 in response to recent comments

TOWN OF PARADISE
RESOLUTION NO. 2022-39

received from the State Department of Housing and Community Development; and has considered comments made at a public hearing conducted by the Town Council; and on the basis thereof has determined pursuant to Government Code Section 65358 that a certain amendment to the 1994 Paradise General Plan that would replace the 2014-2022 Housing Element with the 2022-2030 Housing Element in order to attain compliance consistency with the RHNP as well as with current State housing element law is not only in the public interest but also would be internally consistent with the remainder of the Paradise General Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE PARADISE TOWN COUNCIL AS FOLLOWS:

SECTION 1. The Town Council hereby adopts and certifies that the Initial Study and Negative Declaration document as it relates to the proposed Town of Paradise Housing Element 2022 Update has been completed in compliance with CEQA; and

SECTION 2. The Town Council hereby adopts the amendment to the Housing Element (2022-2030 Housing Element) of the 1994 Paradise General Plan known as Town of Paradise Housing Element 2022 Update in order to make the Paradise Housing Element consistent with the RHNP and current State housing element law, which amendment is set forth in Exhibit "A" attached hereto. Town Council authorizes the Town Manager, or his designee, to make non-substantive changes to any additional edits requested by HCD for certification.

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 14th day of June, 2022, by the following vote:

AYES:	Greg Bolin, Steve "Woody" Culleton, Jody Jones, Rose Tryon and Steve Crowder, Mayor
NOES:	None
ABSENT:	None
ABSTAIN:	None

Steve Crowder, Mayor

ATTEST: June 15, 2022

By: Dina Volenski
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

By:
Scott E. Huber, Town Attorney

I hereby certify that the attached is a true and correct copy of an original document on file at the Town of Paradise.

ATTEST: Dina Volenski
Town Clerk

By: Dina Volenski

Dated: June 22, 2022

C

Regulatory Framework

C Regulatory Framework

C.1 Introduction

This regulatory framework presents the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to each environmental resource topic analyzed in the Paradise Sewer Project Environmental Impact Report (EIR), Chapter 3, Environmental Impact Analysis. This regulatory framework is applicable to construction, operation, and maintenance of the Proposed Project. This regulatory framework is needed provide regulatory context and background for each resource area in order to determine if the Proposed Project would be consistent with federal state and local regulations and to assess environmental impacts.

C.2 Agriculture and Forestry Resources

This section summarizes the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of agriculture and forestry resources in the EIR, Section 3.2.

C.2.1 Federal

Farmland Protection Policy Act

Congress enacted the Farmland Protection Policy Act (FPPA) as part of the Agriculture and Food Act of 1981. The US Department of Agriculture's Natural Resources Conservation Service is responsible for implementation of the FPPA. The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. The FPPA assures that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. The FPPA does not authorize the federal government to regulate the use of private or non-federal land or, in any way, affect the property rights of owners.

For the purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to the FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. Activities that may be subject to FPPA include:

- State highway construction projects (through the Federal Highway Administration)
- Airport expansions
- Electric cooperative construction projects
- Railroad construction projects

- Telephone company construction projects
- Reservoir and hydroelectric projects
- Federal agency projects that convert farmland
- Other projects completed with federal assistance

C.2.2 State

California Department of Conservation

The California Department of Conservation (DOC) provides services and information that promote environmental health, economic vitality, informed land-use decisions, and sound management of the state's natural resources. The DOC administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program, the Williamson Act Easement Exchange Program, and the Farmland Mapping and Monitoring Program (FMMP). These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use.

Farmland Mapping and Monitoring Program

The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The maps are updated every 2 years using a computer mapping system, aerial imagery, public review, and field reconnaissance. Agricultural land is rated according to soil quality and irrigation status. The following categories are mapped by the DOC (DOC 2021b):

The FMMP categories mapped by the DOC include the following (DOC 2021a):

- **Prime Farmland:** This farmland has the best combination of physical and chemical features able to sustain long-term agricultural production. Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agriculture production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance:** This farmland is similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland:** Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock.

- **Urban and Built-up Land:** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land:** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and waterbodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a non-mandated state program, administered by counties and cities to preserve agricultural land and discourage the premature conversion of agricultural land to urban uses. The act authorizes local governments and property owners to (voluntarily) enter into contracts to commit agricultural land to specified uses for 10 or more years. Once restricted, the land is valued for taxation based on its agricultural income rather than unrestricted market value, resulting in a lower tax rate for owners. In return, the owners guarantee that these properties remain under agricultural production for an initial 10-year period. The contract is renewed automatically unless the owner files a notice of nonrenewal, thereby maintaining a constant 10-year contract.

Z'berg-Nejedly Forest Practice Act

The Z'berg-Nejedly Forest Practice Act of 1973 established a set of rules known as the Forest Practice Rules to be applied to forest management-related activities (e.g., timber harvests, timberland conversions, fire hazard removal) on privately owned timberlands in California. They are intended to ensure that timber harvesting is conducted in a manner that will preserve and protect fish, wildlife, forests, and streams. Under the Forest Practice Act, a Timber Harvesting Plan is submitted to the California Department of Forestry and Fire Protection by the landowner outlining what timber is proposed to be harvested, the harvesting method, and the steps that will be taken to prevent damage to the environment.

C.2.3 Regional and Local

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan* includes the following agriculture-related policies:

- **Policy OCEP-31:** Retention of agricultural lands within the town limits should be encouraged while recognizing that changing circumstances may necessitate a change in use for some lands.
- **Policy OCEP-32:** Significantly important agricultural and timber production lands, particularly those located in the secondary and tertiary planning areas, shall be identified and protected from incompatible development.

Butte County General Plan 2030

The *Butte County General Plan 2030* includes the following policies related to agriculture and forestry resources:

- **Policy LU-P13.1:** Maintain the Chico Area Greenline, which shall be located as shown on Figure LU-7.
- **Policy LU-P13.3:** Recognize the Chico Area Greenline as the boundary between the "Urban Side of the Chico Area Greenline" and the "Agricultural Side of the Chico Area Greenline."
- **Policy LU-P13.7:** Conserve and protect for agricultural use the lands in the Chico area that are situated on the Agricultural Side of the Chico Area Greenline.
- **Policy COS-P11.3:** Urban development shall not limit the financial sustainability of timber operations.
- **Policy COS-P11.6:** Public facilities shall generally not be located in the Timber Production Zone if the facility would have a significant adverse effect on the production of timber unless alternative sites for an essential public use cannot be located elsewhere.

Chico 2030 General Plan

The *Chico 2030 General Plan* includes the following policies related to agriculture:

- **Policy OS-5.1, Urban/Rural Boundary:** Protect agriculture by maintaining the Greenline between urban and rural uses.
- **Policy OS-5.2, Agricultural Resources:** Minimize conflicts between urban and agricultural uses by requiring buffers or use restrictions.
    - **Action OS-5.2.1, Agricultural Buffers:** Require buffers for development adjacent to active agricultural operations along the Greenline to reduce incompatibilities and explore opportunities for public uses within buffers.

C.3 Air Quality

This section summarizes the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of air quality in the EIR, Section 3.3.

C.3.1 Federal

Federal Clean Air Act and National Ambient Air Quality Standards

The Federal Clean Air Act (FCAA; 42 USC Section 7401), as amended, is the primary federal law governing air quality. The FCAA is regulated by the USEPA, which sets standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS standards have been established for six criteria air pollutants that have been linked to potential health concerns: CO, NO_2, O_3, SO_2, PM_{10}, $PM_{2.5}$. In addition, national standards exist for Pb. The NAAQS standards are set at levels that protect public

health with a margin of safety and are subject to periodic review and revision. The federal regulatory schemes also cover TACs.

The FCAA requires USEPA to designate areas as attainment, nonattainment, or maintenance (an area that was previously nonattainment and is currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table C.3-1.

The FCAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). USEPA is responsible for implementing the programs established under the FCAA, programs such as establishing and reviewing the federal ambient air quality standards and judging the adequacy of SIPs. If a state contains areas that violate the national standards, the FCAA requires the State to revise its SIP to incorporate additional control measures to reduce air pollution. USEPA has authorized States such as California with air programs that meet or exceed federal standards to implement many of the federal programs while retaining an oversight role.

Table C.3-1. State and Federal Ambient Air Quality Attainment Status for Butte County

Pollutant	Averaging Time	State Standard[1]	Federal Standard[2]	SVAB Attainment Status
O_3 [3]	1 hour 8 hours	0.09 ppm 0.070 ppm	--- 0.070 ppm (4thhighest in 3 years)	Federal: Nonattainment (8-hour) State: Nonattainment (1-hour and 8-hour)
CO	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm 6 ppm	35 ppm 9 ppm ---	Federal: Attainment State: Attainment
PM_{10} [4]	24 hours Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 ---	Federal: Attainment (24-hour) No Standard (Annual) State: Nonattainment (24-hour) Attainment (Annual)
$PM_{2.5}$ [4]	24 hours Annual Secondary Standard (annual)	--- 12 µg/m^3 ---	35 µg/m^3 12.0 µg/m^3 15 µg/m^3 (98th percentile over 3 years)	Federal: Attainment (24-hour and Annual) State: No standard (24-hour) Nonattainment (Annual)
NO_2 [5]	1 hour Annual	0.18 ppm 0.030 ppm	100 ppb (98th percentile over 3 years) 0.053 ppm	Federal: Attainment State: Attainment
SO_2 [6]	1 hour 3 hours 24 hours Annual Arithmetic	0.25 ppm ---- 0.04 ppm ----	75 ppb (99th percentile over 3 years) 0.5 ppm 0.14 ppm [6]	Federal: Attainment State: Attainment

Pollutant	Averaging Time	State Standard[1]	Federal Standard[2]	SVAB Attainment Status
	Mean		0.03 ppm [6]	
Pb [7,8]	Monthly Calendar Quarter Rolling 3-month average	1.5 µg/m^3 ---- ----	---- 1.5 µg/m^3 [7] 0.15 µg/m^3	Federal: Attainment State: Attainment
Sulfate	24 hours	25 µg/m^3	No federal standards	Federal: N/A State: Attainment
Hydrogen Sulfide	1 hour	0.03 ppm	No federal standards	Federal: N/A State: Unclassified
Vinyl Chloride[7]	24 hours	0.01 ppm	No federal standards	Federal: N/A State: No designation
Visibility Reducing Particles[9]	8 hours	See footnote 9	No federal standards	Federal: N/A State: Unclassified

Sources: ARB 2016, ARB 2021, BCAQMD 2018.

1 California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the USEPA for further clarification and current national policies.

3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 ppm to 0.070 ppm.

4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

5 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

6 On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[7] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[8] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[9] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

NAAQS = National Ambient Air Quality Standards; DPM = diesel particulate matter; CO = carbon monoxide; NO_2 = nitrogen dioxide; NO_X = oxides of nitrogen; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particles of 2.5 micrometers and smaller; PM_{10} = particles of 10 micrometers and smaller; SO_2 = sulfur dioxide; SO_X = sulfur oxides; $\mu g/m^3$ = micrograms per cubic meter; ppb = parts per billion; ppm = parts per million; SVAB = Sacramento Valley Air Basin; SIP = state implementation plan; TACs = toxic air contaminants, N/A = not applicable

Non-Road Diesel New Engine and Fuel Standards

The USEPA has adopted multiple tiers of emission standards for non-road (or off-road) diesel engines. The non-road standards cover mobile non-road diesel engines of all sizes used in a wide range of construction, agricultural and industrial equipment. The first federal standards, Tier 1, were adopted in 1994. Tier 2 standards were adopted in 2001, Tier 3 in 2006, and final Tier 4 standards in 2014. The federal emission standards for non-road diesel engines are established in advancing tiers that progressively become more stringent (i.e., the higher the tier, the lower the emissions). Currently, the most stringent is Tier 4. The Tier 4 emissions standards have more stringent NO_X, particulate matter, and hydrocarbon limits than the lower tiers. The CO emission limits for Tier 4 standards remain unchanged from the Tier 2 and Tier 3 standards.

National Emission Standards for Hazardous Air Pollutants

National Emission Standards for Hazardous Air Pollutants are stationary source standards for hazardous air pollutants (40 CFR 63). Hazardous air pollutants are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects (USEPA 2021d).

C.3.2 State

California Clean Air Act and California Ambient Air Quality Standards

In California, the California Clean Air Act (CCAA) is administered by the ARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels (air districts). ARB is responsible for meeting the state requirements of the FCAA, administering the CCAA, establishing the California Ambient Air Quality Standards (CAAQS), and establishing motor vehicle emissions standards. The CCAA requires all air districts in the state to endeavor to achieve and maintain the CAAQS.

CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. ARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. ARB also establishes passenger vehicle fuel specifications. ARB oversees the functions of air districts, which in turn

administer air quality activities at the regional and county levels. The state standards are summarized in Table C.5-1.

The CCAA requires ARB to designate areas in California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous 3 calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

California State Implementation Plan

The 1990 amendments to the FCAA set new deadlines for attainment based on the severity of the pollution problem and launched a comprehensive planning process for attaining the NAAQS. The promulgation of the national 8-hour ozone standard and the fine particulate matter standards in 1997 resulted in additional statewide air quality planning efforts. In response to new federal regulations, SIPs began to address ways to improve visibility in national parks and wilderness areas. SIPs are not single documents, but rather a compilation of new and previously submitted plans, programs, district rules, state regulations, and federal controls.

Many of California's SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes ARB the lead agency for all purposes related to the SIPs. Local air districts and other agencies prepare SIP elements and submit them to ARB for review and approval. ARB then forwards SIP revisions to EPA for approval and publication in the *Federal Register*. CFR Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items that are included in the California SIP.

Health Impacts of Regional Criteria Air Pollutants

In December 2018, the California Supreme Court released a decision in *Sierra Club v. County of Fresno*, 6 Cal. 5th 502, also known as the Friant Ranch Case, finding that CEQA requires that a connection be drawn between project emissions and human health impacts.

As explained in the amicus curiae brief submitted by the San Joaquin Valley Air Pollution Control District for the Friant Ranch case, air district significance thresholds were set at emissions levels tied to the region's attainment status; they are emissions levels at which stationary pollution sources permitted by air districts must offset their emissions and CEQA projects must use feasible mitigation measures, and they are not intended to indicate any localized human health impact that a project may have. Therefore, a project's exceedance of the air district's mass regional emission thresholds does not necessarily indicate that the project would cause or contribute to the exposure of sensitive receptors to ground-level concentrations of ozone greater than health-protective levels.

As suggested in the amicus curiae brief submitted for the Friant Ranch case, given the complexity of ozone formation and the current state of environmental science modeling, it is infeasible to determine whether, or the extent to which, a single project's emissions of precursors (NOX and ROG) would result in the formation of secondary ground-level ozone, and to identify the geographic and temporal distribution of such secondary formed emissions. Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify

ozone-related health impacts caused by project-related NOX or ROG emissions on the local (project) level. Therefore, it is infeasible to connect ozone precursor emissions at a project level to ozone-related health impacts.

Mobile Source Toxics and Toxic Air Contaminants

California regulates TACs primarily through Assembly Bill (AB) 1807, Toxic Air Contaminant Identification and Control Act (Tanner Act) and AB 2588, Air Toxics “Hot Spots” Information and Assessment Act of 1987 (Hot Spots Act). The Tanner Act sets forth a formal procedure for ARB to designate substances as toxic air contaminants (TAC). Once a TAC is identified, ARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate best available toxics control technology to minimize emissions.

Under the Hot Spots Act, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

The ARB adopted a comprehensive Diesel Risk Reduction Plan in September 2000 to reduce emissions from both new and existing diesel-fueled engines and vehicles. The ARB has also adopted regulations to reduce emissions from both on-road and off-road heavy-duty diesel vehicles (for example, equipment used in construction). These regulations, known as airborne toxic control measures, reduce the idling of school buses and other commercial vehicles, control DPM, and limit the emissions of ocean-going vessels in California waters. The regulations also include measures to control emissions of air toxics from stationary sources.

C.3.3 Regional and Local

Butte County Air Quality Management District

BCAQMD is the air quality regulating authority in Butte County, which adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. BCAQMD is responsible for ensuring that NAAQS and CAAQS are not violated within Butte County. Responsibilities of BCAQMD include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality.

Air Quality Attainment Plan**.** The *Northern Sacramento Valley Planning Area 2018 Triennial Air Quality Attainment Plan* (2018 Air Quality Attainment Plan) (Sacramento Valley Air Quality Engineering and Enforcement Professionals [SVAQEEP] 2018) is the most recent air quality attainment plan applicable to Butte County. The air districts for the counties located in the northern portion of the Sacramento Valley together establish the Northern Sacramento Valley Planning Area. The Northern Sacramento Valley Planning Area air districts were designated as nonattainment for the ozone CAAQS and agreed to jointly prepare the 2018 Air Quality Attainment Plan. The plan assesses the progress made in implementing the previous triennial update and proposes modifications to the strategies necessary to attain the CAAQS by the earliest practicable date. The 2018 Air Quality Attainment Plan includes an assessment of progress towards achieving the control

measure commitments in the previous triennial plan, a summary of the last 3 years of ozone data, a comparison of the expected versus actual emission reductions for each measure committed to in the previous triennial plan, updated control measure commitments, and updated growth rates of population, industry, and vehicle related emissions.

Regulations and Rules. The BCAQMD develops regulations to improve air quality and protect the health and welfare of Butte County residents and their environment. BCAQMD rules and regulations (BCAQMD 2014) applicable to the Proposed Project include, but are not limited to, the following:

- **Regulation II, Rule 200, Nuisance:** No person shall discharge from any non-vehicular source such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

- **Regulation II, Rule 201, Visible Emissions:** A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

    - As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the U.S. Bureau of Mines, or

    - Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described above.

- **Regulation II, Rule 202, Particulate Matter Concentration:** A person shall not discharge into the atmosphere from any source particulate matter in excess of 0.3 grains per cubic foot of gas at standard conditions.

- **Regulation II, Rule 205, Fugitive Dust Emissions:** No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

- **Regulation IV, Rule 400, Permit Requirements:** Requires any person constructing, altering, or operating a source that emits or may emit air contaminants to obtain an Authority to Construct or Permit to Operate from the Air Pollution Control Officer and to provide an orderly procedure for application, review, and authorization of new sources and of the modification and operation of existing sources of air pollution.

- **Regulation IV, Rule 430, State New Source Rule:** Establishes pre-construction review requirements for new and modified stationary sources of air pollution for use of Best Available Control Technology (BACT), offsets, and analysis of air quality impacts, and to ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards and complies with all other applicable BCAQMD Rules and Regulations.

CEQA Guidelines. The *CEQA Air Quality Handbook* (BCAQMD 2014) includes analysis requirements for construction and operational emissions. Table C.3-2 summarizes BCAQMD's thresholds for criteria air pollutants and TACs. Thresholds for criteria air pollutants are based upon

BCAQMD's Rule 430, State New Source Review, which incorporates stationary permitting significance thresholds for ambient air quality standards as required by California Health and Safety Code Section 40918. BCAQMD has only established thresholds of significance for criteria air pollutants; while it provides guidance with regards to impacts related to TACs.

Table C.3-2. BCAQMD Thresholds of Significance

Pollutant	Construction-related	Operational-Related
ROG	137 lb/day, not to exceed 4.5 tons/year	25 lb/day
NO_X	137 lb/day, not to exceed 4.5 tons/year	25 lb/day
PM_{10}	80 lb/day	80 lb/day
New Source TAC Risk and Hazards – Individual Project	Same as Recommended Operational Thresholds	No Adopted Threshold. Recommended Thresholds: Increased Cancer Risk > 10 in one million Increased Non-Cancer Risk of > 1.0 Hazard Index (Chronic or Acute) Ambient Diesel $PM_{2.5}$ > 0.3 µg/m^3 annual average Zone of Influence: 1,000-foot radius from parcel(s) of source or receptor
New Source TAC Risk and Hazards – Cumulative Impacts	Same as Recommended Operational Thresholds	No Adopted Threshold. Recommended Thresholds: Cancer Risk > 10 in a million from all local sources Non-Cancer Risk > 1.0 Hazard Index (from all local sources – chronic) Diesel $PM_{2.5}$ > 0.8 µg/m^3 annual average Zone of Influence: 1,000-foot radius from parcel(s) of sources or receptors

Source: BCAQMD 2014

Notes: ROG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = particles of 10 micrometers and smaller, $PM_{2.5}$ = particles of 2.5 micrometers and smaller, TAC = toxic air contaminant, lb = pounds, µg/m^3 = micrograms per cubic meter

Odors. Offensive or strong odors may come from a wide variety of temporary and more or less permanent sources: exhaust from heavy equipment, garbage dumpsters, restaurants, animal boarding facilities, feed lots and general agricultural operations, food processing, compost/green waste and wastewater treatment facilities, rendering plants, various industrial processes, landfills, painting/coating operations, and others.

Pollutants associated with odors such as sulfur compounds and methane can be a nuisance to healthy people and can trigger asthmatic conditions in people with sensitive airways. Given the somewhat subjective nature of human response to odors, BCAQMD does not provide quantitative or formulaic methods to evaluate the presence of an impact. While most odors are highly dispersive, the significance of an odor impact is generally related to its intensity with distance from the source. Table C.3-3 presents BCAQMD's screening distances for various odors sources.

Table C.3-3. BCAQMD Screening Levels for Potential Odor Sources

Type of Facility	Screening Distance (miles)
Wastewater Treatment Plant	2
Wastewater Pumping Facilities	1
Sanitary Landfill	1
Transfer Station	1

Type of Facility	Screening Distance (miles)
Composting Facility	2
Petroleum Refinery	2
Asphalt Batch Plant	2
Chemical Manufacturing	1
Fiberglass Manufacturing	1
Painting/Coating Operations	1
Rendering Plant	4
Coffee Roaster	1
Food Processing Facility	1
Feed Lot/Dairy	1
Green Waste and Recycling Operations	2
Metal Smelting Plants	1

Source: BCAQMD 2014

Town of Paradise 1994 General Plan

The Open Space/Conservation/Energy Element of the *Town of Paradise 1994 General Plan* includes the following goals and objective pertaining to air quality:

- **Goal CG-5**: Maintain and improve local and regional air quality.
- **Objective OCEO-8**: Comply with the standards, provisions, and objectives of the Butte County Air Quality Attainment Plan.

Butte County General Plan 2030

The *Butte County General Plan 2030* includes the following policies related to air quality:

- **Policy COS-P5.2:** Developers shall implement best available mitigation measures to reduce air pollutant emissions associated with the construction and operation of development projects.
- **Policy COS-P5.6:** New sources of toxic air pollutants shall comply with the permitting requirements of the BCAQMD and Section 44300 et. Seq. of the California Health and Safety Code.

Chico 2030 General Plan

The *Chico 2030 General Plan* includes the following policy and actions related to air quality:

- **Policy OS-4.1, Air Quality Standards:** Work to comply with state and federal ambient air quality standards and to meet mandated annual air quality reduction targets.
    - **Action OS-4.1.1, Air Quality Impact Mitigation:** During project and environmental review, evaluate air quality impacts and incorporate applicable mitigations, including payment of air quality impact fees, to reduce impacts consistent with the BCAQMD's CEQA Air Quality Handbook.

C.4 Biological Resources

This section identifies the federal, state, nongovernmental agency, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of biological resources in the EIR, Section 3.4.

C.4.1 Federal

Endangered Species Act

The Endangered Species Act (ESA) provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code [USC] §§ 1531–1544). The ESA defines take to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, § 222, of the CFR (50 CFR § 222) further defined harm to include an act that kills or injures fish or wildlife via significant habitat modification or degradation.

ESA Section 7(a)(1) requires federal agencies to use their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) if a federal agency undertakes, funds, permits, or authorizes any action that may impact endangered or threatened species or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and that lack a federal nexus, a Section 10(a)(1)(b) incidental take permit may be obtained from USFWS and/or NMFS.

Clean Water Act

The Federal Water Pollution Control Act of 1948 was the first major United States law to address water pollution. Upon sweeping amendments made in 1972, the law became commonly known as the Clean Water Act (CWA) (33 USC § 1251). The CWA established the structure for regulating discharge of pollutants into waters of the United States and regulating quality standards for surface waters.

Clean Water Act Section 404

CWA Section 404 (33 USC § 1344) enables regulation of the discharge of dredged or fill material into waters of the United States, including wetlands. The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment or (2) the nation's waters would be significantly degraded. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any unavoidable impacts.

Clean Water Act Section 401

Under CWA Section 401 (33 USC § 1341), federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants, waives or denies CWA Section 401 certification. Granting certification, with or without conditions, allows the federal permit or license to be issued and

remain consistent with any conditions set forth in the CWA Section 401 certification. Decisions made by states or tribes are based on the proposed project's compliance with USEPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board is the primary regulatory authority for CWA Section 401 requirements (additional details are provided in the following subsections).

Section 14 of the Rivers and Harbors Appropriation Act of 1899, Section 408

Under Section 408 (33 USC § 408), any use or alteration of a Civil Works project is subject to the approval of USACE. This requirement was established in Section 14 of the Rivers and Harbors Act of 1899. Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project.

Magnuson-Stevens Fishery Conservation and Management Act

Magnuson-Stevens Act of 1976 (revised in 1996 and reauthorized 2007) is the primary law governing marine fisheries management in US federal waters. The primary objectives of the Magnuson-Stevens Act are to prevent overfishing, rebuild overfished stocks, increase long-term economic and social benefits, and ensure a safe and sustainable supply of seafood. To this end, the federal government is responsible for considering direct and indirect habitat losses, or other impacts that may result in a diminished capacity to support existing populations and stocks.

Among other items, the Sustainable Fisheries Act revision in 1996 specifically outlined the responsibility of the United States to conserve and facilitate long-term protection of EFH, defined as "*those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity*." (*16 U.S.C. 1801*). The 1996 revision also designated HAPCs, which are subsets of EFH for more focused consideration.

Under the act, federal agencies that fund, permit, or carry out activities that may adversely impact EFH or HAPCs are required to consult with NMFS regarding the potential adverse effects of Project activities, as well as respond in writing to NMFS Project-specific recommendations.

Migratory Bird Treaty Act of 1918

Migratory birds are protected under the Migratory Bird Treaty Act of 1918 (MBTA) (16 USC §§ 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR § 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR § 21). Solicitor's Opinion M 37050 was released on December 22, 2017, stating the MBTA does not prohibit incidentally killing birds. Thus, the statute's prohibitions on pursuing, hunting, capturing, taking, killing, or attempting to do any of the aforementioned, apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs.

Executive Order 13112 – Invasive Species

Executive Order 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies

to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, USFWS and USACE would issue permits and, therefore, would be responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

Executive Order 11990 – Protection of Wetlands

Executive Order 11990 (42 Federal Register [FR] 26961) requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless 1) no practicable alternative exists and 2) all practical measures have been taken to minimize harm to wetlands.

C.4.2 State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Wildlife (CDFW) is responsible for maintaining a list of endangered and threatened species (Fish and Game Code [FGC] § 2070). CDFW also maintains a list of candidate species, which are species under formal review for potential addition to the list of endangered or threatened species. And CDFW maintains a list of species of special concern, which are species that may be added to the list of candidate species.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Proposed project-related impacts on species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from CDFW would be in the form of an incidental take permit.

California Fish and Game Code – Native Plant Protection Act

The Native Plant Protection Act (FGC §§ 1900–1913) prohibits the taking, possession, or sale within the state of any plants with a state designation of rare, threatened, or endangered as defined by CDFW. An exception in the act allows landowners, under specified circumstances, to take listed plant species, if they first notify CDFW and give that state agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC § 1913). Project impacts on these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

California Fish and Game Code §§ 3503 and 3503.5

Sections 3503 and 3503.5 of the FGC provide regulatory protection to resident and migratory birds and all birds of prey within the state of California, including the prohibition of the taking of nests and eggs, unless otherwise provided for by the FGC. Specifically, these sections of the FGC make it unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code.

California Fish and Game Code – Fully Protected Species

California statutes afford fully protected status to several specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit. FGC § 3505 makes it unlawful to take "any aigrette or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird". FGC § 3511 protects from take the following fully protected birds: 1) American peregrine falcon (*Falco peregrinus anatum*); 2) brown pelican (*Pelecanus occidentalis*); 3) California black rail (*Laterallus jamaicensis coturniculus*); 4) California clapper rail (*Rallus longirostris obsoletus*); 5) California condor (*Gymnogyps californianus*); 6) California least tern (*Sterna albifrons browni*); 7) golden eagle; (*Aquila chrysaetos*); 8) greater sandhill crane (*Grus canadensis tabida*); 9) light-footed clapper rail (*Rallus longirostris levipes*); 10) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); 11) trumpeter swan (*Cygnus buccinator*); 12) white-tailed kite (*Elanus leucurus*); and 13) Yuma clapper rail (*Rallus longirostris yumanensis*).

FGC § 4700 identifies the following fully protected mammals that cannot be taken: 1) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); 2) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (*Ovis canadensis nelsoni*); 3) Guadalupe fur seal (*Arctocephalus townsendi*); 4) ring-tailed cat (*Bassariscus* sp.); 4) Pacific right whale (*Eubalaena sieboldi*); 6) salt-marsh harvest mouse (*Reithrodontomys raviventris*); 7) southern sea otter (*Enhydra lutris nereis*); and 8) wolverine (*Gulo gulo*).

FGC § 5050 protects from take the following fully protected reptiles and amphibians: 1) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); 2) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); 3) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); 4) limestone salamander (*Hydromantes brunus*); and 5) black toad (*Bufo boreas exsul*).

FGC § 5515 identifies certain fully protected fish that cannot lawfully be taken, even with an incidental take permit. The following species are protected in this fashion: 1) Colorado River squawfish (*Ptychocheilus lucius*); 2) thicktail chub (*Gila crassicauda*); 3) Mohave chub (*Gila mohavensis*); 4) Lost River sucker (*Catostomus luxatus*); 5) Modoc sucker (*Catostomus microps*); 6) shortnose sucker (*Chasmistes brevirostris*); 7) humpback sucker (*Xyrauchen texanus*); 8) Owens River pupfish (*Cyprinoden radiosus*); 9) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and 10) rough sculpin (*Cottus asperrimus*).

California Wetlands and Other Policies

The California Natural Resources Agency and its various departments, which includes CDFW and the Department of Water Resources, do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine, or inland wetlands. Exceptions may be granted if all the following conditions are met:

1. The project is water dependent.
2. No other feasible alternative is available.
3. The public trust is not adversely affected.
4. Adequate compensation is proposed as part of the project.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne) of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented by the State Water Resources Control Board at the state level and the Regional Water Quality Control Board (RWQCB) within the nine regions designated. The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The RWQCB is responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements or conditional waivers to waste discharge requirements. Waste discharge requirements are required by the RWQCB for activities that may affect water quality.

Clean Water Act Section 401 Water Quality Certification

A CWA Section 401 water quality certification is required for activities that require CWA Section 404 permits issued by USACE. As mentioned above, the State Water Resources Control Board has primary regulatory authority for CWA Section 401 requirements for protecting water resources. Enforcement of these requirements is also handled by the nine RWQCBs depending upon location of the potential impacts. The Central Valley RWQCB will be responsible for CWA Section 401 for this project.

State Definition of Covered Waters

Under California state law, waters of the state means “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050). Therefore, water quality laws apply to both surface water and groundwater. After the United States Supreme Court decision in Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, 531 U.S. 159 (2001), the Office of Chief Counsel of the State Water Resources Control Board released a legal memorandum confirming the state’s jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act (Porter-Cologne), discharges to wetlands and other waters of the state are subject to state regulation, and this includes isolated wetlands. In general, the State Water Resources Control Board regulates discharges to isolated waters in much the same way as they do for waters of the United States, but the regulation is via Porter-Cologne rather than the CWA.

C.4.3 Nongovernmental Agencies

California Native Plant Society

The California Native Plant Society (CNPS) is a nongovernmental agency that classifies native plant species according to current population distribution and threat level concerning extinction. These data are used by the CNPS to create and maintain a list of native California plants that have low

numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021). Potential impacts on populations of CNPS-listed plants receive consideration under CEQA review.

The following identifies the definitions of the CNPS listings:

- List 1A: Plants believed to be extinct
- List 1B: Plants that are rare, threatened, or endangered in California and elsewhere
- List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere.

All of the plant species on Lists 1 and 2 meet the requirements of the Native Plant Protection Act Section 1901, Chapter 10, or FGC Section 2062 and Section 2067, and are eligible for state listing. Plants appearing on Lists 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered significant. Classifications for plants on List 3 (plants about which we need more information) and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions or impact analysis was performed on species with these classifications.

C.4.4 Regional and Local

Town of Paradise 1994 General Plan

The Open Space/Conservation/Energy Element of the *Town of Paradise 1994 General Plan* includes the following goals and policies pertaining to biological resources:

- **Goal OCEG-6**: Preserve and protect naturally sensitive areas, and significant natural features in Paradise such as trees, views, stream courses, wildlife habitat, and clean air.
- **Policy OCEP-15**: Existing, significantly important natural habitat areas having high value for birds and other wildlife should be preserved for future generations through careful land use planning and public participation.
- **Policy OCEP-16**: Area fisheries shall be protected, and the cooperation of responsible agencies shall be sought to assure minimum stream flow and restore fisheries.

Town of Paradise Tree Preservation Ordinance

The Town of Paradise Tree Preservation Ordinance (Chapter 8.12 of the Town's municipal code) intends to limit the indiscriminate destruction of healthy trees, preserve natural beauty, maintain healthy forests, and promote proper tree management through education. This section of code prohibits felling of any qualifying trees without a permit. Certain activities are exempt from the tree felling permit program including the reparation, maintenance, or installation of service lines and the establishment of a town-funded capital improvement project. Tree felling permits may be issued to accommodate certain activities including the repair or installation of a town-authorized wastewater treatment and disposal system.

Butte County General Plan 2030

The Conservation and Open Space Element of the *Butte County General Plan 2030* includes the following goals and policies related to biological resources:

- **Goal COS-7**: Conserve and enhance habitat for protected species and sensitive biological communities.
- **Policy COS-P7.3**: Creeks shall be maintained in their natural state whenever possible, and creeks and floodways shall be allowed to function as natural flood protection features during storms.
- **Policy COS-P7.4**: New development projects shall mitigate their impacts in habitat areas for protected species through on- or off-site habitat restoration, clustering of development, and/or project design and through the provisions of the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) within the HCP/NCCP Planning Area, upon the future adoption of the HCP/NCCP.
- **Policy COS-P7.5**: No new development projects shall occur in wetlands or within significant riparian habitats, except within the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) Planning Area where such development is consistent with the conditions of the HCP/NCCP, upon the future adoption of the HCP/NCCP.
- **Policy COS-P7.6**: New development projects shall include setbacks and buffers along riparian corridors and adjacent to habitat for protected species, except where permitted in the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) Planning Area and where such development is consistent with the conditions of the HCP/NCCP, upon the future adoption of the HCP/NCCP.
- **Policy COS-P7.7**: Construction barrier fencing shall be installed around sensitive resources on or adjacent to construction sites. Fencing shall be installed prior to construction activities and maintained throughout the construction period.
- **Policy COS-P7.8**: Where sensitive on-site biological resources have been identified, construction employees operating equipment or engaged in any development-associated activities involving vegetation removal or ground disturbing activities in sensitive resource areas shall be trained by a qualified biologist and/or botanist who will provide information on the on-site biological resources (sensitive natural communities, special-status plant and wildlife habitats, nests of special-status birds, etc.), avoidance of invasive plant introduction and spread, and the penalties for not complying with biological mitigation requirements and other State and federal regulations.
- **Policy COS-P7.9**: A biologist shall be retained to conduct construction monitoring in and adjacent to all habitats for protected species when construction is taking place near such habitat areas.
- **Goal COS-8**: Maintain and promote native vegetation.

- **Policy COS-P8.1**: Native plant species shall be protected and planting and regeneration of native plant species shall be encouraged, wherever possible, in undisturbed portions of development sites.
- **Policy COS-P8.4**: Introduction or spread of invasive plant species during construction of development projects shall be avoided by minimizing surface disturbance; seeding and mulching disturbed areas with certified weed-free native mixes; and using native, noninvasive species in erosion control plantings.
- **Goal COS-9**: Protect identified special-status plant and animal species.
- **Policy COS-P9.1**: A biological resources assessment shall be required for any proposed development project where special-status species or critical habitat may be present. Assessments shall be carried out under the direction of Butte County. Additional focused surveys shall be conducted during the appropriate season if necessary. Upon adoption of the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP), assessment requirements of the HCP/NCCP shall be implemented for development projects within the HCP/NCCP area.
- **Policy COS-P9.2**: If special-status plant or animal species are found to be located within a development site, proponents of the project shall engage in consultation with the appropriate federal, State and regional agencies and mitigate project impacts in accordance with State and federal law. Upon adoption of the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP), mitigation requirements of the HCP/NCCP shall be implemented for development projects within the HCP/NCCP area. Examples of mitigation may include:
    - Design the proposed project to avoid and minimize impacts.
    - Restrict construction to specific seasons based on project-specific special-status species issues (e.g., minimizing impacts to special-status nesting birds by constructing outside of the nesting season).
    - Confine construction disturbance to the minimum area necessary to complete the work.
    - Mitigate for the loss of special-status species by purchasing credits at an approved conservation bank (if a bank exists for the species in question), funding restoration or habitat improvement projects at existing preserves in Butte County, or purchasing or donating mitigation lands of substantially similar habitat.
    - Maintain a minimum 100-foot buffer on each side of all riparian corridors, creeks and streams for special-status and common wildlife.
    - Establish setbacks from the outer edge of special-status species habitat areas.
    - Construct barriers to prevent compaction damage by foot or vehicular traffic.

Chico 2030 General Plan

The Open Space and Environment Element of the *Chico 2030 General Plan* includes the following goals and policies related to biological resources:

- **Goal OS-1**: Protect and conserve native species and habitats.
- **Policy OS-1.1, Native Habitats and Species**: Preserve native species and habitat through land use planning, cooperation, and collaboration.
- **Policy OS-1.2, Regulatory Compliance**: Protect special-status plant and animal species, including their habitats, in compliance with all applicable state, federal and other laws and regulations.
- **Policy OS-2.5, Creeks and Riparian Corridors**: Preserve and enhance Chico's creeks and riparian corridors as open space for their aesthetic, drainage, habitat, flood control, and water quality values.
- **Policy OS-2.6, Oak Woodlands**: Protect oak woodlands as open space for sensitive species and habitat.

City of Chico Tree Preservation Regulations

Chapter 16.66 Tree Preservation Regulations of Chico's municipal code requires that a tree removal permit be obtained from the director of the public works department before removing any trees within the city. A permit is not required for removal of a tree that presents an immediate hazard to life or property, as determined by the city manager, director, police chief, fire chief, public works director, community development director, urban forest manager, code enforcement officer, public utility companies, or their designees. This chapter of the code requires preparation of a tree protection plan that complies with the city's "Best Practices Technical Manual: Tree Preservation Measures" prior to the issuance of demolition permits, grading permits, building permits, use permits, planned development permits, or parcel or tentative subdivision maps.

C.5 Cultural Resources

This section identifies the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of cultural resources in the EIR, Section 3.5.

Section 3.5 includes references to the CEQA Guidelines Section 15064.5 and terminology such as "historic resource" and "archaeological resource," which include in their definition "unique archaeological resources." As such, the following regulations, plans, and/or policies provide relevant definitions and regulatory context for the impact discussion in Section 3.5.

C.5.1 Federal

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires federal undertakings to consider the effects of the action on historic properties. Historic properties are defined by the Advisory Council on Historic Preservation (ACHP) regulations (36 Code of Federal Regulations [CFR] Part 800) and consist of any prehistoric or historical archaeological site, building, structure,

historic district, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 CFR Part 800.16[l]).

To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, historical, and architectural properties) must be inventoried and evaluated for listing in the NRHP.

For projects involving a lead federal agency, cultural resource significance is evaluated in terms of eligibility for listing in the NRHP. For a property to be considered for inclusion in the NRHP, it must be at least 50 years old and meet the criteria for evaluation set forth in 36 CFR Part 60.4.

The quality of significance in American history, architecture, archaeology, engineering, and culture must be present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association. They must also meet one or more of the four criteria for inclusion on the NRHP:

- Criterion A, Association with events that have made a significant contribution to the broad patterns of history;
- Criterion B, Association with the lives of persons significant in the past;
- Criterion C, Embodiment of distinctive characteristics of a type, period, or method of construction, the work of a master, high artistic values, or a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D, History of yielding, or the potential to yield, information important in prehistory or history.

If a cultural resources professional meeting the Secretary of Interior's Qualification Standards determines a particular resource meets one of these criteria, it is considered as an eligible historic property for listing in the NRHP. Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met.

Antiquities Act

The Antiquities Act of 1906 (54 USC 320301–320303) provides for fines or imprisonment of any person convicted of appropriating, excavating, injuring, or destroying any historic or prehistoric ruin or monument or other object of antiquity that falls under the jurisdiction of the federal government.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 (16 USC 470aa et seq.) amended the Antiquities Act, set a broad policy stating that archaeological resources are important to the nation and should be protected, and required special permits before the excavation or removal of archaeological resources from public or Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.) was intended to ensure the protection and rightful disposition of Native American cultural items and burials located on federal or tribal trust lands, and in the possession or control of the federal government. The act requires that an inventory of Native American human remains, and funerary objects must be compiled by federal funded agencies and all museums and educational institutions receiving federal funds. Additionally, this act makes it illegal to traffic Native American remains and cultural items without the right of possession, whether or not they derive from federal or Native American lands.

Also, all Indian tribes and representatives identified by the Native American Heritage Commission (NAHC) must be consulted whenever archaeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the Archaeological Resources Protection Act.

The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation

These standards, effective as of 1983, provide technical advice for archaeological and historic preservation practices. Their purposes are (1) to organize the information gathered about preservation activities; (2) to describe results to be achieved by federal agencies, states, and others when planning for the identification, evaluation, registration, and treatment of historic properties; and (3) to integrate the diverse efforts of many entities performing historic preservation into a systemic effort to preserve the nation's culture heritage (48 Federal Register 44716).

The Secretary of the Interior's Standards for Rehabilitation

These standards were established by the Secretary of the Interior in 1986 as a way to homogenize rehabilitation efforts of nationally significant historic properties and buildings. These standards pertain to actions involved in returning a property to a state of utility through repair or alteration. This allows for the preservation of historic and cultural values of the property, while giving it an efficient contemporary use (36 CFR 67).

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings

The Standards for the Treatment of Historic Properties are a compilation of 34 guidelines to promote the responsible preservation of U.S. historic cultural resources. The standards specifically address preservation, rehabilitation, restoration, and reconstruction of historic materials. The standards are not intended to be the sole basis for decision-making in regard to whether a historic property should be saved, but rather are intended to provide consistency in conservation and restoration practice (36 CFR 68).

C.5.2 State

CEQA Statute and Guidelines

CEQA and the CEQA Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to cultural resources. For archaeological sites, the CEQA Guidelines [Section 15064.5(c)(1)] require that the lead agency first determine whether the site is a "historical resource" as defined in Section 15064.5(a) (see below definition). If the site qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource, as described below [CEQA Guidelines Section 15064.5(c)(2)]. If the archaeological site does not qualify as a historical resource but does qualify as a "unique archaeological resource," then the archaeological site is treated in accordance with CEQA Public Resources Code Section 21083.2, which places certain limits on permissible mitigation measures [CEQA Guidelines Section 15064.5(c)(3)]. In practice, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource.

The CEQA Guidelines [Section 15064.5(a)] define a "historical resource" as including the following:

- A resource listed in, or eligible for listing in, the CRHR;
- A resource listed in a local register of historical resources (as defined at PRC Section 5020.1(k)];
- A resource identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR).

A project that causes a "substantial adverse change" in the significance of a historical resource may have a significant effect on the environment [CEQA Guidelines Section 15064.5(b)]. The CEQA Guidelines [Section 15064.5(b)(1)] define "substantial adverse change" as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired." Generally, the significance of a historical resource is "materially impaired" when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in or eligibility for the CRHR, or its inclusion in a local register of historical resources [CEQA Guidelines Section 15064.5(b)(2)].

Mitigation measures are discussed in CEQA Guidelines Section 15126.4. Generally, by following the Secretary of the Interior's Standards for the Treatment of Historic Properties or the Secretary of the Interior's Standards for Rehabilitation, impacts can be considered as mitigated to a less-than-significant level [CEQA Guidelines Section 15064.5(b)]. For archaeological resources, the CEQA Guidelines [Section 15126.4(b)(3)] provide that a public agency should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The CEQA

Guidelines also require consideration of preservation in place as the preferred manner of mitigation. Mitigation by data recovery is recommended only if preservation is not feasible.

California Register of Historical Resources: Public Resources Code Section 5024.1

The CRHR includes resources that are listed in or formally determined eligible for listing in the NRHP, as well as some designated California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR.

California Native American Heritage Commission: Public Resources Code Sections 5097.91 through 5097.98

The California NAHC identifies and catalogs places of special religious or social significance to Native Americans and known graves and cemeteries of Native Americans on private lands. Section 5097 was amended in 1987 (5097.9) to require consultation with the California NAHC whenever Native American graves are found. When the NAHC is notified of human remains, it shall immediately notify those persons it believes to be the most likely descendants. Section 5097.98 1(b) states:

Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

It also states possible preferences the most likely descendants may have for said treatment, including preservation in place, nondestructive removal and analysis, relinquishment to the most likely descendants, or other appropriate treatment. Conferral or discussion between the most likely descendant and landowner is described in Section 5097.98 2(c) as “meaningful and timely discussion and careful consideration of the views of each party, in a manner that is cognizant of all parties’ cultural values, and where feasible, seeking agreement.”

Unique Archeological Resources

The Public Resources Code Section 21083.2[a] also requires the Lead Agency to determine whether or not a project would have a significant effect on unique archaeological resources.

The Public Resources Code defines a unique archaeological resource as follows.

- An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
    - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2).

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

Health and Safety Code Section 7050.5: Removal of Human Remains

Regarding the discovery of human remains on non-federal lands, Section 7050.5 of the California Health and Safety Code (CHSC) states the following:

a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the [PRC]. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (l) of Section 5097.94 of the [PRC] or to any person authorized to implement Section 5097.98 of the [PRC].

b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the California Government Code [CGC], that the remains are not subject to the provisions of Section 27491 of the CGC or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC. The coroner shall make his or her determination within 2 working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) (CHSC Section 7050.5).

Of particular note to cultural resources is subsection c). After notification, NAHC would follow the procedures outlined in PRC § 5097.98, which include notification of most likely descendants, if possible, and recommendations for treatment of the remains. The most likely descendants would have 24 hours after notification by the NAHC to make their recommendation (PRC § 5097.98). In addition, knowing or willful possession of Native American human remains or artifacts taken from a grave or cairn is a felony under State law (PRC § 5097.99).

California Graves Protection and Repatriation Act

Section 8010 and 8011 of the Health and Safety Code also address the protection of Native American human remains and cultural items and state:

- Section 8010. This chapter shall be known and may be cited as the California Native American Graves Protection and Repatriation Act of 2001.
- Section 8011. It is the intent of the Legislature to do all of the following:

  (a) Provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect.

  (b) Apply the state's repatriation policy consistently with the provisions of the Native American Graves Protection and Repatriation Act (25 U.S.C. Sec. 3001 et seq.), which was enacted in 1990.

  (c) Facilitate the implementation of the provisions of Native American Graves Protection and Repatriation Act with respect to publicly funded agencies and museums in California.

  (d) Encourage voluntary disclosure and return of remains and cultural items by an agency or museum.

  (e) the Provide a mechanism whereby lineal descendants and culturally affiliated California Indian tribes that file repatriation claims for human remains and cultural items under the Native American Graves Protection and Repatriation Act (25 U.S.C. Sec. 3001 et seq.) or under this chapter with California state agencies and museums may request assistance from the commission in ensuring that state agencies and museums are responding to those claims in a timely manner and in facilitating the resolution of disputes regarding those claims.

  (f) Provide a mechanism whereby California tribes that are not federally recognized may file claims with agencies and museums for repatriation of human remains and cultural items.

C.5.3 Regional and Local

Town of Paradise 1994 General Plan

Section 3.15 (Scenic and Cultural Resources) of the *Town of Paradise 1994 General Plan* details the Town's procedures for complying with the state and federal policies outlined above. The General Plan includes the following goals, policies, and implementation measures related to cultural resources:

- **Goal OCEG-9**: Identify, record, preserve, and protect historical and archeological resources.
- **Policy OCEP-36**: The *Land Use Constraints Diagram* identifies areas of potential archaeological sensitivity. Proposed development or public works projects within this area shall be required to undertake an archaeological survey prior to project approval. Proposed projects outside this area, in locations that have not been significantly disturbed, shall be referred to the California Archaeological Inventory, Northeast Information Center, California

State University, Chico to undertake an archaeological survey prior to project approval upon recommendation by the Center.

- **Implementation Measure OCEI-18**: Require compliance of all development projects with Appendix K (archeological impacts) of the *Guidelines for Implementation of the California Environmental Quality Act*.
- **Implementation Measure OCEI-19**: When an archaeological survey is required by the Town or recommended by the California Archaeological Inventory, Northeast Information Center, the survey shall be undertaken by a qualified professional archaeologist who is certified by the Society of Professional Archaeologists or has equivalent qualifications.
- **Implementation Measure OCEI-20**: Should any historic or pre-historic artifacts be discovered during construction, all work shall cease until a qualified professional archaeologist views the site, provides recommendations and gives clearance to continue.

Chico 2030 General Plan

The Chapter 11 (Cultural Resources and Historic Preservation) element of the *Chico 2030 General Plan* identifies important local cultural, archaeological, and historic resources and establishes goals, policies, and actions for the protection and preservation of those resources. Importantly, the element supports a Memorandum of Understanding adopted in June 2008 between the City of Chico and the Mechoopda Indian Tribe of the Chico Rancheria. The element also establishes the policy guidance for the City of Chico's comprehensive Historic Preservation Program. To this end, the City of Chico adopted three goals specific to cultural resources in the General Plan:

- **Goal CRHP-1:** Protect and preserve archaeological, historical, and other cultural resources to serve as significant reminders of the City's heritage and values.
- **Goal CRHP-2:** Reinvest in the archaeological, historical, and other cultural resources that frame Chico's character and identity.
- **Goal CRHP-3:** Engage in and facilitate preservation efforts with local preservation and cultural entities.

The General Plan includes the following policies related to cultural resources:

- **Policy CRHP-1.1, Historic Preservation Program**: Maintain a comprehensive Historic Preservation Program that includes policies and regulations which protect and preserve the archeological, historical, and cultural resources of Chico.
- **Policy CRHP-2.1, Infill and Historic Preservation**: Integrate the values of historic preservation with infill development and adaptive reuse.
- **Policy CRHP-2.2, Adaptive Reuse**: Encourage the adaptive reuse of historic buildings when the original use of the structure is no longer feasible.
- **Policy CRHP-2.3, Demolition as Last Resort**: Limit the demolition of historic resources to an act of last resort, to be permitted only if: 1) rehabilitation of the resource is not feasible; 2)

demolition is necessary to protect the health, safety, and welfare of its residents; or 3) the public benefits outweigh the loss of the historic resource.

- **Policy CRHP-2.4, Public Awareness of Heritage Resources**: Encourage public awareness of the heritage resources that helped shape the history of Chico.
- **Policy CRHP-2.5, Purchase of Historically Significant Buildings**: Explore grant funding, partnerships, and other opportunities to purchase historically significant buildings or sites that are eligible for State or National Registers as they become available.
- **Policy CRHP-3.1, Partnerships to Preserve Heritage Resources**: Foster partnerships with interested parties to preserve heritage resources.

These policies detail the City of Chico's protocols to, among others, identify, avoid, and mitigate impacts to archaeological, tribal, and built environment resources; integrate historic preservation into infill development; encourage public awareness of heritage resources; and establish partnerships with interested parties.

City of Chico Historic Preservation Ordinance

The historic preservation ordinance of the City of Chico's Municipal Code (Chapter 19.37) specifically affords protection for properties listed on the City of Chico's Historic Resources Inventory and provides a mechanism to add historic properties to the Inventory through Landmark Overlay zoning districts. The ordinance also provides development incentives to owners of designated historic property and establishes a number of exempt activities such as ordinary maintenance and repair. Proposals to significantly alter or demolish structures listed on the City of Chico's Historic Resources Inventory are reviewed by the City of Chico's five-member Architectural Review and Historic Preservation Board. The Board also reviews nominations to the City of Chico's Inventory and forwards recommendations to the City Council for a final determination of listing.

Butte County General Plan 2030

Chapter 9 of the *Butte County General Plan 2030* details Butte County's protocols aligning Butte County's efforts to identify, protect, and preserve important prehistoric and historic resources with state and federal regulations and specifies the mandated steps to identify, avoid, and mitigate (if necessary) cultural resources. To this end, the Butte County adopted three goals specific to cultural resources in the General Plan:

- **Goal COS-14:** Preserve important cultural resources
- **Goal COS-15:** Ensure that new development does not adversely impact cultural resources.
- **Goal COS-16:** Respect Native American culture and planning concerns

In support of these policies, the General Plan includes the following policies:

- **Policy COS-P14.1**: Historic and cultural resources management shall be coordinated with nearby jurisdictions, including the five incorporated municipalities, the Lassen and Plumas National Forests, other planning and regulatory agencies, and local tribes.

- **Policy COS-P14.2**: As part of CEQA and NEPA projects, evaluations of surface and subsurface cultural resources in the county shall be conducted. Such evaluations should involve consultation with the Northeast Information Center.
- **Policy COS-P14.3**: The Northeast Information Center and appropriate historic and preservation professionals shall be consulted when considering reuse of historic sites.
- **Policy COS-P15.1**: Areas found during construction to contain significant historic or prehistoric archaeological artifacts shall be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation. Historic or prehistoric artifacts found during construction shall be examined by a qualified consulting archaeologist or historian to determine their significance and develop appropriate protection and preservation measures.
- **Policy COS-P15.2**: Any archaeological or paleontological resources on a development project site shall be either preserved in their sites or adequately documented as a condition of removal. When a development project has sufficient flexibility, avoidance and preservation of the resource shall be the primary mitigation measure.
- **Policy COS-P15.3**: Demolition permit application on potentially important historic sites shall be subject to discretionary review.
- **Policy COS-P16.2**: Impacts to the traditional Native American landscape shall be considered during California Environmental Quality Act or National Environmental Protection Act review of development proposals.
- **Policy COS-P16.3**: Human remains discovered during implementation of public and private development projects shall be treated with dignity and respect. Such treatment shall fully comply with the federal Native American Graves Protection and Repatriation Act and other appropriate laws.
- **Policy COS-P16.4**: If human remains are located during any ground disturbing activity, work shall stop until the County Coroner has been contacted, and, if the human remains are determined to be of Native American origin, the NAHC and most likely descendant have been consulted.
- **Policy COS-P16.5**: Consistent with State local and tribal intergovernmental consultation requirements such as SB 18, the County shall consult with Native American tribes that may be interested in proposed new development projects and land use policy changes.

C.6 Energy

This section summarizes the applicable federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of energy in the EIR, Section 3.6.

C.6.1 Federal

Corporate Average Fuel Economy

The Corporate Average Fuel Economy (CAFE) standards were first introduced by Congress in 1975 to help reduce the country's dependence on foreign oil. CAFE standards are regulated by Department of Transportation's National Highway Traffic and Safety Administration (NHTSA). NHTSA sets and enforces the CAFE standards, while the United States Environmental Protection Agency (USEPA) calculates average fuel economy levels for manufacturers, and also sets related GHG standards. The regulations have become more stringent over time. The regulations at first applied only to passenger cars in 1978, then included light duty trucks up to 6,000 pounds in 1980, and finally increased to all vehicles up to 8,500 pounds the next year. Regulations varied during the 1980s for both cars and trucks before reaching a steady target for cars in 1990 through 2010, with trucks moderately increasing during the period from 20 to 21 miles per gallon (mpg) through 2005, then reaching 23.5 mpg by 2010.

On April 1, 2010, under the Obama Administration, the USEPA and the NHTSA announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States. The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2012 through 2016. This phase required these vehicles to meet a fuel economy standard of 35.5 mpg. The second phase applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 through 2025. This phase required these vehicles to meet an estimated fuel economy standard of 54.5 mpg.

On September 15, 2011, the USEPA and NHTSA issued a final rule for the first national standards to improve fuel efficiency of medium- and heavy-duty trucks and buses, model years 2014 through 2018 by up to 20 percent.

On October 25, 2016, the USEPA and NHTSA issued Phase 2 of the national standards to improve fuel efficiency standards for medium- and heavy-duty trucks and buses for model years 2021 through 2027 to achieve vehicle fuel savings as high as 25 percent, depending on the vehicle category.

On March 31, 2020, under the Trump administration, the USEPA and NHTSA, issued the Safer Affordable Fuel Efficient (SAFE) Vehicles Rule. The SAFE Vehicles Rule set new CAFE targets and tailpipe carbon dioxide emissions standards for passenger cars and lights trucks that increase 1.5 percent in stringency each year from model years 2021 through 2026.

The current Biden administration intends to set new fuel efficiency standards. In August 2021, NHTSA released its Notice of Proposed Rulemaking offering new standards for the 2024–2026 model years. The new standards would increase fuel efficiency 8 percent annually for model years 2024-2026 and increase the estimated fleetwide average by 12 mpg for model year 2026, relative to model year 2021. President Biden issued Executive Order (EO) 14037 on August 5, 2021, which requires NHTSA to develop fuel economy standards for passenger cars and light duty trucks for model years 2027-2030. In addition, NHTSA will develop medium and heavy-duty fuel efficiency standards beginning as early as model year 2027. At the time of EIR preparation, new CAFE standards have not been adopted.

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 set equipment energy efficiency standards. The law seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the National Energy Policy Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; constructing energy-efficient buildings; and improving the energy efficiency of commercial buildings. Tax credits are also available for installing qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), signed by President George W. Bush in 2007, strengthened the federal government's key energy management goals and set more challenging goals than the National Energy Policy Act of 2005. The energy reduction and environmental performance requirements of Executive Order 13423 were expanded upon in Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance), signed by President Barack Obama in 2009.

The Renewable Fuel Standard (RFS) program was created under the National Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. The program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders. This RFS program under this act, commonly referred to as "RFS1", required 4.0 billion gallons of renewable fuel to be blended into gasoline by 2006, ascending to 7.5 billion gallons by 2012.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to achieve energy security in the United States by increasing renewable fuel production, improving energy efficiency and performance, protecting consumers, improving vehicle fuel economy, and promoting research on GHG capture and storage. Under this act, RFS program was expanded in several ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program is referred to as "RFS2" and includes the following:

- Expanded the RFS program to include diesel, in addition to gasoline
- Increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022
- Established new categories of renewable fuel and set separate volume requirements for each
- Required the USEPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces

C.6.2 State

California Energy Commission

The Warren-Alquist Act of 1974 established the California Energy Commission (CEC), which is California's primary energy policy and energy planning agency. CEC's core responsibilities include advancing the state's energy policy, achieving energy efficiency, investing in energy innovation, developing renewable energy, transforming transportation, overseeing energy infrastructure, and preparing for energy emergencies.

Energy Action Plan

The California Public Utilities Commission approved the State's first Energy Action Plan in 2003 followed by the Energy Action Plan II in 2005. The current plan, Energy Action Plan II, is California's principal energy planning and policy document. The plan examines the state's ongoing actions in the context of global climate change, describes a coordinated implementation plan for state energy policies, and identifies specific actions to ensure that California's energy resources are adequate, reliable, and reasonably-priced. The plan identifies policies, strategies, and actions that are cost-effective and environmentally-sound for California's consumers and taxpayers.

Greenhouse Gas Regulations

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006, which required California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, ARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on Climate Change Scoping Plans is provided in Section C.8.2.

Renewable Energy Regulations

SB 1078 (2002) established the California Renewable Portfolio Standard (RPS) Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20 percent standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers.

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20 percent of electricity retail sales be served by renewable energy resources by 2010 (not 2017).

SB X1-2 (2011) required all California utilities to generate 33 percent of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 set a three-stage compliance period: 20 percent electricity from renewables by December 31, 2013; 25 percent from renewables by December 31, 2016; and 33 percent from renewables by December 31, 2020.

SB 350 (2015) accelerated the RPS by requiring retail seller and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030, with interim goals of 40 percent by 2024 and 45 percent by 2027.

SB 100 (2018) accelerated and expanded the standards set forth in SB 350 by establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

EO B-55-18 (2018) established a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. The EO requires the ARB to work with relevant State agencies to develop a framework for implementation and accounting that tracks the progress toward this goal. ARB will also be required to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Assembly Bill 1007

AB 1007 (2005) required CEC to prepare a statewide plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with ARB and in consultation with other State, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality.

Assembly Bill 1493

AB 1493 (2002) required ARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles whose primary use is non-commercial personal transportation in the state. AB 1493 required that ARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years.

Advanced Clean Cars

In 2012, ARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars.

In-Use Off-Road Diesel-Fueled Fleets Regulation

All self-propelled off-road diesel vehicles 25 horsepower or greater used in California (such as bulldozers, loaders, backhoes, forklifts, etc.) and most two-engine vehicles (except on-road two-engine sweepers) are subject to the Regulation for In-Use Off-Road Diesel-Fueled Fleets (Off-Road Diesel Regulation). Adopted by the ARB on July 26, 2007, this regulation aims to reduce NOX and particulate matter from off-road diesel vehicles operating within California by retiring, replacing, or

repowering older engines, or installing diesel exhaust retrofits. The compliance schedule requires full implementation by 2023 in all vehicles for large and medium fleets and by 2028 for small fleets.

Vehicles or engines subject to this regulation must limit their idling to five minutes. The idling limit does not apply to vehicles that need to idle to accomplish the work it was designed for (such as operating a crane), vehicles that need to idle for safe operation, vehicles being serviced or tested, or vehicles in a queue waiting for work. While the goal of this regulation is primarily to reduce emissions from diesel vehicles, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code, Section 65080, SB 375 requires metropolitan planning organizations (such as the Butte County Association of Governments) to include a Sustainable Communities Strategy in its regional transportation plan. The main focus of the Sustainable Communities Strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also a part of a bigger effort to address other development issues within the general vicinity, including transit and VMT, which influence the consumption of petroleum-based fuels.

C.6.3 Regional and Local

Town of Paradise 1994 General Plan

The Open Space/Conservation/Energy Element of the *Town of Paradise 1994 General Plan* includes the following goals related to energy:

- **Goal OCEG-10**: Maximize Paradise's energy efficiency.
- **Goal OCEG-11**: Become a regional leader in the approach to energy conservation.

The general plan contains the following objective related to energy – OCEO-14: Significantly reduce town-wide energy consumption.

Butte County General Plan 2030

The *Butte County General Plan 2030* includes the following policies related to energy:

- **Policy H-P6.1**: Continue to implement state energy efficiency standards.
- **Policy COS-P3.4**: Solar-oriented and renewable design and grid-neutral development shall be encouraged.

Chico 2030 General Plan

The *Chico 2030 General Plan* includes the following policies related to energy:

- **Policy SUS-3.2, Municipal Energy Use**: Reduce energy and water use in municipal operations.
- **Policy SUS-3.4, Sustainable Fleet**: Support sustainable City vehicles and equipment.
- **Policy SUS-4.1, Green Public Facilities**: Incorporate green building techniques in the site design, construction, and renovation of public projects.
- **Policy SUS-5.2, Energy Efficient Design**: Support the inclusion of energy efficient design and renewable energy technologies in public and private projects.

Butte County 2021 Climate Action Plan

The *Butte County 2021 Climate Action Plan* was adopted on December 14, 2021. Strategies in the climate action plan not only result in a reduction of GHG emissions countywide, but they increase overall sustainability and quality of life in the county by facilitating increased access to transportation and services, upgrades to infrastructure that build resiliency for the entire community, energy independence and affordability, and supporting broader economic development initiatives. Additional information on the climate action plan is provided in Section C.8.3.

City of Chico Climate Action Plan Update

The *City of Chico Climate Action Plan Update* (Rincon Consultants 2021) was adopted on October 19, 2021. Measures in the climate action plan that would result in a reduction of GHG emissions are related to energy efficiency, renewable energy, sustainable transportation, development patterns, solid waste, water, urban trees and greenspace, and community engagement. Additional information on the climate action plan is provided in Section C.8.3.

C.7 Geology, Soils, and Paleontological Resources

This section summarizes the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of geology, soils, and paleontological resources in the EIR, Section 3.7.

C.7.1 Federal

Earthquake Hazards Reduction Act

In October 1977, the United States Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. The Earthquake Hazards Reduction Act established the National Earthquake Hazard Reduction Program. The purpose of this program is to reduce the risks to life and property in the United States from earthquakes through the establishment and maintenance of an effective national earthquake risk reduction program. Member agencies in the National Earthquake Hazard Reduction Program are the US Geological Survey, the National Science Foundation, the Federal Emergency Management Agency, and the National Institute of Standards and Technology.

In November 1990, the National Earthquake Hazards Reduction Reauthorization Program Act amended the Earthquake Hazards Reduction Act of 1977 significantly by refining the description of agency responsibilities, program goals, and objectives.

The Earthquake Hazards Reduction Act's aims include improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; reduced earthquake risks through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results (US Geological Survey 2015).

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act was passed on March 30, 2009. The Paleontological Resources Preservation Act is intended to preserve, manage, and protect paleontological resources on lands administered by the Bureau of Land Management, the Bureau of Reclamation, the National Parks Service, and the US Fish and Wildlife Service. The Paleontological Resources Preservation Act addresses the management, collection, and curation of paleontological resources from federal lands and authorizes civil and criminal penalties for illegally collecting, damaging, defacing, or selling paleontological resources.

C.7.2 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (California Public Resources Code [PRC] §§ 2621–2630) was enacted in 1972 to reduce the hazard of surface faulting to structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and issue appropriate maps, which are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, the permitting agency must require a geologic investigation to demonstrate that buildings intended for human habitation would not be constructed on active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC, Chapter 7.8, Sections 2690 to 2699.6) directs the DOC, CGS to identify and map areas prone to earthquake liquefaction hazards, earthquake-induced landslides, and amplified ground shaking. The Seismic Hazards Mapping Act is intended to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards. The Seismic Hazards Mapping Act requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development.

General Permit for Construction Activities

The State of California adopted the Construction General Permit, Order No. 2012 0006 DWQ, amending Order No. 2009 0009 DWQ, effective July 17, 2012. The State Water Resources Control Board (SWRCB) Water Quality Order 2012 0006 DWQ (Construction General Permit) regulates construction site stormwater management. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the general permit for discharges of stormwater associated with construction activity. This requirement includes linear projects that disturb 1 or more acres. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

Permit applicants are required to submit a Notice of Intent to SWRCB and to prepare a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP identifies best management practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on pollutants. The BMPs identified are directed at implementing both sediment and erosion control measures and other measures to control chemical contaminants. The SWPPP must also include descriptions of the BMPs to reduce pollutants in stormwater discharges after all construction phases have been completed at the site (post construction BMPs). The SWPPP must contain a visual monitoring program, a chemical monitoring program for “nonvisible” pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a waterbody listed on the CWA 303(d) list for sediment.

Paleontological Resources

CEQA includes in its definition of historical resources “…any object [or] site …that has yielded or may be likely to yield information important in prehistory…” (14 CCR § 15064.5[a][3]), which is typically interpreted as including fossils and other paleontological resources. More specifically, destruction of a “…unique paleontological resource or site or unique geologic feature…” constitutes a significant impact under CEQA pursuant to CEQA Guidelines in Appendix G. Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in the project; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring, data recovery excavation, and/or avoidance.

Public Resources Code Section 5097.5

PRC § 5097.5 states that no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

Society of Vertebrate Paleontology

The Society of Vertebrate Paleontology has guidance for assessing and mitigating paleontological resources that could potentially be impacted from land development. This guidance is included in the *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (Society of Vertebrate Paleontology 2010). As part of the assessment process for paleontological resources, the Society of Vertebrate Paleontology's guidance groups rock units into a high, undetermined, low, or no potential category for containing significant paleontological resources. These categories then determine the level of mitigation required, or further assessment prior to construction, for adequate protection or salvage of paleontological resources within a project area.

C.7.3 Regional and Local

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan* includes the following policies related to geology and soils:

- **Policy SP-15:** Development projects should be designed to minimize soil erosion and shall be required to comply with all Town of Paradise-adopted soil erosion standards maintained by the Paradise Community Development Department.
- **Policy SP-16:** The town should require all development proposals on sites that contain slopes exceeding 20 percent, and/or which border or include significant and sensitive stream courses or natural drainageways, to include programs for replanting and slope stabilization, erosion control plans, and to incorporate designs which minimize grading and cut-and-fill.
- **Policy SP-17:** Building on slopes in excess of 30 percent should not be permitted.

Butte County General Plan 2030

The *Butte County General Plan 2030* includes the following policies related to geology, soils, and paleontological resources:

- **Policy HS-P6.1:** Appropriate detailed seismic investigations shall be completed for all public and private development projects in accordance with the Alquist-Priolo Earthquake Fault Zoning Act.
- **Policy HS-P7.1:** Site-specific geotechnical investigations shall be required to assess landslide potential for private development and public facilities projects in areas rated "Moderate to High" and "High" in Figure HS-4 or the most current available mapping
- **Policy HS-P8.1:** Site-specific geotechnical investigations shall be required to assess erosion potential for private development projects and public facilities in areas rated "Very High" in Figure HS-7 or the most current available mapping.
- **Policy HS-P9.1:** Site-specific geotechnical investigations shall be required to assess risks from expansive soils for private development projects and public facilities in areas rated "High" in Figure HS-8 or the most current available mapping.

- **Policy COS-P14.2:** As part of CEQA and NEPA projects, evaluations of surface and subsurface cultural resources in the county shall be conducted. Such evaluations should involve consultation with the Northeast Information Center.

- **Policy COS-P15.2:** Any archaeological or paleontological resources on a development project site shall be either preserved in their sites or adequately documented as a condition of removal. When a development project has sufficient flexibility, avoidance and preservation of the resource shall be the primary mitigation measure.

Chico 2030 General Plan

The *Chico 2030 General Plan* includes the following policies and actions related to seismic and geologic hazards:

- **Policy S-3.1, Potential Structural Damage:** Prevent damage to new structures caused by seismic, geologic, or soil conditions.

    - **Action S-3.1.2, Potential Soil Hazards:** In areas with highly expansive soils, require appropriate studies and structural precautions through project review.

Grading Ordinances

Chapter 15.02, 2019 California Building Standards Code, of the Town's municipal code requires that a grading permit be obtained from the Town Engineer before any grading, clearing, or grubbing activities. Application for a grading permit requires submittal of a grading plan. The grading plan, and accompanying site map, shall show the following: existing and proposed contours, proposed limits of cuts and fills and other earthwork, existing off-site structures and other off-site improvements, public and private easements of record, typical sections of areas to be graded, all proposed uses for the site, and any other special features.

Chapter 13, Grading and Mining, of the Butte County's municipal code states that the application for a grading permit shall include the following: location map, plot plan, description of the work to be done and materials to be used, location of all drainage to and from the site, location of culverts and natural watercourses, details of proposed drainage structures, description of the methods to be used for erosion and sediment control, and locations of anticipated stockpile areas.

Chapter 16.28, Grading Regulations – Permits, of the Chico Municipal Code states that application for a grading permit requires submittal of a grading plan. The grading plan shall include detailed plans, dimensions, and grading specifications. If required by the building official, a soils engineering report and/or engineering geology report must be prepared, and any recommendations included in these reports shall be a part of the grading plan submittal.

C.8 Greenhouse Gas Emissions

This section summarizes the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of GHG emissions in the EIR, Section 3.8.

C.8.1 Federal

United States Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497, the U.S. Supreme Court found that GHGs are air pollutants covered by the Federal Clean Air Act. The court held that USEPA must determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. The Supreme Court's decision resulted from a petition for rulemaking under section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations.

C.8.2 State

Executive Order S-3-05

In June 2005, Governor Schwarzenegger issued Executive Order (EO) S-3-05, which established the following GHG emissions reduction targets: 1) reduce GHG emissions to 2000 levels by 2010, 2) reduce GHG emissions to 1990 levels by 2020, and 3) reduce GHG emissions to 80 percent below 1990 levels by 2050.

Assembly Bill 32 (Global Warming Solutions Act)

In September 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. California met its 2020 reduction goal in 2018.

Executive Order B-30-15

On April 20, 2015, Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. California's emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the United States to limit global warming below 2 degrees Celsius, the warming threshold at which there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 32

Senate Bill (SB) 32 was signed into law on September 8, 2016, and expands upon AB 32 to reduce GHG emissions. SB 32 sets into law the mandated GHG emissions target of 40 percent below 1990 levels by 2030 written into EO B-30-15.

Climate Change Scoping Plan

In December 2008, the ARB adopted the *Climate Change Scoping Plan* (2008 Scoping Plan) to achieve the goals outlined in AB 32. The 2008 Scoping Plan, developed by ARB in coordination with the Climate Action Team, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify the state's energy sources, save energy, create new jobs, and enhance public health. According to the 2008 Scoping Plan, California will implement strategies to achieve a reduction of approximately 118

million metric tons (MT) of CO_2e, or approximately 22 percent from the State's projected 2020 emission level of 545 million MT of CO_2e under a business-as-usual scenario. This is a reduction of 47 million MT CO_2e, or almost 10 percent, from 2008 emissions (ARB 2008). The ARB's original 2020 projection was 596 million MT CO_2e, but this revised 2020 projection considered the economic downturn that occurred in 2008.

The *First Update to the Climate Change Scoping Plan* (2014 Scoping Plan) was approved by the ARB in May 2014 and built upon the 2008 Scoping Plan with new strategies and recommendations. The 2014 Scoping Plan contained the main strategies California will implement to achieve a reduction of 80 million MT of CO_2e emissions, or approximately 16 percent, from the state's projected 2020 emission level of 507 million MT of CO_2e under the business-as-usual scenario defined in the 2014 Scoping Plan (ARB 2014). The 2014 Scoping Plan also included a breakdown of the amount of GHG reductions ARB recommended for each emissions sector of the state's GHG inventory. Several strategies to reduce GHG emissions were included: Low Carbon Fuel Standard, Pavley Rule, Advanced Clean Cars program, Renewable Portfolio Standard, and Sustainable Communities Strategy.

In 2016, the Legislature passed SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With the passage of SB 32, the Legislature passed companion legislation AB 197, which provided additional direction for developing the Scoping Plan. The ARB adopted *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan) in November 2017. The 2017 Scoping Plan represents a second update to the scoping plan to reflect the 2030 target as codified by SB 32. According to the 2017 Scoping Plan, the 2030 target of 260 million MT of CO_2e requires the reduction of 129 million MT of CO_2e, or approximately 33.2 percent, from the state's projected 2030 business-as-usual scenario emissions level of 389 million MT of CO_2e (ARB 2017).

Assembly Bill 1493 (Pavley Clean Car Standards)

AB 1493 (Pavley Bill) (Chapter 200, Statutes of 2002) requires ARB to develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light duty truck and other vehicles determined by ARB to be vehicles whose primary use is non-commercial personal transportation in the state." In September 2004, pursuant to this directive, the ARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created the Pavley standards. In September 2009, the ARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created the Pavley II standards.

Advanced Clean Cars Program

In January 2012, the ARB approved a new emissions control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero emission vehicles into a single packet of standards called Advanced Clean Cars. The Advanced Clean Cars Program includes the Zero Emission Vehicle Program, which is designed to achieve California's long-term emission reduction goals by requiring manufacturers to offer for sale specific numbers of zero-emission vehicles, which include battery electric, fuel cell, and plug-in hybrid electric vehicles.

C.8.3 Regional and Local

Butte County Air Quality Management District

BCAQMD is the air quality regulating authority in Butte County. The *CEQA Air Quality Handbook* (BCAQMD 2014) includes analysis requirements for construction and operational emissions. BCAQMD has not adopted thresholds of significance for GHG emissions. For construction and operational GHG emissions, BCAQMD's recommended threshold includes compliance with a qualified GHG reduction strategy, compliance with the Lead Agency's threshold, or consistency with the goals of AB 32.

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan* does not contain any objectives or policies that specifically address GHG emissions. The Town has not adopted a climate action plan or any other plan to quantify existing GHG inventories or provide goals and measures to reduce GHG emissions in the town.

Butte County General Plan 2030

The *Butte County General Plan 2030* includes the following policies related to GHG emissions:

- **Policy COS-P1.1:** Greenhouse gas emission impacts from proposed development projects shall be evaluated as required by the CEQA.
- **Policy COS-P1.2:** New development projects shall mitigate greenhouse gas emissions on-site or as close to the site as possible.

Chico 2030 General Plan

The *Chico 2030 General Plan* includes the following policies related to GHG emissions:

- **Policy SUS-6.1, Greenhouse Gas Reduction Efforts**: Support local, regional, and statewide efforts to reduce emissions of greenhouse gases linked to climate change.
- **Policy SUS-6.2, Greenhouse Gas Inventory and Climate Action Plan**: Maintain a Greenhouse Gas Emissions Inventory and implement the Climate Action Plan to make progress toward meeting the City's greenhouse gas emissions reduction goal.
- **Policy SUS-6.3, Greenhouse Gas Emissions and CEQA**: Analyze and mitigate potentially significant increases in greenhouse gas emissions during project review, pursuant to the California Environmental Quality Act.
- **Policy SUS-6.4, Community Trees**: Continue to support the planting and maintenance of trees in the community to increase carbon sequestration.

Butte County 2021 Climate Action Plan

The *Butte County 2021 Climate Action Plan* (Placeworks 2021), adopted on December 14, 2021, is Butte County's strategic plan to reduce GHG emissions in the unincorporated county. This climate

action plan updates the previously adopted climate action plan in Butte County, providing updated information, an expanded set of GHG reduction strategies, and a planning horizon out to 2050. Butte County is committed to reducing GHG emissions to 6.0 MT CO_2e per person by 2030 and 2.0 MT CO_2e per person by 2050, consistent with the 2017 Scoping Plan guidance. Butte County is also setting forth an interim target of 4.0 MT CO_2e per person by 2040. The following is a list of climate action plan strategies:

- **Strategy 1**: Continue efforts to promote energy conservation and efficiency opportunities for all residents, building/property owners, and renters in the unincorporated county, including support and promotion of programs for lower- income and disadvantaged populations.
- **Strategy 2**: Continue efforts to promote energy conservation and efficiency opportunities for all nonresidential uses in the unincorporated county, including County facilities, office space, commercial space, and industrial space.
- **Strategy 3**: Work with property owners and property management groups to increase overall building electrification and adoption of modern, efficient appliances in residential rental properties.
- **Strategy 4**: Support efforts to increase renewable and carbon-free energy generation, including wind, solar, and biomass, and to ensure customer access to such renewable energy
- **Strategy 5**: Continue efforts to promote water conservation for all residents, building/property owners, and businesses in the unincorporated county, including support and promotion of programs for lower-income and disadvantaged populations, and large water users.
- **Strategy 6**: Pursue Transportation Demand Management (TDM) strategies, implemented through local land use decisions and through partnerships with local employers, that reduce vehicle miles traveled (VMT) countywide.
- **Strategy 7**: Prioritize bicycling and walking as safe, practical, and attractive travel options countywide.
- **Strategy 8**: Reduce carbon emissions from transportation by facilitating a transition to efficient or clean-fuel vehicles.
- **Strategy 9**: Encourage hybrid and clean-fuel construction and landscaping equipment countywide.
- **Strategy 10**: Reduce the amount of solid waste sent to local landfills through innovative programs and partnerships.
- **Strategy 11**: Reduce emissions from disposal and decomposition of organic waste.
- **Strategy 12**: Work to reduce GHG emissions associated with agricultural equipment, in partnership with regional partners, agencies, and members of the agricultural community.

- **Strategy 13**: Track trends in agricultural operations and encourage existing and new farming techniques that reduce GHG emissions from crop cultivation.
- **Strategy 14**: Work with farmers and local and regional agencies to explore techniques to maximize carbon sequestration of the county's natural and working lands.
- **Strategy 15**: Implement projects and programs to reduce GHG emissions associated with Butte County operations.

City of Chico Climate Action Plan Update

The *City of Chico Climate Action Plan Update* (Rincon Consultants 2021) was adopted on October 19, 2021. The City of Chico is committed to a GHG emissions reduction target of 2.71 MT of CO_2e per person (or 292,437 MT of CO_2e in total emissions) by 2030. This corresponds to an 80 percent reduction in per capita emissions (or a 46 percent reduction in total emissions) below 1990 levels by 2030, exceeding the SB 32 target of 40 percent reduction in total emissions by 2030. To achieve the GHG emissions reduction target, the climate action plan includes 13 measures related to energy efficiency, renewable energy, sustainable transportation, development patterns, solid waste, water, urban trees and greenspace, and community engagement.

C.9 Hazards and Hazardous Materials

This section identifies the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of hazards and hazardous materials in the EIR, Section 3.9.

C.9.1 Federal

Hazardous Waste Management

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. Environmental Protection Agency (EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA. The statute also addresses program administration; implementation and delegation to the states; enforcement provisions and responsibilities; and research, training, and grant funding.

EPA Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)

The asbestos NESHAP regulations specify work practices for asbestos to be followed during demolition and renovation of all structures, installations, and buildings (excluding residential buildings that have four or fewer dwelling units). 40 CFR Part 61 states that the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation will thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos. The regulations require the owner of the building or the operator to notify the appropriate state agency before any demolition, or before any renovations of buildings that could contain a certain threshold amount of asbestos or asbestos-containing material. In addition, particular manufacturing and fabricating operations either cannot

emit visible emissions into the outside air or must follow air cleaning procedures, as well as follow certain requirements when removing asbestos-containing waste. 40 CFR Part 61, Subpart M establishes the National Emission Standards for Hazardous Air Pollutants (NESHAP) and names asbestos-containing material as one of these materials. Asbestos-containing material use, removal, and disposal are regulated by U.S. EPA under this law. Work practice standards under the EPA for air toxics regulations would include removing all asbestos1containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expediently as practicable. In addition, notification of friable asbestos-containing material removal prior to a proposed demolition project is required by this law.

Universal Waste Management

40 CFR Part 273 governs the collection and management of widely generated waste, including batteries, pesticides, mercury-containing equipment, and bulbs. This regulation streamlines the hazardous waste management standards and ensures that such waste is diverted to the appropriate treatment or recycling facility.

U.S. Department of Labor, Occupational Safety and Health Administration

29 CFR Part 1910, Occupational Safety and Health Standards, requires facilities that use, store, manufacture, handle, process, or move hazardous materials to conduct employee safety training; inventory safety equipment relevant to potential hazards; have knowledge on safety equipment use; prepare an illness prevention program; provide hazardous substance exposure warnings; prepare an emergency response plan, and prepare a fire prevention plan.

29 CFR Part 1926 establishes safety and health regulations for construction. These standards require employee training; personal protective equipment; safety equipment; and written procedures, programs, and plans for ensuring worker safety when working with hazardous materials or in hazardous work environments during construction activities, including renovations and demolition projects and the handling, storage, and use of explosives. These standards also provide rules for the removal and disposal of asbestos, lead, lead based paint, and other lead materials.

U.S. Department of Transportation

Transportation of hazardous materials is regulated by the U.S. Department of Transportation’s Office of Hazardous Materials Safety. The office formulates, issues, and revises hazardous materials regulations under the Federal Hazardous Materials Transportation Law. The hazardous materials regulations cover hazardous materials definitions and classifications, hazard communications, shipper and carrier operations, training and security requirements, and packaging and container specifications. Vehicles transporting hazardous materials must be properly placarded. In addition, the carrier is responsible for the safe unloading of hazardous materials at the site, and operators must follow specific procedures during unloading to minimize the potential for an accidental release of hazardous materials. The hazardous materials transportation regulations are codified in 49 CFR Parts 100–185.

C.9.2 State

California Hazardous Waste Control Law

The California Hazardous Waste Control Law (HWCL) is administered by the California Environmental Protection Agency (CalEPA) to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the U.S. EPA approves the California program, both the state and federal laws apply in California. The HWCL lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

The California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261, defines hazardous waste as: a waste that exhibits the characteristics that may: (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed or otherwise managed.

According to 22 CCR, substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated, or that is being stored prior to proper disposal.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

Cal/OSHA is the agency responsible for enforcement of the construction safety orders of 8 CCR 1529 related to asbestos removal and cleanup. Section 1529 regulates construction-related asbestos exposure involving demolition of structures, removal of asbestos containing materials, asbestos clean-up, or excavation activities which may involve exposure to asbestos. Work practice standards for Cal/OSHA are similar to the EPA, but also include the presence of an asbestos competent person for monitoring during all demolition activities, HEPA filter dust collection systems, and ventilation of enclosed or isolated areas. Section 1532.1 addresses specific measures for construction workers to take if exposed to sources that contain lead, including lead-based paint.

Lead-Based Paint

The California Department of Public Health enforces lead laws and regulations related to the prevention of lead poisoning in children, prevention of lead poisoning in occupational workers, accreditation and training for construction-related activities, lead exposure screening and reporting, disclosures, and limitations on the amount of lead found in products. Accredited lead specialists are required to find and abate lead hazards in a construction project and to perform lead-related construction work in an effective and safe manner. Specific regulations include:

California Health & Safety Code Section

105250 Establishes a program to accredit lead-related construction training providers and certify individuals to conduct lead-related construction activities.

California Civil Code Sections 1102 to 1102.16

Requires the disclosure of known lead-based paint hazards upon sale of a property.

California Labor Code Sections 6716 to 6717

Provides for the establishment of standards that protect the health and safety of employees who engage in lead-related construction work, including construction, demolition, renovation, and repair.

California Health & Safety Code Sections 105185 to 105197

Establishes an occupational lead poisoning prevention program to register and monitor laboratory reports of adult lead toxicity cases, monitor reported cases of occupational lead poisoning to ascertain lead poisoning sources, conduct investigations of take-home exposure cases, train employees and health professionals regarding occupational lead poisoning prevention, and recommended means for lead poisoning prevention.

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) protects water quality in California by setting statewide policy. The SWRCB supports the nine Regional Water Quality Control Boards, which, within their areas of jurisdiction, protect surface and groundwater from pollutants discharged or threatened to be discharged to the waters of the state. For the City of Chico, the Central Valley RWQCB (CVRWQCB) maintains jurisdiction within the subject basin. This protection is carried out through the issuance and enforcement of National Pollutant Discharge Elimination System (NPDES) permits, called Waste Discharge Requirements (WDRs), regulation of leaking underground storage tanks and contaminated properties through the Leaking Underground Storage Tank (LUST) and Spills, Leaks, Investigation, and Cleanup (SLIC) programs, respectively. USTs are regulated under Chapter 6.7 of the California Health and Safety Code and 23 CCR Chapter 16.

California Health and Safety Code – Handling and Storage of Hazardous Waste

In California, the handling and storage of hazardous materials is regulated by Chapter 6.95 of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a Hazardous Materials Business Plan. The plan provides information to the local emergency response agency regarding the types and quantities of hazardous materials stored at a facility and provides detailed emergency planning and response procedures in the event of a hazardous materials release. In the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by the California code, facilities are also required to prepare a Risk Management Plan and California Accidental Release Plan, which provides information on the potential impact zone of a worst-case release, and requires plans and programs designed to minimize the probability of a release and mitigate potential impacts.

California Health and Safety Code – Transportation of Hazardous Waste

In California, transportation of hazardous waste is regulated under Chapter 6.5 of the California Health and Safety Code. Under Section 21560, hazardous waste generators must complete a

manifest for the waste before it is transported or offered for transportation. A manifest is a shipping document that is signed by the hazardous waste generator and contains the necessary information to be in compliance with all state and federal regulations. The purpose of the manifest is to allow for the waste to be tracked from point of origin through point of disposal and for the generator or regulatory agency to verify that the waste is properly delivered without incurring any loss along the way. The enforcement agencies for the transportation of hazardous materials regulations are the California Highway Patrol and Caltrans.

Emergency Response/Evacuation Plans

The state of California passed legislation authorizing the Office of Emergency Services (CalOES) to prepare a Standard Emergency Management System program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with the program could result in the state withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

California Disaster and Civil Defense Master Mutual Aid Agreement

The California Disaster and Civil Defense Master Mutual Aid Agreement states that all resources and facilities of the state, including all political subdivisions, shall voluntarily aid and assist each other in the event of a disaster by the interchange of services, including rescue, relief, evacuation, rehabilitation, and reconstruction (CalOES 1950).

C.9.3 Regional and Local

Butte County Emergency Response

The Butte County Local Hazard Mitigation Plan (LHMP) was prepared to reduce risks for hazards by helping decision makers direct mitigation activities and resources. The LHMP documents the hazard mitigation planning process and identifies relevant hazards and vulnerabilities facing the county. The LHMP also includes the strategies the County will use to increase resiliency in the face of hazardous situations. This multi-jurisdictional plan includes Butte County, the cities of Biggs, Chico, Gridley, Oroville, and the Town of Paradise, as well as a number of public utilities and services agencies serving the area. According to the LHMP's Hazard Identification Assessment, the most significant hazards in the county are dam failure, 100, 200, and 500-year floods, levee failure, and wildfire (Butte County 2019). Butte County has adopted a multi-jurisdictional Emergency Operations Plan (EOP), which assigns functions and tasks consistent with California's Standardized Emergency Management System and the National Incident Management System. The intent of the EOP is to provide direction on how to mobilize and respond to an emergency from onset to recovery (Butte County 2011).

The Butte Emergency Command Center is the mutual aid coordination center for Butte County. They have the responsibility for coordinating all mutual aid requests in Butte County and have the authority to directly obtain resources from neighboring counties including Yuba, Sutter, Plumas, Glenn, Colusa, Tehama, and Lassen (Butte County 2018c). Butte County is also part of the California Disaster and Civil Defense Master Mutual Aid Agreement and is able to share or receive resources and/or services with other jurisdictions within California in the event of a disaster or emergency situation.

Hazardous Materials Joint Powers Agreement

The Hazardous Materials Joint Powers Agreement (JPA) was initiated in December 1990 by Butte County and its five cities: Biggs, Chico, Gridley, Oroville, and the Town of Paradise. The JPA is governed by the fire chiefs of the six signatory agencies (including Butte County). The Chico Fire Department (CFD) provides 11 of the 40 authorized state certified specialist positions on the team. The nearest specialists are dispatched to any hazardous materials emergency, regardless of jurisdiction (Butte LAFCO 2018).

City of Chico 2030 General Plan

The City's 2030 General Plan includes a number of goals, policies and actions that address the use, handling, storage, and transport of hazardous materials and emergency response in the event of a fire or other city-wide emergency. Relevant goals, policies and actions are as follows.

Safety Element

The General Plan provides several policies and actions related to emergency preparedness, fire hazards, public safety, and emergency response planning.

Goal S-1-: Minimize the loss of life and property resulting from natural and human-caused hazards.

Policy S-1.1 (Emergency Preparedness) – Promote public safety from hazards that may cause death, injury, or property damage through emergency preparedness and awareness.

Action S-1.1.1 (Emergency Plan Maintenance) – Maintain, and update as needed, the City's Emergency Plan to guide emergency management in the City.

Action S-1.1.2 (Emergency Response Awareness) – Promote community preparedness for hazards and awareness of emergency notification methods.

Action S-1.1.3 (Incident Training) – Continue to participate in the Federal Emergency Management Agency's National Incident Management System program, which provides a standardized approach to emergency incidents.

Goal S-4: Continue to provide effective and efficient fire protection and prevention services to Chico area residents.

Policy S-4.1 (Fire Safety Staffing) – Maintain adequate fire suppression and prevention staffing levels.

Policy S-4.2 (Interagency Coordination) – Continue to maintain interagency relationships to maximize fire protection services and support programs that reduce fire hazards.

Policy S-4.3 (Fire Safety Standards and Programs) – Support the development and implementation of standards and programs to reduce fire hazards and review development and building applications for opportunities to ensure compliance with relevant codes.

Goal S-8: Reduce the potential for public exposure to hazardous materials or the accidental releases of toxic or hazardous substances.

Policy S-8.1 (Hazardous Materials Safety Coordination) – Support efforts to reduce the potential for accidental releases of toxic and hazardous substances.

Action S-8.1.1 (Planning for Hazardous Materials Safety) – Consult with the State Office of Emergency Services, the State Department of Toxic Substances Control, the California Highway Patrol, Butte County, and other relevant agencies regarding hazardous materials routing and incident response programs.

Policy S-8.2 (Reduce Toxic Materials Use) – Reduce the use of hazardous and toxic materials in City operations.

City of Chico Emergency Response

As part of the Butte County LHMP, a Hazard Identification Assessment was conducted for the City of Chico, indicating that drought and water shortage, earthquake and liquefaction, 100-, 200-, and 500-year floods, heavy rain and storms, and wildfire are the hazards with the most widespread potential impact. The City has established a number of agreements and procedures regarding response to emergency situations. This includes standard emergency response procedures in line with the CalOES Standard Emergency Management System program, which sets forth measures by which a jurisdiction should handle emergency disasters and mutual aid agreements for emergency assistance. These emergency response measures are included in the Butte County EOP, such established roles for command/management, communication protocols, and establishment of priorities for resource allocation (Butte County 2011). The City maintains numerous mutual aid agreements, including those with Butte County, CSU, Chico's University Police Department, and all other jurisdictions of the state during emergency situations (in accordance with the California Disaster and Civil Defense Master Mutual Aid Agreement) for fire, police, evacuation, and rescue, among other shared services. The General Plan identifies Highway 99 and State Route 32 as emergency routes for evacuation within the city.

Town of Paradise 1994 General Plan

The Town's 1994 General Plan includes a number of goals, objectives, and policies that address the use, handling, storage, and transport of hazardous materials and emergency response in the event of a fire or other town-wide emergency. Relevant goals, policies and actions are as follows.

Safety Element

The General Plan provides several goals, objectives, and policies related to emergency preparedness, fire hazards, public safety, and emergency response planning.

Goal SG-1: Assure that law enforcement and fire protection services are enhanced sufficiently to meet the demands of new and existing land use development

Goal SG-2: Provide adequate access, including emergency vehicle access and evacuation, to all new parcels and existing parcels where feasible.

Goal SG-3: Strive to protect the Paradise community from injury, loss of life and property damage resulting from catastrophes and hazardous conditions.

Goal SG-6: Improve the communication systems used during townwide emergencies, such as wildland fires, earthquakes or volcanic occurrences.

Objective SO-2: Maintain an overall fire insurance (ISO) rating of three or better, and an emergency fire response within five minutes for 90% of all emergency incidents within town limits.

Objective SO-3: Maintain the *Paradise Multihazard Disaster Plan* and conduct practice exercises throughout the life of the *General Plan*.

Policy SP-1 - New and unmitigated land use development shall not cause the police and fire protection services emergency response times to full below the service levels established by this plan.

Policy SP-2 - Through the development review process, adequate roads shall be required to be constructed and/or improved for emergency vehicle access, particularly in high wildland fire hazard areas.

Policy SP-3 - Future development should be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.

Policy SP-5 - The town should promote fire prevention by continuing to require brush removal and fuel load clearing as ongoing conditions of development approval and property maintenance.

Policy SP-8 - The town shall encourage Butte County to enforce standards conforming to the fire safety standards established by the state Board of Forestry for state responsibility areas within the Paradise secondary and tertiary planting areas, including:

- Road standards for fire equipment access
- Standards for signs identifying streets, roads and buildings
- Minimum private water supply reserves for emergency fire use
- Fuel breaks and greenbelts
- Land use policies and safety standards that take into account the recurrent nature of wildland fires
- Design standards establishing minimum road widths and clearances around structures
- Emergency preparedness protocol and procedures
- Maximum length of cul-de-sac roadways

Policy SP-13 - The town shall attempt to require all new development to comply with the airport height restriction policy, airport safety area(s) policies and land use guidelines for safety compatibility of the Paradise Skypark Airpon Land Use Plan.

Policy SP-14 - Detrimental and toxic discharge into natural waterways shall not be permitted.

<u>Hazardous Waste Management Element</u>

The General Plan provides several goals, objectives, and policies related to the use, handling, storage, and transport of hazardous materials.

Goal SG-7: Provide for the safe disposal and handling of toxic and hazardous waste.

Goal SG-8: Direct and promote hazardous waste management practices and technologies that will, in order of priority:

- reduce the use of hazardous substances and the generation of hazardous wastes at their source;
- recover and recycle the remaining waste for reuse to the extent feasible;
- treat those wastes not amenable to source reduction or recycling so that the environment and community health are not harmed by their ultimate release or disposal;
- ensure the safe transportation and disposal of treated hazardous waste residuals in repositories made secure from liquids that might create a toxic leachate and contaminate groundwater.

Goal SG-9: Reduce the need for additional hazardous waste disposal sites.

Objective SO-7 - Minimize the generation of hazardous wastes by seeking waste reduction alternatives which are safe, economically viable, and which represent the best technology available to the generator.

Policy SP-24 - The county, and each city, shall require that all local land use decisions on siting specified hazardous waste management facilities are consistent with the goals and policies and the siting criteria contained in the Hazardous Waste Management Plan.

C.10 Hydrology and Water Quality

This section identifies the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of hydrology and water quality in the EIR, Section 3.10.

C.10.1 Federal

Clean Water Act

The Federal Water Pollution Control Act of 1948 was the first major United States law to address water pollution. Upon sweeping amendments made in 1972, the law became commonly known as the Clean Water Act (CWA) (33 USC § 1251). The CWA established the structure for regulating discharge of pollutants into waters of the United States and regulating quality standards for surface waters.

Clean Water Act Section 404

CWA Section 404 (33 USC § 1344) enables regulation of the discharge of dredged or fill material into waters of the United States, including wetlands. The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is

less damaging to the aquatic environment or (2) the nation's waters would be significantly degraded. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any unavoidable impacts.

Clean Water Act Section 401

Under CWA Section 401 (33 USC § 1341), federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants, waives or denies CWA Section 401 certification. Granting certification, with or without conditions, allows the federal permit or license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Decisions made by states or tribes are based on the proposed project's compliance with USEPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board is the primary regulatory authority for CWA Section 401 requirements (additional details are provided in the following subsections).

National Pollutant Discharge Elimination System

The NPDES permit was established in the CWA to regulate municipal and industrial discharges to surface waters of the US. The ultimate objective of the CWA is zero pollutant discharge, but it recognizes the need for a system to regulate non-zero pollutant discharges until the zero-pollutant objective is feasible. CWA Section 402 established NPDES for this purpose. The NPDES regulates all pollutant discharges, particularly point source discharges, to the waters of the US.

Construction General Permit

The Construction General Permit (CGP; NPDES No. CAS000002, SWRCB Order No. 2009-0009-DWQ, adopted on November 16, 2010) became effective on February 14, 2011, and was amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ. The CGP authorizes the discharge of stormwater (and certain unauthorized non-stormwater discharges) from construction sites that disturb 1 acre or more of land, and from smaller sites that are part of a larger, common plan of development. For all projects subject to the CGP, the applicant is required to hire a qualified developer to develop and implement an effective Stormwater Pollution Prevention Plan (SWPPP). All project registration documents, including the SWPPP, are required to be uploaded into the State Water Resources Control Board's online Stormwater Multiple Application and Report Tracking System at least 30 days prior to construction.

Section 14 of the Rivers and Harbors Appropriation Act of 1899 – Section 408

Under Section 408 (33 USC § 408), any use or alteration of a Civil Works project is subject to the approval of United States Army Corps of Engineers (USACE). This requirement was established in Section 14 of the Rivers and Harbors Act of 1899. Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project.

C.10.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne) of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented by the State Water Resources Control Board at the state level and the Regional Water Quality Control Board (RWQCB) within the nine regions designated. The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The RWQCB is responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements or conditional waivers to waste discharge requirements. Waste discharge requirements are required by the RWQCB for activities that may affect water quality.

Clean Water Act Section 401 Water Quality Certification

A CWA Section 401 water quality certification is required for activities that require CWA Section 404 permits issued by USACE. As mentioned above, the State Water Resources Control Board has primary regulatory authority for CWA Section 401 requirements for protecting water resources. Enforcement of these requirements is also handled by the nine RWQCBs depending upon location of the potential impacts. The Central Valley RWQCB will be responsible for CWA Section 401 for this project.

Delegated Permit Authority

California has been delegated permit authority for the National Pollutant Discharge Elimination System (NPDES) permit program, including storm water permits for all areas except tribal lands. Issuance of CWA Section 404 permits remains the responsibility of USACE; however, the state actively uses its CWA Section 401 certification authority to safeguard that CWA Section 404 permits will comply with state water quality standards.

State Definition of Covered Waters

Under California state law, waters of the state refer to “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050). Therefore, water quality laws apply to both surface water and groundwater. After the United States Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, 531 U.S. 159 (2001), the Office of Chief Counsel of the State Water Resources Control Board released a legal memorandum confirming the state’s jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act (Porter-Cologne), discharges to wetlands and other waters of the state are subject to state regulation, and this includes isolated wetlands. In general, the State Water Resources Control Board regulates discharges to isolated waters in much the same way as they do for waters of the United States, but the regulation is via Porter-Cologne rather than the CWA.

Central Valley Flood Protection Board (California Code Regs. Title 23, Division 1)

The CVFPB exercises regulatory authority within its jurisdiction to maintain the integrity of the existing flood control system and designated floodways by issuing permits for encroachments. The

CVFPB has mapped designated floodways along more than 60 streams and rivers in the Central Valley. In addition, in the California Code of Regulations (CCR), Title 23, Table 8.1 shows several hundred stream reaches and waterways that are regulated streams. Projects that encroach in a designated floodway or regulated stream, or within 10 feet of the toe of a state-federal flood control structure (levee), require an encroachment permit and the submission of an associated application, including an environmental assessment questionnaire. A project must demonstrate that it will not reduce the channel flow capacity and that it will comply with channel and levee safety requirements. In cooperation with USACE, the CVFPB enforces standards for the construction, maintenance, and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the CVFPB includes the Central Valley, including all tributaries and distributaries of the Sacramento River, the San Joaquin River, and designated floodways (23 CCR § 2). The CVFPB has all the responsibilities and authorities necessary to oversee future modifications as approved by USACE pursuant to assurance agreements with USACE and the USACE Operation and Maintenance Manuals under 33 CFR 208.10 and 33 USC 408.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB adjudicates water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

C.10.3 Regional and Local

Regional Water Quality Control Board Basin Plan

The proposed Project is under the jurisdiction of the Central Valley RWQCB. The Central Valley RWQCB implements the *Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region* (May 2018) to regulate surface and groundwater quality in the region. The Basin Plan covers the entire Sacramento and San Joaquin River Basins. The Basin Plan lists beneficial uses and water quality objectives to protect those uses. The proposed Project is in the Sacramento River Basin and will follow the requirements laid out in that portion of the Basin Plan.

Municipal Separate Storm Sewer Systems

CWA Section 402(p) requires the issuance of NPDES permits for five categories of stormwater dischargers, including MS4s. EPA defines an MS4 as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying stormwater.” Pursuant to CWA Section 402, NPDES permits are required and issued for discharges from an MS4 serving a population of 100,000 or more for the Phase I MS4 Municipal Program and serving a population of 10,000 or more for the Phase II Small MS4 Program. As discussed, Butte County operates under Small MS4 stormwater permit.

Butte County Groundwater Conservation Ordinance (Chapter 33)

In November 1996, the voters in Butte County approved an ordinance to protect the groundwater resources in Butte County. One of the stated purposes of the ordinance was that the groundwater underlying Butte County is a significant water resource which must be reasonably and beneficially used and conserved for the benefit of the overlying land by avoiding extractions which harm the Butte Basin aquifer, causing exceedance of the safe yield or a condition of overdraft. The ordinance is now codified as Chapter 33 of the Butte County Code relating to groundwater conservation. The Proposed Project would not extract or use groundwater resources during construction and operations and would not conflict with the Butte County Groundwater Conservation Ordinance.

Butte County Integrated Water Resources Plan (IWRP)

The purpose of the IWRP is to document the stakeholder-centered process used by Butte County to develop water resources policy recommendations for consideration by the Butte County Board of Supervisors. The IWRP is part of the Butte County's proactive Integrated Water Resources Program.

Four-County Memorandum of Understanding

The counties of Butte, Colusa, Glenn, and Tehama share common surface water and groundwater resources. The purpose of the four county MOU is to establish the mutual understandings of the four counties with respect to their voluntary joint efforts toward regional coordination, collaboration and communication. Treated wastewater from the Proposed Project would be discharged into the Sacramento River in accordance with NPDES permitting requirements. The Proposed Project would also include a Frac-out Plan**,** which would outline all standard BMPs, monitoring, and contingency procedures in the event of frac-out during ground disturbing activities to protect groundwater resources. Therefore, the Proposed Project would not conflict with the Four-County MOU.

Butte County General Plan 2030 Water Resources Element

The Water Resources Element of the *Butte County General Plan 2030* describes the water resources within Butte County and contains goals and policies related to groundwater and surface water conservation and protection. It also provides additional guidance to Butte County related to decisions about water resources. The following goals and policies in the *Butte County General Plan 2030* are relevant to the hydrology and water quality analysis:

- **Goal W-1:** Maintain and enhance water quality.
- **Goal W-2:** Ensure an abundant and sustainable water supply to support all uses in Butte County.
- **Goal W-3:** Effectively manage groundwater resources to ensure a long-term water supply for Butte County.
- **Goal W-4:** Promote water conservation as an important part of a long-term and sustainable water supply.
- **Goal W-5:** Protect water quality through effective stormwater management.

- **Policy W-P1.4:** Where appropriate, new development shall be Low Impact Development (LID) that minimizes impervious area, minimizes runoff and pollution and incorporates best management practices.
- **Policy W-P1.8:** The County supports conversion from septic systems to public sewer service, where feasible.
- **Policy W-P2.1:** The County supports solutions to ensure the sustainability of community water supplies.
- **Policy W-P2.2:** The County may continue the Four-County Memorandum of Understanding (MOU) with Colusa, Glenn, Tehama and Sutter Counties, and may support the development of the Northern Sacramento Valley Integrated Regional Water Management Plan.
- **Policy W-P2.6:** The County supports water development projects that are needed to supply local demands.
- **Policy W-P2.7:** The Butte County Water Commission and the Department of Water Resource Conservation shall continue to be utilized as important partners in the water resource planning process.
- **Policy W-P3.3:** The County shall protect groundwater recharge and groundwater quality when considering new development projects.
- **Policy W-P4.4:** Opportunities to recover and utilize wastewater for beneficial purposes shall be promoted and encouraged.
- **Policy W-P4.6**: New development projects shall adopt best management practices for water use efficiency and demonstrate specific water conservation measures.
- **Policy W-P4.7**: County facilities shall adopt water conservation measures and when appropriate retrofit existing facilities to improve water conservation.
- **Policy W-P5.2**: New development projects shall identify and adequately mitigate their water quality impacts from stormwater runoff.
- **Policy W-P5.4:** Temporary facilities shall be installed as necessary during construction activities in order to adequately treat stormwater runoff from construction sites.

Town of Paradise 1994 General Plan

Chapter 6.6 of the *Town of Paradise 1994 General Plan*, Open Space/Conservation/Energy Element addresses the goals, objectives, policies, and implementation measures related to water resources in the Town. It addressed open space for preservation of natural resources, including rivers, streams and watersheds; and open space for public health and safety, including floodplains, watersheds, and the protection of water quality and reservoirs. The following policies in the *Town of Paradise 1994 General Plan* are relevant to the hydrology and water quality analysis:

- **Policy SP-17:** Development projects shall be designed to minimize soil erosion and shall be required to comply with all Town of Paradise adopted soil erosion standards maintained by the Town Engineering Office.
- **Policy OCEP-22**: Surface and groundwater quality shall be improved and preserved, and the Paradise area watershed shall be protected.
- **Policy OCEP-23:** Stream courses identified and designated as significantly important shall be carefully protected from the impacts of land use development, both within and outside the Town limits.
- **Policy OCEP-25:** Natural riparian vegetation along creeks shall be protected.

Town of Paradise Stormwater Ordinance

The Town of Paradise adopted an ordinance relating to Stormwater Quality Management for the purpose of protecting and promoting the health, safety and general welfare of the citizens of the Town. The purpose of the ordinance is also to protect and enhance the water quality, beneficial uses, habitats and ecosystems in receiving waters by reducing pollution and pollutant loads discharged in urban runoff from areas within the town's jurisdiction, and by prohibiting non-stormwater discharges to municipal storm drain systems.

Chico 2030 General Plan Open Space and Environment Element

The Chico 2030 General Plan Open Space and Environment Element provides context and sets goals and policies for the protection of water resources. The following goals and policies in the *Chico 2030 General Plan* are relevant to the hydrology and water quality analysis:

- **Goal OS-3:** Conserve water resources and improve water quality.
- **Policy OS-3.1, Surface Water Resources**: Protect and improve the quality of surface water.
- **Policy OS-3.2, Protect Groundwater**: Protect groundwater and aquifer recharge areas to maintain groundwater supply and quality.
- **Policy OS-3.3, Water Conservation and Reclamation**: Encourage water conservation and the reuse of water.

Chico Urban Area Nitrate Compliance Plan

The *Chico Urban Area Nitrate Compliance Plan* (Butte County 2000) was prepared in response to the contamination of groundwater in the Chico Urban Area by nitrate, a form of nitrogen, and the subsequent issuance of Prohibition Order No. 90-126 adopted by the Central Valley RWQCB on April 27, 1990. The discharge from individual septic systems was the primary source of groundwater nitrate contamination that exceeded drinking water standards set by the USEPA and the SWRCB. Nitrate levels that exceed the standards pose a threat to the public health and are subject to regulation. The *Chico Urban Area Nitrate Compliance Plan* supersedes the Nitrate Action Plan, which was adopted by the Butte County Board of Supervisors and Chico City Council in 1985.

C.11 Land Use and Planning

This section identifies the applicable federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of land use and planning in the EIR, Section 3.11.

C.11.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding land use and planning are relevant to the Proposed Project.

C.11.2 State

California State Planning and Zoning Law (California Government Code § 65000 to 66037)

The California State Planning and Zoning Law delegates most of the state's local land use and development decisions to the respective city or county, and describes the laws that pertain to the land use regulations set by the local government's general plan requirements, specific plans, and zoning.

C.11.3 Regional and Local

Town of Paradise "Dig Once" Policy

The Town of Paradise adopted the "Dig Once" Policy in 2019 to rebuild the Town's infrastructure after the 2018 Camp Fire. Per this policy, the Town strives to place all utility lines underground and direct utility agencies and companies to coordinate with each other when constructing and maintaining their infrastructure. This coordination would lessen the impact on the Town's roadways. Full relocation of utilities is estimated to take 5 years to complete, and work has already begun in Paradise. The Policy includes the following pertinent objectives related to land use and planning:

- Minimize disruption of the town's public infrastructure, such as paved roads and sidewalks.
- Ensure efficient, non-duplicative placement of infrastructure in the town's right-of-way (ROW).
- Protect and control access to public ROW and ensure that use of public ROW aligns with the vision for a resilient and modern Town of Paradise.

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan*, adopted in 1994 and amended through 2008, provides direction on land use decision-making for the next 15 years. The General Plan process offers the Town the opportunity to plan proactively rather than reactively for future development. The General Plan includes the following pertinent goals and policies related to land use and planning:

- **Implementation Measure LUI-7:** Continue to implement the Master Storm Drain Study and Facilities Plan
- **Policy ESP-6:** School sites should have on a timely basis access to all utilities and services, including sewer, water, gas, electricity, and drainage.

- **Objective LUO-10:** Consider the construction and installation of a formal sewer system to service the commercial and industrial areas in the town within the fifteen-year planning period.
- **Policy LUP-16:** The Town shall attempt to implement all feasible steps to assure that sewer service is made available to the commercial area of the Town as expeditiously as possible
- **Goal LUG-2:** Accommodate a rate of growth consistent with the physical and infrastructural limitations in Paradise.
- **Objective LUO-2:** Stimulate and accommodate commercial/industrial growth while maintaining the current quality of life.
- **Objective LUO-4:** Carefully manage and control population growth, while stimulating local economic growth.
- **Goal LUG-32:** Assure that all land uses in the town conform to the goals and policies of the *General Plan*.

Butte County General Plan 2030

The *Butte County General Plan 2030*, adopted in 2010 and updated in 2012, provides Butte County direction on how it will fulfill its community vision and manage its future growth. The General Plan addresses all aspects of Butte County's development, including land use, circulation, public facilities, and public safety. The General Plan includes the following pertinent goals and policies related to land use and planning:

- **Goal LU-1:** Continue to uphold and respect the planning principles on which the County's land use map is based.
- **Goal LU-3:** Create communities where there is a sense of well-being where families and neighbors can socialize, interact, and play.
- **Goal LU-5:** Provide adequate land for and promote the development of attractive commercial and industrial areas and uses that provide goods, services, and jobs.
- **Goal LU-9:** Coordinate land development with provision of new services and infrastructure.

Chico 2030 General Plan

The *Chico 2030 General Plan*, adopted in 2011 and amended in 2017, provides the City of Chico a comprehensive, long-range, and internally consistent policy framework for the growth and preservation of Chico. The General Plan consists of guiding principles, goals, policies, and actions to guide the physical development of Chico. The General Plan includes the following pertinent goals and policies related to land use and planning:

- **Goal LU-1:** Reinforce the City's compact urban form, establish urban growth limits, and manage where and how growth and conservation will occur.

- **Goal LU-2:** Maintain a land use plan that provides a mix and distribution of uses that meet the identified needs of the community.

C.12 Noise and Groundborne Vibration

This section summarizes the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of noise and groundborne vibration in the EIR, Section 3.12.

C.12.1 Federal

Noise Control Act of 1972

The Noise Control Act of 1972 (42 USC 4901 to 4918) was the first comprehensive statement of national noise policy. The Noise Control Act declared "it is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare." Although the Noise Control Act, as a funded program, was ultimately abandoned at the federal level, it served as the catalyst for comprehensive noise studies and the generation of noise assessment and mitigation policies, regulations, ordinances, standards, and guidance for many states, counties, and municipal governments. For example, the noise elements of general plan documents and local noise ordinances considered in this analysis were largely created in response to the passage of the Noise Control Act.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration established standards for occupational noise exposure under 29 CFR 1910.95. These regulations protect employees from excessive noise exposure and require a Hearing Conservation Program when routine exposure to high noise levels would occur. The regulations identify permissible daily noise exposures and stipulate that personal protection against the effects of noise exposure must be provided if those levels are exceeded.

Federal Transit Administration

The Federal Transit Administration (FTA) developed the *Transit Noise and Vibration Impact Assessment Manual* (Noise Manual) in September 2018. The Noise Manual provides technical guidance for conducting noise and vibration analyses for transit projects. While these standards and impact assessment methodologies are not directly applicable to the Proposed Project, they are routinely used as guidelines for projects in state and local jurisdictions. The Noise Manual provides vibration criteria for structural damage by building/structural category as shown in Table C.12-1.

Table C.12-1. Groundborne Vibration Structural Damage Criteria

Building Category	PPV (in/sec)	L_V (VdB)
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018

Notes: PPV = peak particle velocity, in/sec = inch per second, L_V = vibration velocity level, VdB = vibration decibel

The Noise Manual also includes criteria for acceptable levels of groundborne vibration by vibration-sensitive land uses as shown in Table C.12-2.

Table C.12-2. Groundborne Vibration Human Annoyance Criteria

Land Use Category	Maximum L_V (VdB)	Description
Workshop	90	Vibration is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration can be felt. Appropriate for offices and similar areas not as sensitive to vibration
Residential – daytime	78	Vibration is barely felt. Adequate for land uses that are sensitive to vibration.
Residential – nighttime	72	Vibration is not felt, but groundborne noise may be audible inside quiet rooms.

Source: FTA 2018

Notes: L_V = vibration velocity level, VdB = vibration decibel

C.12.2 State

California Noise Control Act

The California Noise Control Act, enacted in 1973 (Health and Safety Code 46010 et seq.), finds that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act declares that the State of California has a responsibility to protect the health and welfare of its citizens through the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians that is free from noise which jeopardizes their health or welfare. The act requires the Office of Noise Control in the Department of Health Services to aid local communities in developing local noise control programs. The Office of Noise Control also works with the Office of Planning and Research to provide guidance for preparing required noise elements in city and county general plans, pursuant to Government Code Section 65302(f).

Office of Planning and Research

The *State of California General Plan 2017 Guidelines* published by the Office of Planning and Research provides a basis for local programs to control and abate environmental noise and to protect residents from excessive exposure (Office of Planning and Research 2017). These guidelines include a noise level/land use compatibility chart that categorizes various outdoor L_{dn} ranges into up to four compatibility categories: normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable, depending on land use. These normally and conditionally acceptable L_{dn} ranges are intended to indicate that local conditions (existing noise levels and community attitudes toward dominant noise sources) should be considered in evaluating land use compatibility at specific locations. These guidelines are used by many agencies, environmental planners, and acoustical specialists as a starting point to evaluate the potential for noise impacts on and by a project. The guidelines are also used to evaluate methods for achieving noise compatibility with respect to nearby existing uses.

However, it is important to note that the guidance does not take local conditions into account, including a particular community's sensitivity to noise, noise reduction goals, or assessment of the relative importance of noise pollution. As a result, noise standards developed by local jurisdictions typically differ somewhat from the Office of Planning and Research's guidance.

C.12.3 Regional and Local

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan* includes the following noise-related policies:

- **Policy NP-1:** Where proposed nonresidential land uses are likely to produce noise levels exceeding the performance standards of Table 6.4-1 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part NP-7 of the environmental review process so that noise mitigation may be included in the project design.
- **Policy NP-4:** Where noise mitigation measures are required to achieve the standards of Tables 6.4-1 and 6.4-2, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers should be considered a supplemental means of achieving the noise standards after all practical design-related noise mitigation measures have been integrated into the project.
- **Policy NP-5:** Acoustical analyses should be prepared in accordance with the requirements of Table 6.4-3.
- **Policy NP-10:** The town shall assure that new development situated near existing residential care and retirement facilities is consistent with the goals, objectives and policies of the Noise Element.

Butte County General Plan 2030

The *Butte County General Plan 2030* includes the following policies related to noise:

- **Policy HS-P1.6:** Applicants proposing a new noise-producing development project near existing or planned noise-sensitive uses shall provide a noise analysis prepared by an acoustical specialist with recommendations for design mitigation.
- **Policy HS-P1.7:** Applicants for discretionary permits shall be required to limit noise-generating construction activities located within 1,000 feet of residential uses to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays and non-holidays.
- **Policy HS-P1.8:** Noise from generators shall be regulated near existing and future residential uses.
- **Policy HS-P1.9:** The following standard construction noise control measures shall be required at construction sites in order to minimize construction noise impacts:
    - Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Utilize quiet air compressors and other stationary noise-generating equipment where appropriate technology exists and is feasible.

Chico 2030 General Plan

The *Chico 2030 General Plan* includes the following policies related to noise:

- **Policy N-1.3, Acoustical Analysis:** Where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards, require an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-3.

Noise Ordinances

The Town of Paradise, City of Chico, and Butte County have established policies and standards that aim to minimize the effects of noise on people through prescriptive construction standards, zoning restrictions, hours of operation, and suppression techniques. Table C.12-3 summarizes the applicable noise standards and policies.

Table C.12-3. Noise Ordinance Specifications

Jurisdiction	Noise Criteria
Town of Paradise	The operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work is prohibited between the hours of 7 p.m. and 6 a.m. on weekdays or at any time on Sundays or holidays.
City of Chico	Construction activities occurring between the hours of 10 a.m. and 6 p.m. on Sundays and holidays, and 7 a.m. and 9 p.m. on other days will be subject to one of the following limits: • No individual device or piece of equipment may produce a noise level exceeding 83 dBA at a distance of 25 feet from the source. • The noise level at any point outside of the property plane of the project may not exceed 86 dBA. The generation of noise in exceedance of 70 dBA at the property line of residential or commercial property is prohibited.
Butte County	Noise sources associated with construction activities occurring within 1,000 feet of residential uses is prohibited between the following hours: • Sunset to sunrise on weekdays and non-holidays; • Friday commencing at 6 p.m. through and including 8 a.m. on Saturday, as well as not before 8 a.m. on holidays; • Saturday commencing at 6 p.m. through and including 10 a.m. on Sunday; and • Sunday after the hour of 6 p.m.

Source: Town of Paradise 2021, City of Chico 2021, and Butte County 2021

C.13 Population and Housing

This section identifies the applicable federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of population and housing conditions in the EIR, Section 3.13.

C.13.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding population and housing are relevant to the Proposed Project.

C.13.2 State

California Relocation Act (California Government Code § 7260 et seq.)

The California Relocation Act requires state and local governments to provide relocation assistance and benefits to persons displaced as a result of projects undertaken by state or local governments that do not involve federal funds.

California Department of Housing and Community Development Home Investment Partnerships Program (HOME)

The California Department of Housing and Community Development Home Investment Partnerships Program (HOME) was created to assist cities, counties, developers, and nonprofit Community Housing Development Organizations (CHDOs) to create and retain affordable housing. It provides grants to cities and counties and low-interest loans to developers. Eligible activities to receive the grant must benefit low-income renters and owners.

C.13.3 Regional and Local

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan* provides direction on land use decision-making for the next 15 years. The General Plan process offers the Town the opportunity to plan proactively rather than reactively to future development. The General Plan includes the following pertinent goals and policies related to population and housing:

- **Goal LUG-20:** Develop a strong local economy, recognizing that this is a key element in solving service providers' financial difficulties.
- **Goal LUG-24:** Encourage a sense of community in Paradise.
- **Goal HG-1:** Encourage and facilitate the production of all housing types, from affordable workhorse housing to executive homes, to meet the Town's share of regional housing needs consistent with the overall goals, objectives, and policies of the Paradise General Plan.
- **Goal HG-2:** Improve and preserve safe, decent housing and neighborhoods for all Paradise residents.

Butte County General Plan 2030

The *Butte County General Plan 2030* provides Butte County direction on how it will fulfill its community vision and manage its future growth. The General Plan addresses all aspects of Butte County's development which includes land use, circulation, public facilities, and public safety. The General Plan includes the following pertinent goals and policies related to population and housing:

- **Policy H-P1.2:** Focus development in the unincorporated areas of the spheres of influence of the cities to accommodate the County's housing allocation.
- **Policy H-P5.1:** Continue to promote housing opportunities for all persons regardless of age, race, religion, gender, marital status, national origin, disability, or other barriers that prevent choice in housing.
- **Goal ED-1:** Improve the local economy by diversifying the economy, reducing the unemployment rate, increasing business revenues to the County, and increasing wages.
- **Policy ED-P1.1:** The County's priority for future growth is creating sustainable jobs and providing a living wage to families to reduce poverty.

Chico 2030 General Plan

The *Chico 2030 General Plan* provides the City of Chico a comprehensive, long-range, and internally consistent policy framework for the growth and preservation of Chico. The General Plan consists of guiding principles, goals, policies, and actions in order to guide the physical development of Chico. The General Plan includes the following pertinent goals and policies related to population and housing:

- **Goal ED-1:** Maintain and implement an Economic Development Strategy to enhance Chico's long-term prosperity.
- **Goal SUS-1:** Balance the environment, economy and social equity, as defined in the General Plan, to create a sustainable Chico.
- **Goal H1:** Increase equal housing opportunities.
- **Goal H2:** Provide housing that is affordable to low incomes.

C.14 Public Services

C.14.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding public services are relevant to the Proposed Project.

C.14.2 State

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Fighting Equipment," the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Uniform Fire Code

The Uniform Fire Code (California Code of Regulations, Title 24, Part 9) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Uniform Fire Code also contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. Regulations address building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise buildings, childcare facility standards, and fire suppression training, among other topics.

C.14.3 Regional and Local

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan* provides direction on land use decision-making for the next 15 years. The General Plan process offers the Town the opportunity to plan proactively rather than reactively for future development. The General Plan includes the following pertinent goals and policies related to public services:

- **Goal LUG-4:** Provide adequate public services and infrastructure to meet future need.
- **Goal LUG-6**: Provide cost-effective public services in the community.
- **Goal LUG-8**: Assure that law enforcement and fire protection services are enhanced sufficiently to meet the demands of new and existing land use development.
- **Objective LUO-6**: Maintain a law enforcement response time for emergency police calls of no more than five minutes.
- **Objective LUO-7**: Maintain an overall fire insurance (ISO) rating of three or better, and an emergency fire response within five minutes for 90 percent of all emergency incidents within the Town limits.
- **Policy LUP-12**: The character of future development should be compatible with the town's service delivery abilities and shall not result in service level declines.
- **Policy LUP-13**: The town shall attempt to assure that the rate and character of growth is commensurate with, or does not exceed the current levels of public services, and shall attempt to assure that municipal services can be provided to areas planned for annexation and development.
- **Policy LUP-14**: Growth and land use development should be linked to the availability of public services and facilities, and to the degree of overall infrastructure and environmental constraints affecting property in the town.

- **Policy LUP-20**: New land use development shall not cause the levels of police and fire protection to fall below the service levels established by this plan.

Butte County General Plan 2030

The *Butte County General Plan 2030* provides Butte County direction on how it will fulfill its community vision and manage its future growth. The General Plan addresses all aspects of Butte County's development which includes land use, circulation, public facilities, and public safety. The General Plan includes the following pertinent goals and policies related to public services:

- **Goal PUB-2**: Provide adequate fire protection and emergency medical response services to serve existing and new development.
- **Goal PUB-3**: Maintain a safe environment in Butte County through the enforcement of law.
- **Goal PUB-4**: Support high quality schools and educational facilities for all Butte County residents.
- **Policy PUB-P4.1**: Review of development proposals shall be coordinated with school districts to determine and plan for capacity issues over time.
- **Policy PUB-P4.2**: Review of development proposals shall be coordinated with school districts regarding the location and design of new schools.
- **Policy PUB-P4.4**: Infrastructure development projects shall be coordinated to minimize the cost to the public of building needed schools.
- **Policy PUB-P4.5**: Information on projected population growth and development patterns shall be provided to school districts to facilitate adequate school facilities.
- **Policy PUB-P4.7**: New development projects shall be approved only if the County and the applicable School District finds that existing or planned schools will be adequate to serve it.
- **Goal PUB-5**: Provide library services to meet the informational and social needs of each community.

Chico 2030 General Plan

The *Chico 2030 General Plan* provides the City of Chico a comprehensive, long-range, and internally consistent policy framework for the growth and preservation of Chico. The General Plan consists of guiding principles, goals, policies, and actions in order to guide the City of Chico on the physical development of Chico. The General Plan includes the following pertinent goals and policies related to utilities and service systems:

- **Goal S-4**: Continue to provide effective and efficient fire protection and prevention services to Chico area residents.
- **Policy S-4.1, Fire Safety Staffing**: Maintain adequate fire suppression and prevention staffing levels.

- **Policy S-4.2, Interagency Coordination**: Continue to maintain interagency relationships to maximize fire protection services and support programs that reduce fire hazards.
- **Goal S-5**: Provide a safe, secure environment with responsive police services for the community.
- **Policy S-5.1, Police Services**: Continue to provide fundamental police services based upon rapid response to emergencies and response, control and intervention in conduct that threatens life and property.
- **Policy S-5.4, Collaboration and Coordination**: Maintain strong relationships with local and state law enforcement agencies and participate in joint disaster preparedness planning.
- **Goal PPFS-3**: Support efforts by Chico Unified School District, California State University Chico, Butte College and private educational institutions to maintain and improve educational facilities and services in the City.
- **Policy PPFS-3.1, CUSD Coordination**: Support Chico Unified School District's efforts to provide school sites and facilities that meet the educational needs of the community.

C.15 Recreation

This section identifies the applicable federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of recreation in the EIR, Section 3.15.

C.15.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding recreation are relevant to the Proposed Project.

C.15.2 State

California Department of Parks and Recreation Rules and Regulations (1999)

The CDPR has established rules and regulations to protect park areas for the enjoyment of future generations and to keep park visitors safe. Topics covered in the rules and regulations include protection of natural scenery, plants and animal life; loaded firearms and hunting; dead and down wood; fires; animals; noise (engine driven electric generators); all vehicle travel; campsite use; refuse; smoking; drones; and cleanup responsibilities.

C.15.3 Regional and Local

Bidwell Park Master Management Plan Update (2008)

Bidwell Park is approximately 3,670 acres and is one of the largest municipal parks in the United States. The Bidwell Park Master Management Plan Update was adopted by the City of Chico in 2008. The plan includes extensive information on the resources present in Bidwell Park and outlines updates and expansions of the existing management goals and objectives. The plan also contains implementing strategies and guidelines for translating the goals and objectives into actions guiding the everyday operation of the Park (City of Chico Park Division 2008).

Vegetative Fuels Management Plan (2020)

The City of Chico is proposing to implement a comprehensive program of work referred to as the Vegetative Fuels Management Plan. The plan is intended to protect lives and property and enhance the natural resources in Chico and covers all land owned and managed by the City of Chico, including parks, greenways, and open spaces. A key component of the Vegetative Fuels Management Plan is the identification of high fire hazard areas in greatest need of treatment, description of how fires can be managed, and development of policies and actions focused on reducing harmful impacts of wildfire in the community (City of Chico Parks Division 2020).

Butte County Bikeway Master Plan

The 2011 Butte County Bikeway Master Plan (Butte County 2011) provides updates to the Countywide Bikeway Master Plan originally adopted in 1998. The 2011 Bikeway Master Plan focuses on connectivity in all the unincorporated areas of Butte County, as well as the cities of Biggs, Chico, Gridley, and Oroville, and the Town of Paradise. The plan is intended to address safety and connectivity between the local communities and within rural areas of Butte County. The plan also serves as a tool to identify Butte County's proposed bicycle network within the *Butte County General Plan 2030* Circulation Element and proposed local development reviews that may involve existing or proposed portions of the network. The Bikeway Master Plan Update will also assist Butte County in its efforts to safely and equitably provide contiguous bicycle facilities in the future and implement roadway projects that are bicycle friendly throughout the unincorporated areas.

Town of Paradise 1994 General Plan

The Open Space, Conservation and Energy Elements of the *Town of Paradise 1994 General Plan* addresses the preservation of open space land for outdoor recreation, including areas of outstanding scenic, historic and cultural value; areas suited for recreation purposes; and areas which link major recreation and open space areas. No recreational goals or policies in the *Town of Paradise 1994 General Plan* are relevant to the Proposed Project.

Butte County General Plan 2030

The Conservation and Open Space Element of the *Butte County General Plan 2030* addresses the conservation, development, and utilization of natural resources in Butte County. The Public Facilities and Services Element addresses public services, infrastructure and facilities provided by Butte County, including parks and recreational facilities. The General Plan also presents information and policy guidance to ensure adequate provision and maintenance of Butte County recreational facilities, parks, and services. Policies applicable to the Proposed Project related to parks and recreation in Butte County are as follows:

- **Policy PUB-P6.1:** Review of development proposals shall be coordinated with public agencies in order to designate sites for new parks and recreation facilities.
- **Policy PUB-P8.7:** New development projects should incorporate multi-use trails and connections to existing trail networks.

Chico 2030 General Plan

The Parks, Public Facilities, and Services element of the *Chico 2030 General Plan* addresses the community's needs and interests for its parks of all sizes as well as its public facilities and services. There are no recreational goals or policies in the *Chico 2030 General Plan* that are relevant to the Proposed Project.

C.16 Transportation

This section identifies the applicable federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of transportation in the EIR, Section 3.16.

C.16.1 Federal

No identified federal laws, regulations, orders, policies, or plans regarding transportation are relevant to the Proposed Project.

C.16.2 State

SB 743 (Steinberg 2013), which added PRC § 21099 to CEQA, proposed a change in how transportation impacts are analyzed in transit priority areas to better align local environmental review with statewide objectives. These alignment considerations include reductions to GHG emissions, encouragement of infill mixed-use development in designated priority development areas (PDAs), reductions of regional sprawl land development, and reductions in mobile source VMT. In addition, SB 743 supports and complements the following State Bills and Executive Orders relevant to this project:

- AB 32 requires statewide GHG reductions to be below 1990 levels by 2035 according to SB 375 and ARB established GHG reduction targets for Metropolitan Planning Organizations (MPOs) to achieve in Regional Transportation Plans and Sustainable Community Strategies (RTP/SCS), including targets for the largest MPOs ranging from 13 percent to 16 percent reductions
- SB 391 requires that the California Transportation Plan (CTP) supports an 80 percent reduction in GHGs below 1990 levels by 2050
- Executive Order B-30-15 sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030
- Executive Order S-3-05 sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050
- Executive Order B-16-12 specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050, specifically for transportation.

In November 2017, OPR released the final proposed update to CEQA Guidelines consistent with SB 743, recommending VMT, both within and outside of transit priority areas, as the most appropriate metric of transportation impact. This metric will align with local environmental review under CEQA and with California's long-term GHG emissions reduction goals.

C.16.3 Regional and Local

Butte County 2020 Regional Transportation Plan/Sustainable Communities Strategy

The *Butte County 2020 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) specifies the policies, projects, and programs necessary over a 20-year period between 2020 and 2040 to maintain, manage, and improve the region's transportation system. BCAG is the federally designated Metropolitan Planning Organization and the state-designated Regional Transportation Planning Agency for Butte County. The RTP/SCS provides a foundation for transportation decisions by local, regional, and state officials. This foundation is based on a vision of an efficient and environmentally sound multi-modal system.

The RTP/SCS is the region's long-range plan to meet the requirements of California's Sustainable Communities and Climate Change Act of 2008 (SB 375), which calls on regions throughout California to develop a Sustainable Communities Strategy that demonstrates the integration of land use, housing, and transportation for the purpose of reducing GHG emissions from passenger vehicles. The RTP/SCS is intended to be consistent with the California Transportation Plan developed by Caltrans.

2011 Butte County Bicycle Plan

The *2011 Butte County Bicycle Plan* (Butte County 2011) provides Butte County's vision for making bicycling an integral part of the transportation system with its unincorporated limits. The plan includes emphasis on regional connectivity between the local cities of Biggs, Chico, Gridley, Oroville and the Town of Paradise, in addition to the various rural communities and recreational opportunities that exist within Butte County. The plan serves as a tool to identify Butte County's proposed bicycle network within the Butte County General Plan Circulation Element and proposed local development reviews that may involve existing or proposed portions of the bicycle network. The plan will also assist Butte County in its efforts to safely and equitably provide contiguous bicycle facilities in the future, as well as implement roadway projects that are bicycle friendly throughout the unincorporated areas.

Town of Paradise 1994 General Plan

Based on the *Town of Paradise 1994 General Plan*, the following are the goals and policies:

- **Goal CG-2**: Provide safe, efficient and effective traffic flow, both within Paradise and between Paradise and its environs.
- **Goal CG-4**: Provide adequate access, including access for emergency vehicles and evacuation, to all new parcels and to existing parcels when feasible.
- **Policy CP-1**: The Town shall strive to maintain a level of service (LOS) "D" or better as the standard for new and existing roadways in the Paradise Planning Area. LOS "D" or better shall be maintained on all local streets within the town limits, and LOS "C" or better shall be maintained whenever feasible.
- **Policy CP-8**: The town should continue to designate and regulate truck routes in order to protect residential areas from unwanted noise and traffic.

- **Policy CP-13**: Automobile dependency within Paradise should be reduced for local residents and visitors by implementing congestion management and trip reduction plan programs that decrease the number of vehicle miles travelled which, in tum, reduces air pollution and congestion and saves energy.

- **Policy CP-15**: Expand public transportation services within Paradise and between Paradise and major employment centers as feasible, based on service demand and financial constraints.

Butte County General Plan 2030

The *Butte County General Plan 2030* has the following goals:

- **Policy CIR-P1.3**: Transportation planning within the municipalities' spheres of influence shall consider the municipalities' land use and circulation plans, as appropriate, and shall be consistent with Policy CIR-P6.1 pertaining to County Levels of Service.

- **Policy CIR-P2.1**: Carpooling shall be encouraged by providing additional carpool pickup and park-and-ride locations near transit centers and at freeway interchanges.

- **Policy CIR-P2.2**: Trip reduction among County employees shall be encouraged. Specific measures to encourage trip reduction could include providing subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.

- **Policy CIR-P2.4**: Employers shall be encouraged to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.

- **Policy CIR-P3.10**: Trees located along urban streets shall be protected. If maintenance or upgrading requires tree removal, the trees shall be replaced.

- **Policy CIR-P6.1**: The level of service for County-maintained roads within the unincorporated areas of the county but outside municipalities' sphere of influences (SOIs) shall be level of service (LOS) C or better during the PM peak hour. Within a municipality's SOI, the level of service shall meet the municipality's level of service policy.

- **Policy CIR-P6.3**: Project approval shall be conditioned on the provision of roadway improvements to meet the level of service standards in policies CIR-P6.1 and CIR-P6.2. Exceptions to satisfying the level of service standards and/or constructing transportation facilities to the County's design standards may be allowed on a case-by-case basis where reducing level of service or not constructing a transportation facility to County standards would result in a clear public benefit. Such circumstances may include, but are not limited to the following:

    - Conserving agricultural or open space land.

    - Enhancing the agricultural economy.

  - Protecting scenic roadways or highways.
  - Preserving downtown community environments.

- **Policy CIR-P6.5**: Street improvements within the sphere of influence of an incorporated municipality shall conform to the street standards of that municipality.
- **Policy CIR-P7.2**: Existing road capacity available within the County road system shall be used to serve future development unless construction of a new road will enhance circulation opportunities.

Chico 2030 General Plan

Based on the *Chico 2030 General Plan*, the following are the policies:

- **Policy CIRC-1.4, Level of Service Standards**: Maintain LOS D or better for roadways and intersections at the peak PM period, except as specified below:
  - LOS E is acceptable for City streets and intersections under the following circumstances: Downtown streets, arterials served by scheduled transit, and arterials not served by scheduled transit, if bicycle and pedestrian facilities are provided within or adjacent to the roadway.
  - Utilize Caltrans LOS standards for Caltrans' facilities.
  - There are no LOS standards for private roads.
  - If improvements necessary to achieve the LOS standard results in impacts to a unique historical resource, a highly sensitive environmental area, requires infeasible right-of-way acquisition, or some other unusual physical constraint exists.
  - If the intersection is located within a corridor that utilizes coordinated signal timing, in which case, the operation of the corridor as a whole should be considered.
- **Policy CIRC-1.5, Vehicle Miles Travelled Analysis**: Consistent with State law, implement VMT assessments as part of the environmental review process under CEQA.
- **Policy CIRC-1.7, Goods Movement**: Provide clear routes for goods delivery
- **Policy CIRC-2.2, Circulation Connectivity and Efficiency**: Provide greater street connectivity and efficiency for all transportation modes.
- **Policy CIRC-9.1, Reduce Peak-Hour Trips**: Strive to reduce single occupant vehicle trips through the use of travel demand management strategies.
- **Policy CIRC-9.3, Emphasize Trip Reduction**: Emphasize automotive trip reduction in the design, review, and approval of public and private development.

C.17 Tribal Cultural Resources

This section identifies the federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of tribal cultural resources in the EIR, Section 3.17.

C.17.1 Federal

Indian Trust Assets

ITAs are legal interests in property held in trust by the United States for Native American tribes or individuals. Examples of potential ITAs are lands, minerals, fishing rights, and water rights. Management of ITAs is based on the following orders, agreements, and regulations:

- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments 65 FR 67249
- Memorandum on Government-to-Government Relations With Native American Tribal Governments (FR Volume 59, Number 85, signed April 29, 1994)
- Secretarial Order No. 3175 – Departmental Responsibilities for Indian Trust Resources
- Secretarial Order No. 3206 – American Indian Tribal Rights, Federal -Tribal Trust Responsibilities, and the federal Endangered Species Act (ESA)
- Secretarial Order No. 3215 – Principles for the Discharge of the Secretary's Trust Responsibility
- Secretarial Order No. 3342 – Identifying Opportunities for Cooperative and Collaborative Partnerships with Federally Recognized Indian Tribes in the Management of Federal Lands and Resources
- Secretarial Order No. 3335 – Reaffirmation of the Federal Trust Responsibility to Federally Recognized Tribes and Individual Indian Beneficiaries

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act of 1978 (AIRFA; 42 U.S.C. § 1996) protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Historic Sites Act of 1935

The Historic Sites Act of 1935 (54 U.S.C. 320101–320106, formerly 16 U.S.C. 461–467) declares "…that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance…," asserting historic preservation as a government duty under jurisdiction of the United States Secretary of the Interior.

National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. For purposes of the discussion regarding tribal cultural resources, it is important to note that historic properties include properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 C.F.R. § 800.16[l]).[1]

Traditional Cultural Properties (TCP) and Traditional Cultural Landscapes (TCL)

TCPs are properties associated with cultural practices or beliefs of a living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity of a community. TCPs can refer to properties of importance to any community, including Indigenous communities. The appropriate terminology for sites of importance to Indian tribes is 'historic property of religious and cultural significance to an Indian tribe [and Native Hawaiian organization'" (ACHP 2008:19; ACHP 2011:14).

A TCL encompasses the same meaning and utility, as well as inclusivity of Indigenous communities. The Secretary of the Interior's Guidelines for the treatment of cultural landscapes define a cultural landscape as "a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (Birnbaum and Peters 1996:4). Historic vernacular landscapes "evolved through use by the people whose activities or occupancy shaped them" and ethnographic landscapes "contain a variety of natural and cultural resources that associated people define as heritage resource" (Birnbaum and Peter 1996:4; Ball et al. 2015:7).

National Register Bulletin 38 provides examples of TCPs and TCLs that fit the definition in the guidelines (Parker and King 1998:1):

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice
- A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity

[1] The terminology for NHPA is relative to federally recognized tribes. CEQA terminology, however, is inclusive of Native American tribes regardless of federal recognition.

TCPs and TCLs are eligible for inclusion on the NRHP if they meet the criteria set forth in 36 C.F.R. § 60.4, National Register Criteria for Evaluation. The steps in the identification and evaluation of TCPs are the following (abbreviated from Parker and King 1998:11-14):

1. Potential Traditional Cultural Properties must be identified through consultation with the affected community or Tribe.
2. The investigation must consider the beliefs and practices associated with a potential Traditional Cultural Properties from the perspective of the community or Tribe.
3. The potential Traditional Cultural Properties must be a property, that is, a tangible place on the landscape, rather than an intangible belief or practice.
4. The property must retain integrity of relationship with the beliefs and practices that give it meaning to the community or Tribe.
5. The property must retain integrity of condition, such that the elements of the property associated with the beliefs and practices that give it significance are present.
6. The property must meet one or more of the four criteria for eligibility on the National Register (see Section C.5.1).

Cultural resources routinely not considered for eligibility for inclusion in the NRHP are religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties achieving significance within the past 50 years. However, these resources, can be evaluated as eligible if they meet one or more of the NRHP eligibility criteria for evaluation, retain integrity, and meet special criteria requirements called criteria considerations. The most notable of the seven considerations (A through G) is Criteria Consideration G, which specifies that a property that has achieved significance within the last 50 years can qualify for the NRHP only if it is of exceptional importance. As noted by Parker and King (1998:17–18), “a significance ascribed to a property only in the past 50 years cannot be considered traditional.” However, they also note: “The fact that a property may have gone unused for a lengthy period of time, with use beginning again only recently, does not make the property ineligible for the [National] Register” (Parker and King 1998:14).

If a property is determined to be a TCP, it becomes the responsibility of the lead agency to assess whether the proposed project would have an effect on the property, and should the effect be adverse, would it alter or destroy the elements that make the property significant and eligible. If a proposed project is determined to have an adverse effect, the lead agency is responsible for seeking measures that would mitigate the adverse effects to TCPs.

C.17.2 State

Tribal Cultural Resources

As defined at PRC § 21074, a TCR is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe, and is either: (1) on or eligible for the CRHR or a local historic register; or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR. TCRs are similar to TCPs in terms of their characteristics, identification, and

treatment, and may include a cultural landscape to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Additionally, as defined at PRC § 21074, a historical resource, a unique archaeological resource, or a non-unique archaeological resource may also be a TCR if it conforms to the criteria of a TCR in PRC § 21074(a). CEQA mandates that lead agencies determine whether a project will have a significant impact on TCRs that are eligible for listing on the CRHR (i.e., a historical resource), or are determined to be significant by the lead agency in order to appropriately mitigate any such impacts.

Under the CEQA Guidelines, even if a resource is not included on any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource (i.e., TCR) for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines § 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. A resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Criterion 1);
- Is associated with the lives of persons important in our past (Criterion 2);
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values (Criterion 3); and/or
- Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4).

In accordance with CEQA guidelines, cultural resources investigations are necessary to identify TCRs that may have significant impacts as a result of a project (14 CCR §15064.5). The following steps are routinely implemented in a cultural resources' investigation for CEQA compliance:

1. Identify cultural resources in the proposed project area
2. Evaluate against the CRHR criteria of significance (listed below)
3. Evaluate the impacts of the proposed project on all cultural/tribal resources
4. Develop and implement measures to mitigate proposed project impacts on historical resources or resources deemed significant by the lead agency

As TCRs hold cultural value to a California Native American tribe, consultation with local Native American tribes is an integral component of each of the cultural resources' investigation steps described above.

Assembly Bill 52 and Consultation

The lead agency for CEQA is responsible for consultation with Native American tribes regarding the potential for a project to impact TCRs, pursuant to AB 52 and PRC §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m). AB 52 recognizes that "…tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural

resources with which they are traditionally and culturally affiliated…" and that consultation will occur between a lead agency and Native American tribes for covered projects.

PRC §21080.3.1 (a) and Government Code §65352.4 define consultation as "the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance."

As described in Section 3.10, Cultural Resources, a proposed project may induce a significant impact to a historical resource, unique archaeological resource, or a TCR if it causes a substantial adverse change (i.e., physical demolition, destruction, relocation, or alteration) to the resource or immediate surroundings (14 CCR 15064.5[b]), thereby demolishing or significantly altering the physical characteristics that qualify it for listing on the CRHR or local registers (PRC §§ 5020.01[k] and 5024.1[g]). A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC § 21084.2). A lead agency shall establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC §21084.3).

As such, the Town is committed to working together with tribes and consultation efforts with California Native American tribes are described below.

Native American Historical, Cultural, and Sacred Sites

Pursuant to PRC 5097.94 the NAHC has authority and duty to "identify and catalog places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands" and has the power and duty to make recommendations for acquisition by the state or other public agencies regarding Native American sacred places that are located on private lands, are inaccessible to Native Americans, and have cultural significance to Native Americans.

California Native American Graves Protection and Repatriation Act of 2001

The California Native American Graves Protection and Repatriation Act of 2001 (CalNAGPRA) requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items to provide a process for the identification and repatriation of these items to the appropriate tribes.

California Native American Traditional Tribal Cultural Places (SB 18)

SB 18 provides California Native American tribes an opportunity to participate in local land use decisions at an early planning stage for the purpose of protecting or mitigating impacts to cultural places. SB 18 requires local governments to consult with tribes prior to making certain planning decisions, including the adoption and amendment of general plans.

C.17.3 Regional and Local

Town of Paradise 1994 General Plan

Section 3.15 (Scenic and Cultural Resources) of the *Town of Paradise 1994 General Plan* details the Town's procedures for complying with the state and federal policies outlined above with regards to cultural resources. As discussed above, a TCR is a cultural resource of cultural value to a California Native American tribe and is therefore incorporated into the procedures codified in the various policy statements and implementation measures of the General Plan. The General Plan includes the following goals, policies, and implementation measures related to TCRs:

- **Goal OCEG-9**: Identify, record, preserve, and protect historical and archeological resources.
- **Policy OCEP-36**: The *Land Use Constraints Diagram* identifies areas of potential archaeological sensitivity. Proposed development or public works projects within this area shall be required to undertake an archaeological survey prior to project approval. Proposed projects outside this area, in locations that have not been significantly disturbed, shall be referred to the California Archaeological Inventory, Northeast Information Center, California State University, Chico to undertake an archaeological survey prior to project approval upon recommendation by the Center.
- **Implementation Measure OCEI-18**: Require compliance of all development projects with Appendix K (archeological impacts) of the *Guidelines for Implementation of the California Environmental Quality Act*.
- **Implementation Measure OCEI-19**: When an archaeological survey is required by the Town or recommended by the California Archaeological Inventory, Northeast Information Center, the survey shall be undertaken by a qualified professional archaeologist who is certified by the Society of Professional Archaeologists or has equivalent qualifications.
- **Implementation Measure OCEI-20**: Should any historic or pre-historic artifacts be discovered during construction, all work shall cease until a qualified professional archaeologist views the site, provides recommendations and gives clearance to continue.

Butte County General Plan 2030

Chapter 8 of the *Butte County General Plan 2030* details Butte County's protocols to identify, protect, and preserve cultural resources important to Native American groups in line with state and federal regulations, and specifies the mandated steps to identify, avoid, and mitigate (if necessary) effects to cultural resources. To this end, Butte County adopted three goals specific to cultural resources in the General Plan:

- **Goal COS-14:** Preserve important cultural resources
- **Goal COS-15:** Ensure that new development does not adversely impact cultural resources.
- **Goal COS-16:** Respect Native American culture and planning concerns

In support of these policies, the General Plan includes the following policies:

- **Policy COS-P14.1**: Historic and cultural resources management shall be coordinated with nearby jurisdictions, including the five incorporated municipalities, the Lassen and Plumas National Forests, other planning and regulatory agencies, and local tribes.
- **Policy COS-P14.2**: As part of CEQA and NEPA projects, evaluations of surface and subsurface cultural resources in the county shall be conducted. Such evaluations should involve consultation with the Northeast Information Center.
- **Policy COS-P14.3**: The Northeast Information Center and appropriate historic and preservation professionals shall be consulted when considering reuse of historic sites.
- **Policy COS-P15.1**: Areas found during construction to contain significant historic or prehistoric archaeological artifacts shall be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation. Historic or prehistoric artifacts found during construction shall be examined by a qualified consulting archaeologist or historian to determine their significance and develop appropriate protection and preservation measures.
- **Policy COS-P15.2**: Any archaeological or paleontological resources on a development project site shall be either preserved in their sites or adequately documented as a condition of removal. When a development project has sufficient flexibility, avoidance and preservation of the resource shall be the primary mitigation measure.
- **Policy COS-P15.3**: Demolition permit application on potentially important historic sites shall be subject to discretionary review.
- **Policy COS-P16.2**: Impacts to the traditional Native American landscape shall be considered during California Environmental Quality Act or National Environmental Protection Act review of development proposals.
- **Policy COS-P16.3**: Human remains discovered during implementation of public and private development projects shall be treated with dignity and respect. Such treatment shall fully comply with the federal Native American Graves Protection and Repatriation Act and other appropriate laws.
- **Policy COS-P16.4**: If human remains are located during any ground disturbing activity, work shall stop until the County Coroner has been contacted, and, if the human remains are determined to be of Native American origin, the NAHC and most likely descendant have been consulted.
- **Policy COS-P16.5**: Consistent with State local and tribal intergovernmental consultation requirements such as SB18, the County shall consult with Native American tribes that may be interested in proposed new development projects and land use policy changes.

These policies are consistent with the state and federal processes outlined above.

Memorandum of Understanding between the City of Chico and Mechoopda Indian Tribe

An MOU has been established between the City of Chico and Mechoopda Indian Tribe of Chico Rancheria, describing the original relationship to the land. The MOU establishes framework for consultation between the City of Chico and Mechoopda Indian Tribe prior to development of new open space or land use plans, per SB 18, to best protect cultural resources in the City of Chico and all of its open spaces through government-to-government communication.

Chico 2030 General Plan

The Chapter 11 (Cultural Resources and Historic Preservation) element of the *Chico 2030 General Plan* identifies important local cultural, archaeological, and historic resources and establishes goals, policies, and actions for the protection and preservation of those resources. Importantly, the element supports a Memorandum of Understanding adopted in June 2008 between the City of Chico and the Mechoopda Indian Tribe of the Chico Rancheria. The element also establishes the policy guidance for the City of Chico's comprehensive Historic Preservation Program. To this end, the City of Chico adopted three goals specific to cultural resources in the General Plan:

- **Goal CRHP-1:** Protect and preserve archaeological, historical and other cultural resources to serve as significant reminders of the City's heritage and values.
- **Goal CRHP-2:** Reinvest in the archaeological, historical and other cultural resources that frame Chico's character and identity.
- **Goal CRHP-3:** Engage in and facilitate preservation efforts with local preservation and cultural entities.

The General Plan includes the following policies related to cultural resources:

- **Policy CRHP-1.1, Historic Preservation Program**: Maintain a comprehensive Historic Preservation Program that includes policies and regulations which protect and preserve the archeological, historical, and cultural resources of Chico.
- **Policy CRHP-2.1, Infill and Historic Preservation**: Integrate the values of historic preservation with infill development and adaptive reuse.
- **Policy CRHP-2.2, Adaptive Reuse**: Encourage the adaptive reuse of historic buildings when the original use of the structure is no longer feasible.
- **Policy CRHP-2.3, Demolition as Last Resort**: Limit the demolition of historic resources to an act of last resort, to be permitted only if: 1) rehabilitation of the resource is not feasible; 2) demolition is necessary to protect the health, safety, and welfare of its residents; or 3) the public benefits outweigh the loss of the historic resource.
- **Policy CRHP-2.4, Public Awareness of Heritage Resources**: Encourage public awareness of the heritage resources that helped shape the history of Chico.

- **Policy CRHP-2.5, Purchase of Historically Significant Buildings**: Explore grant funding, partnerships, and other opportunities to purchase historically significant buildings or sites that are eligible for State or National Registers as they become available.

- **Policy CRHP-3.1, Partnerships to Preserve Heritage Resources**: Foster partnerships with interested parties to preserve heritage resources.

These policies detail the City of Chico's protocols to, among others, identify, avoid, and mitigate impacts to archaeological, tribal, and built environment resources; integrate historic preservation into infill development; encourage public awareness of heritage resources; and establish partnerships with interested parties.

City of Chico Historic Preservation Ordinance

The historic preservation ordinance of the City of Chico's Municipal Code (Chapter 19.37) specifically affords protection for properties listed on the City of Chico's Historic Resources Inventory and provides a mechanism to add historic properties to the Inventory through Landmark Overlay zoning districts. The ordinance also provides development incentives to owners of designated historic property and establishes a number of exempt activities such as ordinary maintenance and repair. Proposals to significantly alter or demolish structures listed on the City of Chico's Historic Resources Inventory are reviewed by the City of Chico's five-member Architectural Review and Historic Preservation Board. The Board also reviews nominations to the City of Chico's Inventory and forwards recommendations to the City Council for a final determination of listing.

California State University, Chico Research Foundation Ecological Reserves Management Plan, Memorandums of Understanding and Agreement

California State University, Chico (CSU, Chico) has implemented a management plan for the Butte Creek Canyon Ecological Reserve (BCCER), which consists of a 287-acre property comprising two units, the Virgin Valley and Canyon Units, located along Butte Creek. The management plan includes a goal for natural and cultural resource preservation and enhancement, "to preserve and restore natural and cultural resources of the Reserve System in order to maintain ecological processes and enhance biological diversity; maintain the physical integrity and sociological sensitivity of historical and archeological sites, and protect the Reserves from undue encroachment or damage by human activities." In support of this goal, the management plan includes seven objectives related to cultural resources and a Cultural Resources Management Plan, which are consistent with the state and federal processes outlined above. According to the management plan, a number of cultural resources indicative of historical and pre-contact occupation are likely to occur on BCCER lands based on cultural resource inventories conducted on adjoining lands with similar landscape and habitat.

The Mechoopda Indian Tribe is partner with CSU, Chico to the Memorandum of Agreement Regarding Guiding Principles for CSU, Chico Consultation with the Mechoopda Indian Tribe of Chico Rancheria (2018) with commitments for consultation and development of a cultural resources plan regarding the recognized ancestral lands of the Mechoopda Indian Tribe that encompass the CSU, Chico campus. The Mechoopda Indian Tribe is also partner with Chico State Enterprises to the Memorandum of Understanding between the Mechoopda Indian Tribe of Chico Rancheria (Tribe) and Chico State Enterprises (CSE) (2020) for CSE-administered lands, which include the Big Chico

Creek Ecological Reserve and the Butte Creek Ecological Preserve; the Proposed Project intersects with the Butte Creek Ecological Preserve. The primary purpose of the Memorandum of Understanding is to facilitate communication, collaboration and consultation between the Parties as early as possible in the decision-making process to allow meaningful input into the development of programs, projects, plans, property decisions, use and/or activities that may impact cultural resources within CSE administered lands (e.g., the BCCER).

C.18 Utilities and Service Systems

This section identifies the applicable federal, state, and local laws, regulations, orders, policies, and plans that are relevant to the analysis of utilities and service systems in the EIR, Section 3.18.

C.18.1 Federal

Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The USEPA implemented pollution control programs under the Clean Water Act that sets wastewater standards for the industry.

C.18.2 State

California Integrated Waste Management Act (AB 939)

The California Integrated Waste Management Act (AB 939, Sher, Chapter 1095, Statutes of 1989 as amended) made all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by the year 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year.

C.18.3 Regional and Local

Town of Paradise 1994 General Plan

The *Town of Paradise 1994 General Plan* provides direction on land use decision-making for the next 15 years. The General Plan process offers the Town the opportunity to plan proactively rather than reactively for future development. The General Plan includes the following pertinent goals and policies related to utilities and service systems:

- **Goal LUG-4:** Provide adequate public services and infrastructure to meet future need.
- **Objective LUO-5:** Assure that an adequate water supply exists prior to approval of development in the Paradise planning area.
- **Objective LUO-10:** Consider the construction and installation of a formal sewer system to service the commercial and industrial areas in the town within the 15-year planning period.
- **Policy LUP-12**: The character of future development should be compatible with the town's service delivery abilities and shall not result in service level declines.

- **Policy LUP-13**: The town shall attempt to assure that the rate and character of growth is commensurate with, or does not exceed the current levels of public services, and shall attempt to assure that municipal services can be provided to areas planned for annexation and development.

Butte County General Plan 2030

The *Butte County General Plan 2030* provides Butte County direction on how it will fulfill its community vision and manage its future growth. The General Plan addresses all aspects of Butte County's development which includes land use, circulation, public facilities, and public safety. The General Plan includes the following pertinent goals and policies related to utilities and service systems:

- **Goal PUB-9:** Provide safe, sanitary and environmentally acceptable solid waste management.
- **Goal PUB-11**: Increase recycling among Butte County residents, businesses, and public agencies.
- **Goal PUB-12:** Manage wastewater treatment facilities at every scale to protect the public health and safety of Butte County residents and the natural environment.
- **Policy PUB-P11.2**: Construction sites shall provide for the salvage, reuse, or recycling of construction and demolition materials.
- **Policy W-P1.8**: The County supports conversion from septic systems to public sewer service, where feasible.
- **Policy PUB-P12.4**: New sewer collection and transmission systems shall be designed and constructed to minimize potential inflow and infiltration.
- **Policy PUB-P13.4**: Installation of sewer lines shall occur concurrently with construction of new roadways to maximize efficiency and minimize disturbance from construction activity.
- **Policy HS-P15.2**: Critical emergency response facilities such as fire, police, emergency service facilities and utilities shall be sited to minimize their exposure to flooding, seismic effects, fire, or explosion.

Butte County Power Butte Joint Powers Authority Agreement

The Butte County Board of Supervisors and the Chico City Council have entered into a Joint Powers Authority agreement intended to provide residents of the unincorporated areas of Butte County as well as residents of the City of Chico the ability to choose where they purchase their energy from, and the joint agreement has been titled the Butte Choice Energy Authority.

Chico 2030 General Plan

The *Chico 2030 General Plan* provides the City of Chico a comprehensive, long-range, and internally consistent policy framework for the growth and preservation of Chico. The General Plan consists of guiding principles, goals, policies, and actions in order to guide the City of Chico on the

physical development of Chico. The General Plan includes the following pertinent goals and policies related to utilities and service systems:

- **Goal PPFS-4:** Maintain a sanitary sewer system that meets the City's existing and future needs, complies with all applicable regulations, and protects the underlying aquifer.
- **Goal PPFS-5:** Maintain a sustainable supply of high-quality water, delivered through an efficient water system to support Chico's existing and future population, including fire suppression efforts.
- **Goal PPFS-8:** Ensure that solid waste and recyclable collection services are available to City residents.
- **Policy SUS-3.3, Municipal Waste Reduction**: Reduce consumption and increase recycling and reuse of materials in City operations.
- **Policy PPFS-4.1, Sanitary Sewer System**: Improve and expand the sanitary sewer system as necessary to accommodate the needs of existing and future development.
- **Policy PPFS-4.3, Capacity of Water Pollution Control Plant**: Increase system capacity by reducing wet weather infiltration into the sanitary sewer system.
- **Policy PPFS-4.4, Wastewater Flows**: Ensure that total flows are effectively managed within the overall capacity of the Water Pollution Control Plant.

City of Chico Sanitary System Management Plan

The City of Chico Sanitary System Management Plan was adopted on May 2, 2006, and was prepared to follow requirements of the State Water Resources Control Board Order No. 2006-0003. The plan is a combination of policies, procedures, and activities that would aid in the planning, management, operation, and maintenance of the City of Chico's sanitary sewer system.

C.19 Wildfire

C.19.1 Federal

The National Strategy

Pursuant to the 2009 Federal Land Assistance, Management, and Enhancement Act, the U.S. Department of Agriculture and U.S. Department of the Interior developed a national cohesive strategy to comprehensively address wildland fire management across all lands in the United States. The National Strategy recognizes and accepts fire as a natural process necessary for the maintenance of many ecosystems and strives to reduce conflicts between fire-prone landscapes and people (USDA and DOI, 2014). Specifically, the National Strategy identifies the following primary goals:

- **Restoration and maintenance of landscapes:** Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.

- **Fire-adapted communities:** Human populations and infrastructure can withstand a wildfire without loss of life and property.
- **Wildfire response:** All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

The National Strategy guides federal direction for the state and local agencies responsible for fire protection in the vicinity of the Proposed Project.

FEMA HMGP Grant – Town of Paradise Wildfire Mitigation Projects

The Town of Paradise, in Butte County, California, is proposing wildfire mitigation activities to enhance fire safety and mitigate the threat of wildfire. The purpose of the proposed HMGP grants is to protect people and property by reducing wildfire-related hazards within Paradise. Per Paradise, the Projects would implement wildfire mitigation measures throughout the town, through a combination of enhanced enforcement, education, and incentives to help property owners reduce hazards on their own lands and reduce hazardous fuels on town rights-of-way. The four projects include the following: (1) enhancing code enforcement activities to manage hazardous fuels and defensible space, (2) introducing a residential ignition-resistant improvement and defensible space program, (3) hazardous fuel reduction along town rights-of-way, and (4) removing hazardous dead or dying trees on private properties (FEMA 2022).

C.19.2 State

2018 Strategic Fire Plan for California

The *2018 Strategic Fire Plan for California*, developed by the State Board of Forestry and Fire Protection, provides direction and guidance to CAL FIRE and its 21 field units. This plan sets forth a number of goals focused on fire prevention, natural resource management, and fire suppression efforts, including the following (CAL FIRE, 2018):

- Improve the availability and use of consistent, shared information on hazard and risk assessment.
- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognize individual landowner/homeowner responsibilities.
- Foster a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as community wildfire protection plans.
- Increase awareness and actions to improve fire resistance of human-made assets at risk and fire resilience of wildland environments through natural resource management.
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers.
- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services.

- Implement needed assessments and actions for post-fire protection and recovery.

The 2018 Strategic Fire Plan for California guides CAL FIRE oversight of local agencies' responsibilities for fire protection and natural resource management in the vicinity of the Proposed Project.

Community Wildfire Prevention and Mitigation Report

CAL FIRE prepared the Community Wildfire Prevention & Mitigation Report in response to Executive Order N-05-19, which directed CAL FIRE, in consultation with other state agencies and departments, to recommend immediate, medium-term, and long-term actions to help prevent destructive wildfires, with a specific focus on vulnerable communities and populations in the state (CAL FIRE, 2019). Based on local fire plans developed by CAL FIRE units, CAL FIRE identified 35 priority projects for immediate implementation to help reduce public safety risks for more than 200 communities. Projects include removal of hazardous dead trees, vegetation clearing, creation of fuel breaks and community defensible spaces, and creation of ingress and egress corridors. The *Community Wildfire Prevention & Mitigation Report* also identifies near-term administrative, regulatory, and policy actions to address community vulnerability and wildfire fuel buildup through rapid deployment of resources.

CAL FIRE's identified medium-term and long-term actions encourage coordination and cooperation among the various levels of regional and local fire protection agencies.

California Fire Code

The California Fire Code (California Code of Regulations title 24, part 9) establishes minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of the code contains requirements for fire preserving safety during construction, such as to develop a pre-fire plan in coordination with the fire chief, maintain vehicle access for firefighting at construction sites, and meet requirements for safe operation of construction equipment powered by internal combustion engines.

CAL FIRE Fire Hazard Severity Zone Mapping

CAL FIRE's Fire and Resource Assessment Program has modeled and mapped wildfire hazard zones using a science-based, field-tested computer model that assigns an FHSZ rating of moderate, high, or very high. CAL FIRE develops maps depicting FHSZs based on factors such as fuel, weather, terrain, and probability of future occurrence (Santa Clara County, 2017a).

The Board of Forestry and Fire Protection designates responsibility for wildland fire protection and prevention within FHSZs. State Responsibility Areas (SRAs) are defined as areas where the State of California has financial responsibility for wildland fire protection and prevention; incorporated cities and federal ownership are not included. Within SRAs, CAL FIRE is responsible for fire prevention and suppression (Public Resources Code section 4125; Office of the State Fire Marshal, 2021). Local Responsibility Areas (LRAs) are defined as incorporated cities, urban regions, agricultural lands, and portions of the desert where the local government is responsible for wildfire protection. This is typically provided by city fire departments, fire protection districts, counties, and in some instances by CAL FIRE under contract (Office of the State Fire Marshal, 2021).

FHSZ maps evaluate wildfire hazards, which are physical conditions that create a likelihood that an area will burn over a 30- to 50-year period. They do not take into account modifications such as fuel reduction efforts (Office of the State Fire Marshal, 2021). FHSZs are meant to help limit wildfire damage to structures through planning, prevention, and mitigation activities/requirements that reduce risk (Office of the State Fire Marshal, 2021).

C.19.3 Regional and Local

Butte County Local Hazard Mitigation Plan (LHMP) Update, 2019

In 2006, the state adopted Assembly Bill (AB) 2140 which added provisions specifying what is to be included in a LHMP and requiring a linkage between local jurisdictions' LHMP and the Safety Element of their General Plan. Butte County has a current LHMP which includes an assessment of the County's risk and vulnerability related to natural and other identified hazards and a comprehensive mitigation strategy which includes actions and projects designed to mitigate or reduce the impacts of those hazards and to increase community resiliency.

Butte County General Plan 2030 Health and Safety Element

The Health and Safety Element provides information about risks in Butte County due to natural and huma-made disasters. The LHMP, discussed above, is considered a part of the Health and Safety Element. The following goals and policies are relevant to wildland fires.

- Goal HS-11: Reduce risks from wildland fire and urban fire.
- Policy HS-P11.1: Fire hazards shall be considered in all land use and zoning decisions, environmental review, subdivisions review and the provision of public services.
- Policy HS-P11.2: Create communities that are resistant to wildfire by supporting the implementation of community wildfire protection plans and wildfire fuel load reduction measures in coordination with the appropriate government, community group, or non-profit organization and California Department of Forestry and Fire Protection (CAL FIRE).
- Policy HS-P11.3: The County supports the Wildfire Mitigation Action Plan, the Butte County Local Hazard Mitigation Plan (LHMP), and the Butte Unit Community Wildfire Protection Plan prepared by CAL FIRE and will cooperate with the Butte County Fire Department and the Butte County Fire Safe Council in implementing these plans.
- Policy HS-P11.4: New development projects shall meet current fire safe ordinance standards for adequate emergency water flow, emergency vehicle access, signage, evacuation routes, fuel management, defensible space, fire safe building construction and wildfire preparedness.
- Goal HS-12: Protect people and property from wildland or urban fires.
- Policy HS-P12.4: All development projects in wildland urban interface areas in High or Very High Fire Hazard Severity Zones shall provide, at a minimum, small-scale water systems for fire protection.

Butte County Pre-Disaster Mitigation Plan

The Butte County Pre-Disaster Mitigation Plan was developed by the Butte County Office of Emergency Management to meet the requirements of the Disaster Mitigation Act of 2000. The purpose of the plan is to provide strategies and enumerate potential projects for mitigating or reducing the loss of life and property in the event of an emergency or disaster with the confines of Butte County and its political subdivisions (Butte County Office of Emergency Management 2010).

Butte County Community Wildfire Protection Plan 2020-2025

The Butte County Community Wildfire Protection Plan was developed by Federal, State, and local agencies in order to identify and prioritize pre-fire and post-fire management strategies and tactics meant to reduce the loss of value at risk within Butte County. The plan establishes a framework for reducing the risks associated with wildfire by placing emphasis on what needs to be done before the fire starts. The plan strives to reduce firefighting costs and property losses, increase firefighter safety, and to enhance ecosystem health (Butte County 2020).

Town of Paradise General Plan Safety Element

The purpose of the Safety Element is to reduce the risk of death, injuries, property damage, and other economic and social consequences associated with natural and societal hazards, such as wildland fires. The following goals and policies are relevant to wildland fires:

- Goal SG-1: Assure that law enforcement and fire protection services are enhanced sufficiently to meet the demands of new and existing land use development.
- Policy SP-1: New and unmitigated land use development shall not cause the police and fire protection services emergency response times to full below the service levels established by this plan.
- Policy SP-2: Through the development review process, adequate roads shall be required to be constructed and/or improved for emergency vehicle access, particularly in high wildland fire hazard areas.
- Policy SP-3: Future development should be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.
- Policy SP-5: The town should promote fire prevention by continuing to require brush removal and fuel load clearing as ongoing conditions of development approval and property maintenance.
- Implementation Measure SI-6: Enforce and comply with the provisions of the Unform Building Code and Uniform Fire Code.

Town of Paradise Emergency Operations Plan (EOP)

The purpose of the EOP, its Functional Annexes and Hazard/Threat Specific Appendices is to provide the basis for a coordinated response before, during, and after a disaster incident affecting the Town of Paradise. The EOP is the principal guide for the town's response to, and management of real or potential emergencies and disasters occurring within its designated geographic boundaries. It also identifies how the town integrates into the Standardized Emergency

management System (SEMS) and the National Incident Management System (NIMS). Reducing risks from and response to wildland fire is also discussed in the EOP and focuses on fuel reduction and the reduction of wildland fire to infrastructure.

Paradise Fire Safe Council

Founded in 1999, the Paradise Fire Safe Council is comprised of volunteer community members under the umbrellas of the Butte County Fire Safe Council and the California Fire Safe Council. The council is designated under the Town of Paradise to provide community input on wildfire prevention and safety (Paradise Fire Safe Council 2008).

Chico General Plan Safety Element

The Safety Element of the Chico General Plan identifies known safety threats and hazards, along with the City's approach to managing these risks and hazards. The safety element covers fire risks and the provision of law enforcement and emergency services. The following goals and policies are relevant to wildland fires:

- Goal S-4: Continue to provide effective and efficient fire protection and prevention services to Chico area residents.
- Action S-4.1.1 (Fire Response Time): Strive to obtain an initial response time of five and a half minutes or less for at least 90 percent of fire emergency response calls in urbanized areas.
- Action S-4.3.3 (Project Design): As part of the project review process in wildland fire areas, require consideration of emergency evacuation routes and defensible buffer areas.
- Policy S-4.4 (Vegetation management): Support vegetation management and weed abatement programs that reduce fire hazards.

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Emissions Modeling

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Memo

Date: Tuesday, April 26, 2022

Project: Paradise Sewer Project

To: Town of Paradise

From: Tanya Kalaskar, Environmental Planner, HDR

Subject: Emissions Modeling

Introduction

This memorandum describes the methodology and inputs used in the emissions modeling prepared for the proposed Paradise Sewer Project (Proposed Project) by HDR in April 2022. The modeling results are summarized in Tables 1 through 4 of this memorandum. Attachment 1 is the modeling output that shows the detailed results.

About the Model

The purpose of the California Emissions Estimator Model (CalEEMod) is to provide a uniform platform for government agencies, land use planners, and environmental professionals to estimate potential emissions associated with both construction and operational use of land use projects. CalEEMod utilizes widely accepted methodologies for estimating emissions combined with default data that can be used when site-specific information is not available. Sources of these methodologies and default data include but are not limited to the United States Environmental Protection Agency (USEPA) AP-42 emission factors, California Air Resources Board (CARB) vehicle emission models, studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle.

Methodology

CalEEMod version 2020.4.0 was used to estimate the Proposed Project's criteria air pollutant and GHG emissions during its construction. Construction emissions were estimated using a combination of Project-specific information and model defaults. Criteria air pollutant and GHG emissions were estimated for the construction of the Core Collection System and Export Pipeline System.

Inputs

The CalEEMod data inputs are based on or derived from information provided in Chapter 2, Project Description. The following data were utilized as inputs into the model:

- Area disturbance
- Construction schedule
- Type of construction equipment
- Quantity of construction equipment

- Number of construction crews
- Number of construction workers
- Quantity of soil exported
- Quantity of fill material imported

Results

Criteria Air Pollutants

Table 1 summarizes the unmitigated construction criteria air pollutant emissions by year for the Core Collection System. Table 2 summarizes the unmitigated construction criteria air pollutant emissions by year for the Export Pipeline System.

Table 1. Unmitigated Construction Criteria Air Pollutant Emissions – Core Collection System

Year	ROG	NO_X	PM_{10}	CO	SO_2	$PM_{2.5}$
			lb/day			
2023	11.81	89.41	5.94	114.10	0.24	4.05
2024	14.24	100.75	6.95	140.78	0.32	4.61
2025	13.15	87.06	6.33	137.95	0.32	4.04
Maximum Emissions	**14.24**	**100.75**	**6.95**	**140.78**	**0.32**	**4.61**
Total Emissions	**39.20**	**277.22**	**19.22**	**392.83**	**0.88**	**12.7**

Source: CalEEMod Results (see Attachment 1)

Notes: ROG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = particulate matter 10 micrometers and smaller, CO = carbon monoxide, SO_X = sulfur oxides, $PM_{2.5}$ = particulate matter 2.5 micrometers and smaller, lb = pound

Table 2. Unmitigated Construction Criteria Air Pollutant Emissions – Export Pipeline System

Year	ROG	NO_X	PM_{10}	CO	SO_2	$PM_{2.5}$
			lb/day			
2023	9.78	75.26	5.19	105.27	0.25	3.51
2024	5.83	41.65	2.87	57.51	0.12	1.92
Maximum Emissions	**9.78**	**75.26**	**5.19**	**105.27**	**0.25**	**3.51**
Total Emissions	**15.61**	**116.91**	**8.06**	**162.78**	**0.37**	**5.43**

Source: CalEEMod Results (see Attachment 1)

Notes: ROG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = particulate matter 10 micrometers and smaller, CO = carbon monoxide, SO_X = sulfur oxides, $PM_{2.5}$ = particulate matter 2.5 micrometers and smaller, lb = pound

GHG Emissions

Table 3 summarizes the unmitigated construction GHG emissions by year for the Core Collection System. Table 4 summarizes the unmitigated construction GHG emissions by year for the Export Pipeline System.

Table 3. Unmitigated Construction GHG Emissions – Core Collection System

Year	GHG Emissions MT CO_2e
2023	706.62
2024	3,032.48
2025	522.31
Maximum Emissions	**3,032.48**
Total Emissions	**4,261.41**

Source: CalEEMod (see Attachment 1)

Notes: MT = metric tons, CO_2e = carbon dioxide equivalent, GHG = greenhouse gas

Table 4. Unmitigated Construction GHG Emissions – Export Pipeline System

Year	GHG Emissions MT CO_2e
2023	655.68
2024	793.39
Maximum Emissions	**793.39**
Total Emissions	**1,449.07**

Source: CalEEMod (see Attachment 1)

Notes: MT = metric tons, CO_2e = carbon dioxide equivalent, GHG = greenhouse gas

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paradise - Core Collection System

Butte County AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.67	Acre	10.67	464,785.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description

Construction Phase - adjusted based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Trips and VMT - from project description and notes

Grading - from project description

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	10.00	80.00
tblGrading	AcresOfGrading	0.00	10.67
tblGrading	MaterialExported	0.00	169,400.00
tblGrading	MaterialImported	0.00	62,600.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	9.00	425.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	170.00

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	22,939.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	833.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	88.00	154.00
tblTripsAndVMT	WorkerTripNumber	35.00	48.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.8062	89.4105	114.0989	0.2419	2.1452	3.7907	5.9359	0.5475	3.5034	4.0509	0.0000	23,425.2977	23,425.2977	6.7131	0.1016	23,623.4019
2024	14.2373	100.7475	140.7817	0.3164	2.7320	4.2140	6.9460	0.7257	3.8851	4.6108	0.0000	30,645.7328	30,645.7328	8.9635	0.1383	30,911.0329
2025	13.1470	87.0598	137.9531	0.3162	2.7320	3.5977	6.3296	0.7257	3.3180	4.0438	0.0000	30,616.7053	30,616.7053	8.9774	0.1319	30,880.4470
Maximum	**14.2373**	**100.7475**	**140.7817**	**0.3164**	**2.7320**	**4.2140**	**6.9460**	**0.7257**	**3.8851**	**4.6108**	**0.0000**	**30,645.7328**	**30,645.7328**	**8.9774**	**0.1383**	**30,911.0329**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.8062	89.4105	114.0989	0.2419	2.1452	3.7907	5.9359	0.5475	3.5034	4.0509	0.0000	23,425.2977	23,425.2977	6.7131	0.1016	23,623.4019
2024	14.2373	100.7475	140.7817	0.3164	2.7320	4.2140	6.9460	0.7257	3.8851	4.6108	0.0000	30,645.7328	30,645.7328	8.9635	0.1383	30,911.0329
2025	13.1470	87.0598	137.9531	0.3162	2.7320	3.5977	6.3296	0.7257	3.3180	4.0438	0.0000	30,616.7053	30,616.7053	8.9774	0.1319	30,880.4469
Maximum	**14.2373**	**100.7475**	**140.7817**	**0.3164**	**2.7320**	**4.2140**	**6.9460**	**0.7257**	**3.8851**	**4.6108**	**0.0000**	**30,645.7328**	**30,645.7328**	**8.9774**	**0.1383**	**30,911.0329**

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	11/20/2023	5	80	
2	Pipe Installation	Trenching	10/1/2023	2/14/2025	5	360	
3	Pump Installation	Trenching	6/1/2024	3/7/2025	5	200	
4	Asphalt Replacement	Paving	11/15/2024	3/6/2025	5	80	

Acres of Grading (Site Preparation Phase): 10.67

Acres of Grading (Grading Phase): 0

Acres of Paving: 10.67

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	7	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	7	8.00	510	0.38
Pipe Installation	Plate Compactors	7	8.00	8	0.43
Pipe Installation	Rollers	7	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Scrapers	0	8.00	367	0.48
Pipe Installation	Tractors/Loaders/Backhoes	7	8.00	170	0.37
Pump Installation	Cement and Mortar Mixers	2	8.00	425	0.56
Pump Installation	Cranes	0	7.00	231	0.29
Pump Installation	Excavators	4	8.00	310	0.38
Pump Installation	Forklifts	0	8.00	89	0.20
Pump Installation	Generator Sets	0	8.00	84	0.74
Pump Installation	Plate Compactors	2	8.00	8	0.43
Pump Installation	Rollers	2	8.00	20	0.38
Pump Installation	Tractors/Loaders/Backhoes	4	8.00	170	0.37
Pump Installation	Welders	0	8.00	46	0.45
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Removal	5	14.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	35	154.00	0.00	1,500.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pump Installation	14	48.00	0.00	833.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222		1,889.3552	1,889.3552	0.4486		1,900.5697
Total	**0.8538**	**7.3468**	**11.3459**	**0.0197**	**0.1414**	**0.3390**	**0.4805**	**0.0153**	**0.3222**	**0.3374**		**1,889.3552**	**1,889.3552**	**0.4486**		**1,900.5697**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6400e-003	0.3685	0.1022	1.5500e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		164.4432	164.4432	4.0000e-004	0.0259	172.1555
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	**0.0868**	**0.4152**	**0.7885**	**3.0700e-003**	**0.2035**	**4.1200e-003**	**0.2076**	**0.0544**	**3.9100e-003**	**0.0583**		**317.7880**	**317.7880**	**4.8200e-003**	**0.0300**	**326.8497**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222	0.0000	1,889.3552	1,889.3552	0.4486		1,900.5697
Total	**0.8538**	**7.3468**	**11.3459**	**0.0197**	**0.1414**	**0.3390**	**0.4805**	**0.0153**	**0.3222**	**0.3374**	**0.0000**	**1,889.3552**	**1,889.3552**	**0.4486**		**1,900.5697**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6400e-003	0.3685	0.1022	1.5500e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		164.4432	164.4432	4.0000e-004	0.0259	172.1555
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	**0.0868**	**0.4152**	**0.7885**	**3.0700e-003**	**0.2035**	**4.1200e-003**	**0.2076**	**0.0544**	**3.9100e-003**	**0.0583**		**317.7880**	**317.7880**	**4.8200e-003**	**0.0300**	**326.8497**

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651		19,366.7535	19,366.7535	6.2106		19,522.0185
Total	**9.9973**	**80.7655**	**94.3128**	**0.2010**		**3.4344**	**3.4344**		**3.1651**	**3.1651**		**19,366.7535**	**19,366.7535**	**6.2106**		**19,522.0185**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6500e-003	0.3688	0.1023	1.5600e-003	0.0439	3.2300e-003	0.0471	0.0120	3.0900e-003	0.0151		164.6078	164.6078	4.0000e-004	0.0259	172.3278
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.8597	0.5143	7.5494	0.0167	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,686.7932	1,686.7932	0.0487	0.0457	1,701.6363
Total	**0.8684**	**0.8831**	**7.6517**	**0.0183**	**1.8003**	**0.0132**	**1.8135**	**0.4779**	**0.0122**	**0.4901**		**1,851.4009**	**1,851.4009**	**0.0491**	**0.0716**	**1,873.9641**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651	0.0000	19,366.7535	19,366.7535	6.2106		19,522.0185
Total	**9.9973**	**80.7655**	**94.3128**	**0.2010**		**3.4344**	**3.4344**		**3.1651**	**3.1651**	**0.0000**	**19,366.7535**	**19,366.7535**	**6.2106**		**19,522.0185**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6500e-003	0.3688	0.1023	1.5600e-003	0.0439	3.2300e-003	0.0471	0.0120	3.0900e-003	0.0151		164.6078	164.6078	4.0000e-004	0.0259	172.3278
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.8597	0.5143	7.5494	0.0167	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,686.7932	1,686.7932	0.0487	0.0457	1,701.6363
Total	**0.8684**	**0.8831**	**7.6517**	**0.0183**	**1.8003**	**0.0132**	**1.8135**	**0.4779**	**0.0122**	**0.4901**		**1,851.4009**	**1,851.4009**	**0.0491**	**0.0716**	**1,873.9641**

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315		19,374.2725	19,374.2725	6.2130		19,529.5982
Total	**9.7408**	**76.1744**	**92.7522**	**0.2010**		**3.1804**	**3.1804**		**2.9315**	**2.9315**		**19,374.2725**	**19,374.2725**	**6.2130**		**19,529.5982**

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3631	0.1023	1.5200e-003	0.0439	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3921	161.3921	4.0000e-004	0.0254	168.9613
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7956	0.4541	6.8908	0.0161	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,631.6657	1,631.6657	0.0435	0.0420	1,645.2792
Total	**0.8042**	**0.8172**	**6.9931**	**0.0177**	**1.8003**	**0.0125**	**1.8129**	**0.4779**	**0.0117**	**0.4895**		**1,793.0578**	**1,793.0578**	**0.0439**	**0.0674**	**1,814.2405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315	0.0000	19,374.2725	19,374.2725	6.2130		19,529.5982
Total	**9.7408**	**76.1744**	**92.7522**	**0.2010**		**3.1804**	**3.1804**		**2.9315**	**2.9315**	**0.0000**	**19,374.2725**	**19,374.2725**	**6.2130**		**19,529.5982**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3631	0.1023	1.5200e-003	0.0439	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3921	161.3921	4.0000e-004	0.0254	168.9613
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7956	0.4541	6.8908	0.0161	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,631.6657	1,631.6657	0.0435	0.0420	1,645.2792
Total	**0.8042**	**0.8172**	**6.9931**	**0.0177**	**1.8003**	**0.0125**	**1.8129**	**0.4779**	**0.0117**	**0.4895**		**1,793.0578**	**1,793.0578**	**0.0439**	**0.0674**	**1,814.2405**

3.3 Pipe Installation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860		19,433.6069	19,433.6069	6.2322		19,589.4124
Total	**8.9226**	**65.2015**	**90.8710**	**0.2017**		**2.6962**	**2.6962**		**2.4860**	**2.4860**		**19,433.6069**	**19,433.6069**	**6.2322**		**19,589.4124**

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3562	0.1021	1.4900e-003	0.0439	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.7393	157.7393	4.0000e-004	0.0248	165.1372
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7409	0.4040	6.3325	0.0156	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,576.5062	1,576.5062	0.0390	0.0389	1,589.0667
Total	**0.7494**	**0.7602**	**6.4346**	**0.0171**	**1.8003**	**0.0120**	**1.8123**	**0.4779**	**0.0112**	**0.4890**		**1,734.2455**	**1,734.2455**	**0.0394**	**0.0637**	**1,754.2038**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860	0.0000	19,433.6069	19,433.6069	6.2322		19,589.4124
Total	**8.9226**	**65.2015**	**90.8710**	**0.2017**		**2.6962**	**2.6962**		**2.4860**	**2.4860**	**0.0000**	**19,433.6069**	**19,433.6069**	**6.2322**		**19,589.4124**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3562	0.1021	1.4900e-003	0.0439	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.7393	157.7393	4.0000e-004	0.0248	165.1372
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7409	0.4040	6.3325	0.0156	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,576.5062	1,576.5062	0.0390	0.0389	1,589.0667
Total	**0.7494**	**0.7602**	**6.4346**	**0.0171**	**1.8003**	**0.0120**	**1.8123**	**0.4779**	**0.0112**	**0.4890**		**1,734.2455**	**1,734.2455**	**0.0394**	**0.0637**	**1,754.2038**

3.4 Pump Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660		6,196.4705	6,196.4705	1.9889		6,246.1935
Total	**2.0339**	**14.5442**	**24.0133**	**0.0643**		**0.6135**	**0.6135**		**0.5660**	**0.5660**		**6,196.4705**	**6,196.4705**	**1.9889**		**6,246.1935**

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3630	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3276	161.3276	4.0000e-004	0.0254	168.8937
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2480	0.1415	2.1478	5.0300e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		508.5711	508.5711	0.0136	0.0131	512.8143
Total	**0.2566**	**0.5045**	**2.2500**	**6.5500e-003**	**0.5913**	**6.1200e-003**	**0.5974**	**0.1572**	**5.7500e-003**	**0.1630**		**669.8987**	**669.8987**	**0.0140**	**0.0385**	**681.7080**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660	0.0000	6,196.4705	6,196.4705	1.9889		6,246.1935
Total	**2.0339**	**14.5442**	**24.0133**	**0.0643**		**0.6135**	**0.6135**		**0.5660**	**0.5660**	**0.0000**	**6,196.4705**	**6,196.4705**	**1.9889**		**6,246.1935**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3630	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3276	161.3276	4.0000e-004	0.0254	168.8937
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2480	0.1415	2.1478	5.0300e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		508.5711	508.5711	0.0136	0.0131	512.8143
Total	**0.2566**	**0.5045**	**2.2500**	**6.5500e-003**	**0.5913**	**6.1200e-003**	**0.5974**	**0.1572**	**5.7500e-003**	**0.1630**		**669.8987**	**669.8987**	**0.0140**	**0.0385**	**681.7080**

3.4 Pump Installation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959		6,201.0163	6,201.0163	1.9904		6,250.7761
Total	**1.9079**	**12.7663**	**23.9407**	**0.0643**		**0.5373**	**0.5373**		**0.4959**	**0.4959**		**6,201.0163**	**6,201.0163**	**1.9904**		**6,250.7761**

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3561	0.1021	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.6762	157.6762	4.0000e-004	0.0248	165.0711
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2309	0.1259	1.9738	4.8600e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		491.3786	491.3786	0.0122	0.0121	495.2935
Total	**0.2394**	**0.4820**	**2.0758**	**6.3500e-003**	**0.5913**	**5.9200e-003**	**0.5972**	**0.1572**	**5.5600e-003**	**0.1628**		**649.0547**	**649.0547**	**0.0126**	**0.0369**	**660.3646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959	0.0000	6,201.0163	6,201.0163	1.9904		6,250.7761
Total	**1.9079**	**12.7663**	**23.9407**	**0.0643**		**0.5373**	**0.5373**		**0.4959**	**0.4959**	**0.0000**	**6,201.0163**	**6,201.0163**	**1.9904**		**6,250.7761**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3561	0.1021	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.6762	157.6762	4.0000e-004	0.0248	165.0711
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2309	0.1259	1.9738	4.8600e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		491.3786	491.3786	0.0122	0.0121	495.2935
Total	**0.2394**	**0.4820**	**2.0758**	**6.3500e-003**	**0.5913**	**5.9200e-003**	**0.5972**	**0.1572**	**5.5600e-003**	**0.1628**		**649.0547**	**649.0547**	**0.0126**	**0.0369**	**660.3646**

3.5 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2590**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**		**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5700e-003	0.3628	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0470	0.0120	3.0700e-003	0.0151		161.2307	161.2307	4.0000e-004	0.0253	168.7924
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	**0.1429**	**0.4394**	**1.2656**	**4.2500e-003**	**0.3404**	**4.7800e-003**	**0.3451**	**0.0907**	**4.5200e-003**	**0.0952**		**436.7068**	**436.7068**	**7.7400e-003**	**0.0324**	**446.5668**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2590**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**	**0.0000**	**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5700e-003	0.3628	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0470	0.0120	3.0700e-003	0.0151		161.2307	161.2307	4.0000e-004	0.0253	168.7924
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	**0.1429**	**0.4394**	**1.2656**	**4.2500e-003**	**0.3404**	**4.7800e-003**	**0.3451**	**0.0907**	**4.5200e-003**	**0.0952**		**436.7068**	**436.7068**	**7.7400e-003**	**0.0324**	**446.5668**

3.5 Asphalt Replacement - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151		2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1941**	**7.4257**	**13.4599**	**0.0226**		**0.3416**	**0.3416**		**0.3151**	**0.3151**		**2,175.0370**	**2,175.0370**	**0.6959**		**2,192.4339**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.4900e-003	0.3559	0.1020	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.5815	157.5815	4.0000e-004	0.0248	164.9721
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1251	0.0682	1.0691	2.6300e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		266.1634	266.1634	6.5800e-003	6.5600e-003	268.2840
Total	**0.1336**	**0.4241**	**1.1711**	**4.1200e-003**	**0.3404**	**4.6600e-003**	**0.3450**	**0.0907**	**4.4000e-003**	**0.0951**		**423.7449**	**423.7449**	**6.9800e-003**	**0.0313**	**433.2560**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151	0.0000	2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1941**	**7.4257**	**13.4599**	**0.0226**		**0.3416**	**0.3416**		**0.3151**	**0.3151**	**0.0000**	**2,175.0370**	**2,175.0370**	**0.6959**		**2,192.4339**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.4900e-003	0.3559	0.1020	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.5815	157.5815	4.0000e-004	0.0248	164.9721
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1251	0.0682	1.0691	2.6300e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		266.1634	266.1634	6.5800e-003	6.5600e-003	268.2840
Total	**0.1336**	**0.4241**	**1.1711**	**4.1200e-003**	**0.3404**	**4.6600e-003**	**0.3450**	**0.0907**	**4.4000e-003**	**0.0951**		**423.7449**	**423.7449**	**6.9800e-003**	**0.0313**	**433.2560**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.015908	0.000716	0.000409	0.032995	0.001089	0.004690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Unmitigated	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**		**2.4900e-003**

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Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**		**2.4900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paradise - Core Collection System

Butte County AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.67	Acre	10.67	464,785.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description

Construction Phase - adjusted based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Trips and VMT - from project description and notes

Grading - from project description

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	10.00	80.00
tblGrading	AcresOfGrading	0.00	10.67
tblGrading	MaterialExported	0.00	169,400.00
tblGrading	MaterialImported	0.00	62,600.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	9.00	425.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	170.00

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	22,939.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	833.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	88.00	154.00
tblTripsAndVMT	WorkerTripNumber	35.00	48.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.7047	89.6005	112.5483	0.2398	2.1452	3.7907	5.9360	0.5475	3.5035	4.0509	0.0000	23,208.3786	23,208.3786	6.7160	0.1090	23,408.7512
2024	14.1126	100.9923	138.8899	0.3136	2.7320	4.2141	6.9460	0.7257	3.8851	4.6109	0.0000	30,361.8399	30,361.8399	8.9674	0.1475	30,629.9707
2025	13.0331	87.2858	136.2384	0.3134	2.7320	3.5977	6.3297	0.7257	3.3181	4.0438	0.0000	30,343.1140	30,343.1140	8.9813	0.1404	30,609.4706
Maximum	**14.1126**	**100.9923**	**138.8899**	**0.3136**	**2.7320**	**4.2141**	**6.9460**	**0.7257**	**3.8851**	**4.6109**	**0.0000**	**30,361.8399**	**30,361.8399**	**8.9813**	**0.1475**	**30,629.9707**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.7047	89.6005	112.5483	0.2398	2.1452	3.7907	5.9360	0.5475	3.5035	4.0509	0.0000	23,208.3785	23,208.3785	6.7160	0.1090	23,408.7512
2024	14.1126	100.9923	138.8899	0.3136	2.7320	4.2141	6.9460	0.7257	3.8851	4.6109	0.0000	30,361.8399	30,361.8399	8.9674	0.1475	30,629.9707
2025	13.0331	87.2858	136.2384	0.3134	2.7320	3.5977	6.3297	0.7257	3.3181	4.0438	0.0000	30,343.1139	30,343.1139	8.9813	0.1404	30,609.4706
Maximum	**14.1126**	**100.9923**	**138.8899**	**0.3136**	**2.7320**	**4.2141**	**6.9460**	**0.7257**	**3.8851**	**4.6109**	**0.0000**	**30,361.8399**	**30,361.8399**	**8.9813**	**0.1475**	**30,629.9707**

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	11/20/2023	5	80	
2	Pipe Installation	Trenching	10/1/2023	2/14/2025	5	360	
3	Pump Installation	Trenching	6/1/2024	3/7/2025	5	200	
4	Asphalt Replacement	Paving	11/15/2024	3/6/2025	5	80	

Acres of Grading (Site Preparation Phase): 10.67

Acres of Grading (Grading Phase): 0

Acres of Paving: 10.67

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	7	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	7	8.00	510	0.38
Pipe Installation	Plate Compactors	7	8.00	8	0.43
Pipe Installation	Rollers	7	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Scrapers	0	8.00	367	0.48
Pipe Installation	Tractors/Loaders/Backhoes	7	8.00	170	0.37
Pump Installation	Cement and Mortar Mixers	2	8.00	425	0.56
Pump Installation	Cranes	0	7.00	231	0.29
Pump Installation	Excavators	4	8.00	310	0.38
Pump Installation	Forklifts	0	8.00	89	0.20
Pump Installation	Generator Sets	0	8.00	84	0.74
Pump Installation	Plate Compactors	2	8.00	8	0.43
Pump Installation	Rollers	2	8.00	20	0.38
Pump Installation	Tractors/Loaders/Backhoes	4	8.00	170	0.37
Pump Installation	Welders	0	8.00	46	0.45
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Removal	5	14.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	35	154.00	0.00	1,500.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pump Installation	14	48.00	0.00	833.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222		1,889.3552	1,889.3552	0.4486		1,900.5697
Total	**0.8538**	**7.3468**	**11.3459**	**0.0197**	**0.1414**	**0.3390**	**0.4805**	**0.0153**	**0.3222**	**0.3374**		**1,889.3552**	**1,889.3552**	**0.4486**		**1,900.5697**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9000e-003	0.3998	0.1047	1.5600e-003	0.0438	3.2300e-003	0.0470	0.0120	3.0900e-003	0.0151		164.8095	164.8095	3.7000e-004	0.0259	172.5383
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	**0.0777**	**0.4572**	**0.6614**	**2.9000e-003**	**0.2035**	**4.1300e-003**	**0.2076**	**0.0544**	**3.9200e-003**	**0.0583**		**300.0167**	**300.0167**	**5.0500e-003**	**0.0307**	**309.2811**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222	0.0000	1,889.3552	1,889.3552	0.4486		1,900.5697
Total	**0.8538**	**7.3468**	**11.3459**	**0.0197**	**0.1414**	**0.3390**	**0.4805**	**0.0153**	**0.3222**	**0.3374**	**0.0000**	**1,889.3552**	**1,889.3552**	**0.4486**		**1,900.5697**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9000e-003	0.3998	0.1047	1.5600e-003	0.0438	3.2300e-003	0.0470	0.0120	3.0900e-003	0.0151		164.8095	164.8095	3.7000e-004	0.0259	172.5383
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	**0.0777**	**0.4572**	**0.6614**	**2.9000e-003**	**0.2035**	**4.1300e-003**	**0.2076**	**0.0544**	**3.9200e-003**	**0.0583**		**300.0167**	**300.0167**	**5.0500e-003**	**0.0307**	**309.2811**

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651		19,366.7535	19,366.7535	6.2106		19,522.0185
Total	**9.9973**	**80.7655**	**94.3128**	**0.2010**		**3.4344**	**3.4344**		**3.1651**	**3.1651**		**19,366.7535**	**19,366.7535**	**6.2106**		**19,522.0185**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9100e-003	0.4002	0.1048	1.5600e-003	0.0439	3.2400e-003	0.0471	0.0120	3.1000e-003	0.0151		164.9745	164.9745	3.7000e-004	0.0259	172.7110
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7680	0.6309	6.1233	0.0147	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,487.2786	1,487.2786	0.0514	0.0524	1,504.1710
Total	**0.7759**	**1.0311**	**6.2282**	**0.0163**	**1.8003**	**0.0132**	**1.8135**	**0.4779**	**0.0123**	**0.4901**		**1,652.2531**	**1,652.2531**	**0.0518**	**0.0783**	**1,676.8820**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651	0.0000	19,366.7535	19,366.7535	6.2106		19,522.0185
Total	**9.9973**	**80.7655**	**94.3128**	**0.2010**		**3.4344**	**3.4344**		**3.1651**	**3.1651**	**0.0000**	**19,366.7535**	**19,366.7535**	**6.2106**		**19,522.0185**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9100e-003	0.4002	0.1048	1.5600e-003	0.0439	3.2400e-003	0.0471	0.0120	3.1000e-003	0.0151		164.9745	164.9745	3.7000e-004	0.0259	172.7110
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7680	0.6309	6.1233	0.0147	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,487.2786	1,487.2786	0.0514	0.0524	1,504.1710
Total	**0.7759**	**1.0311**	**6.2282**	**0.0163**	**1.8003**	**0.0132**	**1.8135**	**0.4779**	**0.0123**	**0.4901**		**1,652.2531**	**1,652.2531**	**0.0518**	**0.0783**	**1,676.8820**

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315		19,374.2725	19,374.2725	6.2130		19,529.5982
Total	**9.7408**	**76.1744**	**92.7522**	**0.2010**		**3.1804**	**3.1804**		**2.9315**	**2.9315**		**19,374.2725**	**19,374.2725**	**6.2130**		**19,529.5982**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3941	0.1048	1.5300e-003	0.0439	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.7566	161.7566	3.6000e-004	0.0254	169.3421
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7129	0.5567	5.6079	0.0142	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,439.1754	1,439.1754	0.0462	0.0481	1,454.6677
Total	**0.7207**	**0.9508**	**5.7127**	**0.0158**	**1.8003**	**0.0126**	**1.8129**	**0.4779**	**0.0117**	**0.4895**		**1,600.9319**	**1,600.9319**	**0.0466**	**0.0735**	**1,624.0098**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315	0.0000	19,374.2725	19,374.2725	6.2130		19,529.5982
Total	**9.7408**	**76.1744**	**92.7522**	**0.2010**		**3.1804**	**3.1804**		**2.9315**	**2.9315**	**0.0000**	**19,374.2725**	**19,374.2725**	**6.2130**		**19,529.5982**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3941	0.1048	1.5300e-003	0.0439	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.7566	161.7566	3.6000e-004	0.0254	169.3421
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7129	0.5567	5.6079	0.0142	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,439.1754	1,439.1754	0.0462	0.0481	1,454.6677
Total	**0.7207**	**0.9508**	**5.7127**	**0.0158**	**1.8003**	**0.0126**	**1.8129**	**0.4779**	**0.0117**	**0.4895**		**1,600.9319**	**1,600.9319**	**0.0466**	**0.0735**	**1,624.0098**

3.3 Pipe Installation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860		19,433.6069	19,433.6069	6.2322		19,589.4124
Total	**8.9226**	**65.2015**	**90.8710**	**0.2017**		**2.6962**	**2.6962**		**2.4860**	**2.4860**		**19,433.6069**	**19,433.6069**	**6.2322**		**19,589.4124**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7600e-003	0.3867	0.1046	1.4900e-003	0.0439	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.1000	158.1000	3.6000e-004	0.0249	165.5141
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.6655	0.4950	5.1693	0.0138	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,390.9814	1,390.9814	0.0417	0.0445	1,405.2754
Total	**0.6732**	**0.8817**	**5.2739**	**0.0153**	**1.8003**	**0.0120**	**1.8123**	**0.4779**	**0.0112**	**0.4890**		**1,549.0814**	**1,549.0814**	**0.0420**	**0.0693**	**1,570.7895**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860	0.0000	19,433.6069	19,433.6069	6.2322		19,589.4124
Total	**8.9226**	**65.2015**	**90.8710**	**0.2017**		**2.6962**	**2.6962**		**2.4860**	**2.4860**	**0.0000**	**19,433.6069**	**19,433.6069**	**6.2322**		**19,589.4124**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7600e-003	0.3867	0.1046	1.4900e-003	0.0439	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.1000	158.1000	3.6000e-004	0.0249	165.5141
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.6655	0.4950	5.1693	0.0138	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,390.9814	1,390.9814	0.0417	0.0445	1,405.2754
Total	**0.6732**	**0.8817**	**5.2739**	**0.0153**	**1.8003**	**0.0120**	**1.8123**	**0.4779**	**0.0112**	**0.4890**		**1,549.0814**	**1,549.0814**	**0.0420**	**0.0693**	**1,570.7895**

3.4 Pump Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660		6,196.4705	6,196.4705	1.9889		6,246.1935
Total	**2.0339**	**14.5442**	**24.0133**	**0.0643**		**0.6135**	**0.6135**		**0.5660**	**0.5660**		**6,196.4705**	**6,196.4705**	**1.9889**		**6,246.1935**

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3939	0.1048	1.5300e-003	0.0438	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.6919	161.6919	3.6000e-004	0.0254	169.2744
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2222	0.1735	1.7479	4.4400e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		448.5741	448.5741	0.0144	0.0150	453.4029
Total	**0.2300**	**0.5675**	**1.8527**	**5.9700e-003**	**0.5913**	**6.1300e-003**	**0.5974**	**0.1572**	**5.7600e-003**	**0.1630**		**610.2660**	**610.2660**	**0.0148**	**0.0404**	**622.6773**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660	0.0000	6,196.4705	6,196.4705	1.9889		6,246.1935
Total	**2.0339**	**14.5442**	**24.0133**	**0.0643**		**0.6135**	**0.6135**		**0.5660**	**0.5660**	**0.0000**	**6,196.4705**	**6,196.4705**	**1.9889**		**6,246.1935**

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3939	0.1048	1.5300e-003	0.0438	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.6919	161.6919	3.6000e-004	0.0254	169.2744
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2222	0.1735	1.7479	4.4400e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		448.5741	448.5741	0.0144	0.0150	453.4029
Total	**0.2300**	**0.5675**	**1.8527**	**5.9700e-003**	**0.5913**	**6.1300e-003**	**0.5974**	**0.1572**	**5.7600e-003**	**0.1630**		**610.2660**	**610.2660**	**0.0148**	**0.0404**	**622.6773**

3.4 Pump Installation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959		6,201.0163	6,201.0163	1.9904		6,250.7761
Total	**1.9079**	**12.7663**	**23.9407**	**0.0643**		**0.5373**	**0.5373**		**0.4959**	**0.4959**		**6,201.0163**	**6,201.0163**	**1.9904**		**6,250.7761**

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3865	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.0368	158.0368	3.6000e-004	0.0248	165.4479
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2074	0.1543	1.6112	4.2900e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		433.5527	433.5527	0.0130	0.0139	438.0079
Total	**0.2152**	**0.5408**	**1.7158**	**5.7800e-003**	**0.5913**	**5.9300e-003**	**0.5972**	**0.1572**	**5.5700e-003**	**0.1628**		**591.5894**	**591.5894**	**0.0134**	**0.0387**	**603.4558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959	0.0000	6,201.0163	6,201.0163	1.9904		6,250.7761
Total	**1.9079**	**12.7663**	**23.9407**	**0.0643**		**0.5373**	**0.5373**		**0.4959**	**0.4959**	**0.0000**	**6,201.0163**	**6,201.0163**	**1.9904**		**6,250.7761**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3865	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.0368	158.0368	3.6000e-004	0.0248	165.4479
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2074	0.1543	1.6112	4.2900e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		433.5527	433.5527	0.0130	0.0139	438.0079
Total	**0.2152**	**0.5408**	**1.7158**	**5.7800e-003**	**0.5913**	**5.9300e-003**	**0.5972**	**0.1572**	**5.5700e-003**	**0.1628**		**591.5894**	**591.5894**	**0.0134**	**0.0387**	**603.4558**

3.5 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2590**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**		**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8300e-003	0.3937	0.1047	1.5300e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		161.5948	161.5948	3.6000e-004	0.0254	169.1728
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	**0.1282**	**0.4877**	**1.0515**	**3.9300e-003**	**0.3404**	**4.7900e-003**	**0.3452**	**0.0907**	**4.5300e-003**	**0.0952**		**404.5725**	**404.5725**	**8.1600e-003**	**0.0335**	**414.7660**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2590**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**	**0.0000**	**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8300e-003	0.3937	0.1047	1.5300e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		161.5948	161.5948	3.6000e-004	0.0254	169.1728
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	**0.1282**	**0.4877**	**1.0515**	**3.9300e-003**	**0.3404**	**4.7900e-003**	**0.3452**	**0.0907**	**4.5300e-003**	**0.0952**		**404.5725**	**404.5725**	**8.1600e-003**	**0.0335**	**414.7660**

3.5 Asphalt Replacement - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151		2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1941**	**7.4257**	**13.4599**	**0.0226**		**0.3416**	**0.3416**		**0.3151**	**0.3151**		**2,175.0370**	**2,175.0370**	**0.6959**		**2,192.4339**

Unmitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3863	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		157.9419	157.9419	3.6000e-004	0.0248	165.3486
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1124	0.0836	0.8727	2.3200e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		234.8410	234.8410	7.0400e-003	7.5100e-003	237.2543
Total	**0.1201**	**0.4699**	**0.9772**	**3.8100e-003**	**0.3404**	**4.6700e-003**	**0.3450**	**0.0907**	**4.4100e-003**	**0.0951**		**392.7829**	**392.7829**	**7.4000e-003**	**0.0323**	**402.6029**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151	0.0000	2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1941**	**7.4257**	**13.4599**	**0.0226**		**0.3416**	**0.3416**		**0.3151**	**0.3151**	**0.0000**	**2,175.0370**	**2,175.0370**	**0.6959**		**2,192.4339**

Mitigated Construction Off-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3863	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		157.9419	157.9419	3.6000e-004	0.0248	165.3486
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1124	0.0836	0.8727	2.3200e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		234.8410	234.8410	7.0400e-003	7.5100e-003	237.2543
Total	**0.1201**	**0.4699**	**0.9772**	**3.8100e-003**	**0.3404**	**4.6700e-003**	**0.3450**	**0.0907**	**4.4100e-003**	**0.0951**		**392.7829**	**392.7829**	**7.4000e-003**	**0.0323**	**402.6029**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.015908	0.000716	0.000409	0.032995	0.001089	0.004690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Unmitigated	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**		**2.4900e-003**

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Total	**0.2179**	**1.0000e-005**	**1.0900e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3400e-003**	**2.3400e-003**	**1.0000e-005**		**2.4900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paradise - Core Collection System

Butte County AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.67	Acre	10.67	464,785.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description

Construction Phase - adjusted based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Trips and VMT - from project description and notes

Grading - from project description

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	10.00	80.00
tblGrading	AcresOfGrading	0.00	10.67
tblGrading	MaterialExported	0.00	169,400.00
tblGrading	MaterialImported	0.00	62,600.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	9.00	425.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	170.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	22,939.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	833.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	88.00	154.00
tblTripsAndVMT	WorkerTripNumber	35.00	48.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction

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Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3862	2.9673	3.7513	7.9800e-003	0.0695	0.1258	0.1953	0.0176	0.1163	0.1339	0.0000	700.6103	700.6103	0.2010	3.2900e-003	706.6157
2024	1.5604	11.3843	15.1174	0.0342	0.2743	0.4720	0.7463	0.0731	0.4351	0.5082	0.0000	3,006.7467	3,006.7467	0.8922	0.0115	3,032.4796
2025	0.2393	1.5931	2.5432	5.8900e-003	0.0497	0.0659	0.1156	0.0133	0.0607	0.0740	0.0000	517.7561	517.7561	0.1525	2.4800e-003	522.3078
Maximum	**1.5604**	**11.3843**	**15.1174**	**0.0342**	**0.2743**	**0.4720**	**0.7463**	**0.0731**	**0.4351**	**0.5082**	**0.0000**	**3,006.7467**	**3,006.7467**	**0.8922**	**0.0115**	**3,032.4796**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3862	2.9673	3.7513	7.9800e-003	0.0695	0.1258	0.1953	0.0176	0.1163	0.1339	0.0000	700.6096	700.6096	0.2010	3.2900e-003	706.6149
2024	1.5604	11.3843	15.1173	0.0342	0.2743	0.4720	0.7463	0.0731	0.4351	0.5082	0.0000	3,006.7434	3,006.7434	0.8922	0.0115	3,032.4763
2025	0.2393	1.5931	2.5432	5.8900e-003	0.0497	0.0659	0.1156	0.0133	0.0607	0.0740	0.0000	517.7555	517.7555	0.1525	2.4800e-003	522.3073
Maximum	**1.5604**	**11.3843**	**15.1173**	**0.0342**	**0.2743**	**0.4720**	**0.7463**	**0.0731**	**0.4351**	**0.5082**	**0.0000**	**3,006.7434**	**3,006.7434**	**0.8922**	**0.0115**	**3,032.4763**

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-1-2023**	**10-31-2023**	1.3112	1.3112
2	**11-1-2023**	**1-31-2024**	3.0488	3.0488
3	**2-1-2024**	**4-30-2024**	2.8148	2.8148
4	**5-1-2024**	**7-31-2024**	3.2539	3.2539
5	**8-1-2024**	**10-31-2024**	3.4469	3.4469
6	**11-1-2024**	**1-31-2025**	3.5676	3.5676
7	**2-1-2025**	**4-30-2025**	0.6831	0.6831
		Highest	3.5676	3.5676

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.0398**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.0000**	**2.0000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0398**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.0000**	**2.0000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	11/20/2023	5	80	
2	Pipe Installation	Trenching	10/1/2023	2/14/2025	5	360	
3	Pump Installation	Trenching	6/1/2024	3/7/2025	5	200	
4	Asphalt Replacement	Paving	11/15/2024	3/6/2025	5	80	

Acres of Grading (Site Preparation Phase): 10.67

Acres of Grading (Grading Phase): 0

Acres of Paving: 10.67

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	7	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	7	8.00	510	0.38
Pipe Installation	Plate Compactors	7	8.00	8	0.43
Pipe Installation	Rollers	7	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Scrapers	0	8.00	367	0.48
Pipe Installation	Tractors/Loaders/Backhoes	7	8.00	170	0.37

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Pump Installation	Cement and Mortar Mixers	2	8.00	425	0.56
Pump Installation	Cranes	0	7.00	231	0.29
Pump Installation	Excavators	4	8.00	310	0.38
Pump Installation	Forklifts	0	8.00	89	0.20
Pump Installation	Generator Sets	0	8.00	84	0.74
Pump Installation	Plate Compactors	2	8.00	8	0.43
Pump Installation	Rollers	2	8.00	20	0.38
Pump Installation	Tractors/Loaders/Backhoes	4	8.00	170	0.37
Pump Installation	Welders	0	8.00	46	0.45
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Removal	5	14.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	35	154.00	0.00	1,500.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pump Installation	14	48.00	0.00	833.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.6600e-003	0.0000	5.6600e-003	6.1000e-004	0.0000	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0342	0.2939	0.4538	7.9000e-004		0.0136	0.0136		0.0129	0.0129	0.0000	68.5598	68.5598	0.0163	0.0000	68.9667
Total	**0.0342**	**0.2939**	**0.4538**	**7.9000e-004**	**5.6600e-003**	**0.0136**	**0.0192**	**6.1000e-004**	**0.0129**	**0.0135**	**0.0000**	**68.5598**	**68.5598**	**0.0163**	**0.0000**	**68.9667**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0156	4.1300e-003	6.0000e-005	1.6900e-003	1.3000e-004	1.8200e-003	4.7000e-004	1.2000e-004	5.9000e-004	0.0000	5.9728	5.9728	1.0000e-005	9.4000e-004	6.2529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6700e-003	2.0400e-003	0.0226	6.0000e-005	6.1200e-003	4.0000e-005	6.1500e-003	1.6300e-003	3.0000e-005	1.6600e-003	0.0000	5.0536	5.0536	1.6000e-004	1.6000e-004	5.1052
Total	**3.0000e-003**	**0.0176**	**0.0268**	**1.2000e-004**	**7.8100e-003**	**1.7000e-004**	**7.9700e-003**	**2.1000e-003**	**1.5000e-004**	**2.2500e-003**	**0.0000**	**11.0264**	**11.0264**	**1.7000e-004**	**1.1000e-003**	**11.3581**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.6600e-003	0.0000	5.6600e-003	6.1000e-004	0.0000	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0342	0.2939	0.4538	7.9000e-004		0.0136	0.0136		0.0129	0.0129	0.0000	68.5597	68.5597	0.0163	0.0000	68.9666
Total	**0.0342**	**0.2939**	**0.4538**	**7.9000e-004**	**5.6600e-003**	**0.0136**	**0.0192**	**6.1000e-004**	**0.0129**	**0.0135**	**0.0000**	**68.5597**	**68.5597**	**0.0163**	**0.0000**	**68.9666**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0156	4.1300e-003	6.0000e-005	1.6900e-003	1.3000e-004	1.8200e-003	4.7000e-004	1.2000e-004	5.9000e-004	0.0000	5.9728	5.9728	1.0000e-005	9.4000e-004	6.2529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6700e-003	2.0400e-003	0.0226	6.0000e-005	6.1200e-003	4.0000e-005	6.1500e-003	1.6300e-003	3.0000e-005	1.6600e-003	0.0000	5.0536	5.0536	1.6000e-004	1.6000e-004	5.1052
Total	**3.0000e-003**	**0.0176**	**0.0268**	**1.2000e-004**	**7.8100e-003**	**1.7000e-004**	**7.9700e-003**	**2.1000e-003**	**1.5000e-004**	**2.2500e-003**	**0.0000**	**11.0264**	**11.0264**	**1.7000e-004**	**1.1000e-003**	**11.3581**

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3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3249	2.6249	3.0652	6.5300e-003		0.1116	0.1116		0.1029	0.1029	0.0000	570.9998	570.9998	0.1831	0.0000	575.5775
Total	**0.3249**	**2.6249**	**3.0652**	**6.5300e-003**		**0.1116**	**0.1116**		**0.1029**	**0.1029**	**0.0000**	**570.9998**	**570.9998**	**0.1831**	**0.0000**	**575.5775**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0127	3.3600e-003	5.0000e-005	1.3700e-003	1.1000e-004	1.4800e-003	3.8000e-004	1.0000e-004	4.8000e-004	0.0000	4.8578	4.8578	1.0000e-005	7.6000e-004	5.0856
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0183	0.2022	4.9000e-004	0.0547	3.2000e-004	0.0550	0.0146	3.0000e-004	0.0148	0.0000	45.1666	45.1666	1.4300e-003	1.4300e-003	45.6278
Total	**0.0241**	**0.0309**	**0.2055**	**5.4000e-004**	**0.0560**	**4.3000e-004**	**0.0565**	**0.0149**	**4.0000e-004**	**0.0153**	**0.0000**	**50.0244**	**50.0244**	**1.4400e-003**	**2.1900e-003**	**50.7134**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3249	2.6249	3.0652	6.5300e-003		0.1116	0.1116		0.1029	0.1029	0.0000	570.9991	570.9991	0.1831	0.0000	575.5768
Total	**0.3249**	**2.6249**	**3.0652**	**6.5300e-003**		**0.1116**	**0.1116**		**0.1029**	**0.1029**	**0.0000**	**570.9991**	**570.9991**	**0.1831**	**0.0000**	**575.5768**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0127	3.3600e-003	5.0000e-005	1.3700e-003	1.1000e-004	1.4800e-003	3.8000e-004	1.0000e-004	4.8000e-004	0.0000	4.8578	4.8578	1.0000e-005	7.6000e-004	5.0856
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0183	0.2022	4.9000e-004	0.0547	3.2000e-004	0.0550	0.0146	3.0000e-004	0.0148	0.0000	45.1666	45.1666	1.4300e-003	1.4300e-003	45.6278
Total	**0.0241**	**0.0309**	**0.2055**	**5.4000e-004**	**0.0560**	**4.3000e-004**	**0.0565**	**0.0149**	**4.0000e-004**	**0.0153**	**0.0000**	**50.0244**	**50.0244**	**1.4400e-003**	**2.1900e-003**	**50.7134**

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2760	9.9789	12.1505	0.0263		0.4166	0.4166		0.3840	0.3840	0.0000	2,302.4618	2,302.4618	0.7384	0.0000	2,320.9209
Total	**1.2760**	**9.9789**	**12.1505**	**0.0263**		**0.4166**	**0.4166**		**0.3840**	**0.3840**	**0.0000**	**2,302.4618**	**2,302.4618**	**0.7384**	**0.0000**	**2,320.9209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0800e-003	0.0502	0.0135	2.0000e-004	5.5300e-003	4.2000e-004	5.9600e-003	1.5200e-003	4.0000e-004	1.9300e-003	0.0000	19.1982	19.1982	5.0000e-005	3.0200e-003	20.0986
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0891	0.0649	0.7452	1.9200e-003	0.2204	1.2200e-003	0.2216	0.0586	1.1300e-003	0.0598	0.0000	176.1546	176.1546	5.1800e-003	5.2900e-003	177.8594
Total	**0.0902**	**0.1151**	**0.7588**	**2.1200e-003**	**0.2259**	**1.6400e-003**	**0.2276**	**0.0602**	**1.5300e-003**	**0.0617**	**0.0000**	**195.3528**	**195.3528**	**5.2300e-003**	**8.3100e-003**	**197.9580**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2760	9.9788	12.1505	0.0263		0.4166	0.4166		0.3840	0.3840	0.0000	2,302.4591	2,302.4591	0.7384	0.0000	2,320.9182
Total	**1.2760**	**9.9788**	**12.1505**	**0.0263**		**0.4166**	**0.4166**		**0.3840**	**0.3840**	**0.0000**	**2,302.4591**	**2,302.4591**	**0.7384**	**0.0000**	**2,320.9182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0800e-003	0.0502	0.0135	2.0000e-004	5.5300e-003	4.2000e-004	5.9600e-003	1.5200e-003	4.0000e-004	1.9300e-003	0.0000	19.1982	19.1982	5.0000e-005	3.0200e-003	20.0986
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0891	0.0649	0.7452	1.9200e-003	0.2204	1.2200e-003	0.2216	0.0586	1.1300e-003	0.0598	0.0000	176.1546	176.1546	5.1800e-003	5.2900e-003	177.8594
Total	**0.0902**	**0.1151**	**0.7588**	**2.1200e-003**	**0.2259**	**1.6400e-003**	**0.2276**	**0.0602**	**1.5300e-003**	**0.0617**	**0.0000**	**195.3528**	**195.3528**	**5.2300e-003**	**8.3100e-003**	**197.9580**

3.3 Pipe Installation - 2025

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1472	1.0758	1.4994	3.3300e-003		0.0445	0.0445		0.0410	0.0410	0.0000	290.8929	290.8929	0.0933	0.0000	293.2251
Total	**0.1472**	**1.0758**	**1.4994**	**3.3300e-003**		**0.0445**	**0.0445**		**0.0410**	**0.0410**	**0.0000**	**290.8929**	**290.8929**	**0.0933**	**0.0000**	**293.2251**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.2100e-003	1.7000e-003	2.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.3634	2.3634	1.0000e-005	3.7000e-004	2.4742
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0105	7.2700e-003	0.0864	2.3000e-004	0.0278	1.5000e-004	0.0279	7.3900e-003	1.3000e-004	7.5200e-003	0.0000	21.4428	21.4428	5.9000e-004	6.2000e-004	21.6410
Total	**0.0106**	**0.0135**	**0.0881**	**2.5000e-004**	**0.0285**	**2.0000e-004**	**0.0287**	**7.5800e-003**	**1.8000e-004**	**7.7600e-003**	**0.0000**	**23.8062**	**23.8062**	**6.0000e-004**	**9.9000e-004**	**24.1152**

Mitigated Construction On-Site

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Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1472	1.0758	1.4994	3.3300e-003		0.0445	0.0445		0.0410	0.0410	0.0000	290.8925	290.8925	0.0933	0.0000	293.2247
Total	**0.1472**	**1.0758**	**1.4994**	**3.3300e-003**		**0.0445**	**0.0445**		**0.0410**	**0.0410**	**0.0000**	**290.8925**	**290.8925**	**0.0933**	**0.0000**	**293.2247**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.2100e-003	1.7000e-003	2.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.3634	2.3634	1.0000e-005	3.7000e-004	2.4742
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0105	7.2700e-003	0.0864	2.3000e-004	0.0278	1.5000e-004	0.0279	7.3900e-003	1.3000e-004	7.5200e-003	0.0000	21.4428	21.4428	5.9000e-004	6.2000e-004	21.6410
Total	**0.0106**	**0.0135**	**0.0881**	**2.5000e-004**	**0.0285**	**2.0000e-004**	**0.0287**	**7.5800e-003**	**1.8000e-004**	**7.7600e-003**	**0.0000**	**23.8062**	**23.8062**	**6.0000e-004**	**9.9000e-004**	**24.1152**

3.4 Pump Installation - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1546	1.1054	1.8250	4.8900e-003		0.0466	0.0466		0.0430	0.0430	0.0000	427.2221	427.2221	0.1371	0.0000	430.6503
Total	**0.1546**	**1.1054**	**1.8250**	**4.8900e-003**		**0.0466**	**0.0466**		**0.0430**	**0.0430**	**0.0000**	**427.2221**	**427.2221**	**0.1371**	**0.0000**	**430.6503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3000e-004	0.0291	7.8500e-003	1.2000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1200e-003	0.0000	11.1335	11.1335	3.0000e-005	1.7500e-003	11.6556
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0161	0.0117	0.1348	3.5000e-004	0.0399	2.2000e-004	0.0401	0.0106	2.0000e-004	0.0108	0.0000	31.8535	31.8535	9.4000e-004	9.6000e-004	32.1618
Total	**0.0168**	**0.0409**	**0.1426**	**4.7000e-004**	**0.0431**	**4.6000e-004**	**0.0435**	**0.0115**	**4.3000e-004**	**0.0119**	**0.0000**	**42.9869**	**42.9869**	**9.7000e-004**	**2.7100e-003**	**43.8173**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1546	1.1054	1.8250	4.8900e-003		0.0466	0.0466		0.0430	0.0430	0.0000	427.2216	427.2216	0.1371	0.0000	430.6498
Total	**0.1546**	**1.1054**	**1.8250**	**4.8900e-003**		**0.0466**	**0.0466**		**0.0430**	**0.0430**	**0.0000**	**427.2216**	**427.2216**	**0.1371**	**0.0000**	**430.6498**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3000e-004	0.0291	7.8500e-003	1.2000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1200e-003	0.0000	11.1335	11.1335	3.0000e-005	1.7500e-003	11.6556
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0161	0.0117	0.1348	3.5000e-004	0.0399	2.2000e-004	0.0401	0.0106	2.0000e-004	0.0108	0.0000	31.8535	31.8535	9.4000e-004	9.6000e-004	32.1618
Total	**0.0168**	**0.0409**	**0.1426**	**4.7000e-004**	**0.0431**	**4.6000e-004**	**0.0435**	**0.0115**	**4.3000e-004**	**0.0119**	**0.0000**	**42.9869**	**42.9869**	**9.7000e-004**	**2.7100e-003**	**43.8173**

3.4 Pump Installation - 2025

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0458	0.3064	0.5746	1.5400e-003		0.0129	0.0129		0.0119	0.0119	0.0000	135.0112	135.0112	0.0433	0.0000	136.0946
Total	**0.0458**	**0.3064**	**0.5746**	**1.5400e-003**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**135.0112**	**135.0112**	**0.0433**	**0.0000**	**136.0946**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	9.0200e-003	2.4700e-003	4.0000e-005	1.0100e-003	8.0000e-005	1.0900e-003	2.8000e-004	7.0000e-005	3.5000e-004	0.0000	3.4363	3.4363	1.0000e-005	5.4000e-004	3.5975
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7400e-003	3.3000e-003	0.0392	1.1000e-004	0.0126	7.0000e-005	0.0127	3.3500e-003	6.0000e-005	3.4100e-003	0.0000	9.7214	9.7214	2.7000e-004	2.8000e-004	9.8113
Total	**4.9400e-003**	**0.0123**	**0.0416**	**1.5000e-004**	**0.0136**	**1.5000e-004**	**0.0137**	**3.6300e-003**	**1.3000e-004**	**3.7600e-003**	**0.0000**	**13.1577**	**13.1577**	**2.8000e-004**	**8.2000e-004**	**13.4087**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0458	0.3064	0.5746	1.5400e-003		0.0129	0.0129		0.0119	0.0119	0.0000	135.0111	135.0111	0.0433	0.0000	136.0945
Total	**0.0458**	**0.3064**	**0.5746**	**1.5400e-003**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**135.0111**	**135.0111**	**0.0433**	**0.0000**	**136.0945**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	9.0200e-003	2.4700e-003	4.0000e-005	1.0100e-003	8.0000e-005	1.0900e-003	2.8000e-004	7.0000e-005	3.5000e-004	0.0000	3.4363	3.4363	1.0000e-005	5.4000e-004	3.5975
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7400e-003	3.3000e-003	0.0392	1.1000e-004	0.0126	7.0000e-005	0.0127	3.3500e-003	6.0000e-005	3.4100e-003	0.0000	9.7214	9.7214	2.7000e-004	2.8000e-004	9.8113
Total	**4.9400e-003**	**0.0123**	**0.0416**	**1.5000e-004**	**0.0136**	**1.5000e-004**	**0.0137**	**3.6300e-003**	**1.3000e-004**	**3.7600e-003**	**0.0000**	**13.1577**	**13.1577**	**2.8000e-004**	**8.2000e-004**	**13.4087**

3.5 Asphalt Replacement - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0150	0.1364	0.2229	3.7000e-004		6.5400e-003	6.5400e-003		6.0300e-003	6.0300e-003	0.0000	32.5615	32.5615	0.0104	0.0000	32.8219
Paving	5.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0208**	**0.1364**	**0.2229**	**3.7000e-004**		**6.5400e-003**	**6.5400e-003**		**6.0300e-003**	**6.0300e-003**	**0.0000**	**32.5615**	**32.5615**	**0.0104**	**0.0000**	**32.8219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.3200e-003	1.7000e-003	3.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.4157	2.4157	1.0000e-005	3.8000e-004	2.5290
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.3800e-003	0.0159	4.0000e-005	4.6900e-003	3.0000e-005	4.7100e-003	1.2500e-003	2.0000e-005	1.2700e-003	0.0000	3.7459	3.7459	1.1000e-004	1.1000e-004	3.7822
Total	**2.0400e-003**	**7.7000e-003**	**0.0176**	**7.0000e-005**	**5.3900e-003**	**8.0000e-005**	**5.4600e-003**	**1.4400e-003**	**7.0000e-005**	**1.5100e-003**	**0.0000**	**6.1616**	**6.1616**	**1.2000e-004**	**4.9000e-004**	**6.3112**

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0150	0.1364	0.2229	3.7000e-004		6.5400e-003	6.5400e-003		6.0300e-003	6.0300e-003	0.0000	32.5614	32.5614	0.0104	0.0000	32.8219
Paving	5.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0208**	**0.1364**	**0.2229**	**3.7000e-004**		**6.5400e-003**	**6.5400e-003**		**6.0300e-003**	**6.0300e-003**	**0.0000**	**32.5614**	**32.5614**	**0.0104**	**0.0000**	**32.8219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.3200e-003	1.7000e-003	3.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.4157	2.4157	1.0000e-005	3.8000e-004	2.5290
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.3800e-003	0.0159	4.0000e-005	4.6900e-003	3.0000e-005	4.7100e-003	1.2500e-003	2.0000e-005	1.2700e-003	0.0000	3.7459	3.7459	1.1000e-004	1.1000e-004	3.7822
Total	**2.0400e-003**	**7.7000e-003**	**0.0176**	**7.0000e-005**	**5.3900e-003**	**8.0000e-005**	**5.4600e-003**	**1.4400e-003**	**7.0000e-005**	**1.5100e-003**	**0.0000**	**6.1616**	**6.1616**	**1.2000e-004**	**4.9000e-004**	**6.3112**

3.5 Asphalt Replacement - 2025

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.1745	0.3163	5.3000e-004		8.0300e-003	8.0300e-003		7.4000e-003	7.4000e-003	0.0000	46.3693	46.3693	0.0148	0.0000	46.7402
Paving	8.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0281**	**0.1745**	**0.3163**	**5.3000e-004**		**8.0300e-003**	**8.0300e-003**		**7.4000e-003**	**7.4000e-003**	**0.0000**	**46.3693**	**46.3693**	**0.0148**	**0.0000**	**46.7402**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	8.8300e-003	2.4200e-003	4.0000e-005	9.9000e-004	7.0000e-005	1.0700e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.3627	3.3627	1.0000e-005	5.3000e-004	3.5204
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5200e-003	1.7500e-003	0.0208	6.0000e-005	6.6700e-003	4.0000e-005	6.7100e-003	1.7800e-003	3.0000e-005	1.8100e-003	0.0000	5.1561	5.1561	1.4000e-004	1.5000e-004	5.2037
Total	**2.7100e-003**	**0.0106**	**0.0232**	**1.0000e-004**	**7.6600e-003**	**1.1000e-004**	**7.7800e-003**	**2.0500e-003**	**1.0000e-004**	**2.1500e-003**	**0.0000**	**8.5188**	**8.5188**	**1.5000e-004**	**6.8000e-004**	**8.7241**

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.1745	0.3163	5.3000e-004		8.0300e-003	8.0300e-003		7.4000e-003	7.4000e-003	0.0000	46.3692	46.3692	0.0148	0.0000	46.7401
Paving	8.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0281**	**0.1745**	**0.3163**	**5.3000e-004**		**8.0300e-003**	**8.0300e-003**		**7.4000e-003**	**7.4000e-003**	**0.0000**	**46.3692**	**46.3692**	**0.0148**	**0.0000**	**46.7401**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	8.8300e-003	2.4200e-003	4.0000e-005	9.9000e-004	7.0000e-005	1.0700e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.3627	3.3627	1.0000e-005	5.3000e-004	3.5204
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5200e-003	1.7500e-003	0.0208	6.0000e-005	6.6700e-003	4.0000e-005	6.7100e-003	1.7800e-003	3.0000e-005	1.8100e-003	0.0000	5.1561	5.1561	1.4000e-004	1.5000e-004	5.2037
Total	**2.7100e-003**	**0.0106**	**0.0232**	**1.0000e-004**	**7.6600e-003**	**1.1000e-004**	**7.7800e-003**	**2.0500e-003**	**1.0000e-004**	**2.1500e-003**	**0.0000**	**8.5188**	**8.5188**	**1.5000e-004**	**6.8000e-004**	**8.7241**

4.0 Operational Detail - Mobile

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.015908	0.000716	0.000409	0.032995	0.001089	0.004690

5.0 Energy Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Unmitigated	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004

6.2 Area by SubCategory

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Total	**0.0397**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.0000**	**2.0000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Total	**0.0397**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.0000**	**2.0000e-004**

7.0 Water Detail

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paradise - Export Pipeline System

Butte County AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.95	Acre	5.95	259,182.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description

Construction Phase - from project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Trips and VMT - from notes and project description

Grading - from project description

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblGrading	AcresOfGrading	0.00	5.95
tblGrading	MaterialExported	0.00	60,800.00
tblGrading	MaterialImported	0.00	22,900.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	9.00	425.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	10,463.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	HaulingTripNumber	0.00	107.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	38.00	66.00
tblTripsAndVMT	WorkerTripNumber	18.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.7754	75.2586	105.2680	0.2523	1.9545	3.2397	5.1942	0.4851	3.0256	3.5108	0.0000	24,423.0100	24,423.0100	6.5770	0.1232	24,624.1552
2024	5.8303	41.6499	57.5060	0.1204	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,659.9295	11,659.9295	3.3852	0.0576	11,761.7183

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	**9.7754**	**75.2586**	**105.2680**	**0.2523**	**1.9545**	**3.2397**	**5.1942**	**0.4851**	**3.0256**	**3.5108**	**0.0000**	**24,423.0100**	**24,423.0100**	**6.5770**	**0.1232**	**24,624.1552**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.7754	75.2586	105.2680	0.2523	1.9545	3.2397	5.1942	0.4851	3.0256	3.5108	0.0000	24,423.0100	24,423.0100	6.5770	0.1232	24,624.1552
2024	5.8303	41.6499	57.5060	0.1204	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,659.9295	11,659.9295	3.3852	0.0576	11,761.7183
Maximum	**9.7754**	**75.2586**	**105.2680**	**0.2523**	**1.9545**	**3.2397**	**5.1942**	**0.4851**	**3.0256**	**3.5108**	**0.0000**	**24,423.0100**	**24,423.0100**	**6.5770**	**0.1232**	**24,624.1552**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**0.0000**	**1.3900e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**0.0000**	**1.3900e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	10/23/2023	5	60	
2	Pipe Installation	Trenching	10/1/2023	8/30/2024	5	240	
3	Structure Installation	Trenching	10/1/2023	11/24/2023	5	40	
4	HDD	Trenching	10/1/2023	12/22/2023	5	60	
5	Bore and Jack	Trenching	10/1/2023	12/22/2023	5	60	
6	Asphalt Replacement	Paving	6/10/2024	8/30/2024	5	60	

Acres of Grading (Site Preparation Phase): 5.95

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	3	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	3	8.00	510	0.38
Pipe Installation	Plate Compactors	3	8.00	8	0.43
Pipe Installation	Rollers	3	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pipe Installation	Tractors/Loaders/Backhoes	3	8.00	170	0.37
Structure Installation	Cement and Mortar Mixers	1	8.00	425	0.56
Structure Installation	Cranes	0	7.00	231	0.29
Structure Installation	Excavators	2	8.00	310	0.38
Structure Installation	Forklifts	0	8.00	89	0.20
Structure Installation	Generator Sets	0	8.00	84	0.74
Structure Installation	Plate Compactors	1	8.00	8	0.43
Structure Installation	Rollers	1	8.00	20	0.38
Structure Installation	Tractors/Loaders/Backhoes	2	8.00	170	0.37
Structure Installation	Welders	0	8.00	46	0.45
HDD	Air Compressors	0	6.00	78	0.48
HDD	Bore/Drill Rigs	1	8.00	650	0.50
HDD	Generator Sets	1	8.00	84	0.74
HDD	Other Material Handling Equipment	1	8.00	168	0.40
HDD	Pumps	1	8.00	84	0.74
HDD	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Bore and Jack	Bore/Drill Rigs	1	8.00	650	0.50
Bore and Jack	Generator Sets	1	8.00	84	0.74
Bore and Jack	Other Material Handling Equipment	1	8.00	168	0.40
Bore and Jack	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Removal	5	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	15	66.00	0.00	640.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Structure Installation	7	24.00	0.00	107.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
HDD	5	18.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Bore and Jack	4	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284		1,935.6213	1,935.6213	0.4635		1,947.2098
Total	**0.8688**	**7.5463**	**11.6657**	**0.0201**	**0.2629**	**0.3458**	**0.6087**	**0.0352**	**0.3284**	**0.3636**		**1,935.6213**	**1,935.6213**	**0.4635**		**1,947.2098**

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	**0.0837**	**0.2828**	**0.7518**	**2.5200e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**258.6938**	**258.6938**	**4.6800e-003**	**0.0207**	**264.9840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284	0.0000	1,935.6213	1,935.6213	0.4635		1,947.2098
Total	**0.8688**	**7.5463**	**11.6657**	**0.0201**	**0.2629**	**0.3458**	**0.6087**	**0.0352**	**0.3284**	**0.3636**	**0.0000**	**1,935.6213**	**1,935.6213**	**0.4635**		**1,947.2098**

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	**0.0837**	**0.2828**	**0.7518**	**2.5200e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**258.6938**	**258.6938**	**4.6800e-003**	**0.0207**	**264.9840**

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565		8,300.0372	8,300.0372	2.6617		8,366.5794
Total	**4.2846**	**34.6138**	**40.4198**	**0.0861**		**1.4719**	**1.4719**		**1.3565**	**1.3565**		**8,300.0372**	**8,300.0372**	**2.6617**		**8,366.5794**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3684	0.2204	3.2354	7.1500e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		722.9114	722.9114	0.0209	0.0196	729.2727
Total	**0.3740**	**0.4565**	**3.3009**	**8.1500e-003**	**0.7808**	**6.3200e-003**	**0.7872**	**0.2073**	**5.9000e-003**	**0.2132**		**828.2603**	**828.2603**	**0.0211**	**0.0362**	**839.5625**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565	0.0000	8,300.0372	8,300.0372	2.6617		8,366.5794
Total	**4.2846**	**34.6138**	**40.4198**	**0.0861**		**1.4719**	**1.4719**		**1.3565**	**1.3565**	**0.0000**	**8,300.0372**	**8,300.0372**	**2.6617**		**8,366.5794**

Mitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3684	0.2204	3.2354	7.1500e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		722.9114	722.9114	0.0209	0.0196	729.2727
Total	**0.3740**	**0.4565**	**3.3009**	**8.1500e-003**	**0.7808**	**6.3200e-003**	**0.7872**	**0.2073**	**5.9000e-003**	**0.2132**		**828.2603**	**828.2603**	**0.0211**	**0.0362**	**839.5625**

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563		8,303.2596	8,303.2596	2.6627		8,369.8278
Total	**4.1746**	**32.6462**	**39.7510**	**0.0862**		**1.3630**	**1.3630**		**1.2563**	**1.2563**		**8,303.2596**	**8,303.2596**	**2.6627**		**8,369.8278**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3410	0.1946	2.9532	6.9200e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		699.2853	699.2853	0.0186	0.0180	705.1196
Total	**0.3465**	**0.4270**	**3.0187**	**7.9000e-003**	**0.7808**	**6.0600e-003**	**0.7869**	**0.2073**	**5.6500e-003**	**0.2130**		**802.5763**	**802.5763**	**0.0189**	**0.0343**	**813.2549**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563	0.0000	8,303.2596	8,303.2596	2.6627		8,369.8278
Total	**4.1746**	**32.6462**	**39.7510**	**0.0862**		**1.3630**	**1.3630**		**1.2563**	**1.2563**	**0.0000**	**8,303.2596**	**8,303.2596**	**2.6627**		**8,369.8278**

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3410	0.1946	2.9532	6.9200e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		699.2853	699.2853	0.0186	0.0180	705.1196
Total	**0.3465**	**0.4270**	**3.0187**	**7.9000e-003**	**0.7808**	**6.0600e-003**	**0.7869**	**0.2073**	**5.6500e-003**	**0.2130**		**802.5763**	**802.5763**	**0.0189**	**0.0343**	**813.2549**

3.4 Structure Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075		3,097.6724	3,097.6724	0.9943		3,122.5294
Total	**1.0442**	**7.8626**	**11.9759**	**0.0321**		**0.3334**	**0.3334**		**0.3075**	**0.3075**		**3,097.6724**	**3,097.6724**	**0.9943**		**3,122.5294**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5500e-003	0.2368	0.0657	1.0000e-003	0.0282	2.0700e-003	0.0302	7.7200e-003	1.9800e-003	9.7100e-003		105.6782	105.6782	2.6000e-004	0.0166	110.6345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1340	0.0802	1.1765	2.6000e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		262.8769	262.8769	7.5800e-003	7.1300e-003	265.1901
Total	**0.1395**	**0.3169**	**1.2422**	**3.6000e-003**	**0.3019**	**3.6200e-003**	**0.3055**	**0.0803**	**3.4100e-003**	**0.0837**		**368.5551**	**368.5551**	**7.8400e-003**	**0.0237**	**375.8245**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075	0.0000	3,097.6724	3,097.6724	0.9943		3,122.5294
Total	**1.0442**	**7.8626**	**11.9759**	**0.0321**		**0.3334**	**0.3334**		**0.3075**	**0.3075**	**0.0000**	**3,097.6724**	**3,097.6724**	**0.9943**		**3,122.5294**

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5500e-003	0.2368	0.0657	1.0000e-003	0.0282	2.0700e-003	0.0302	7.7200e-003	1.9800e-003	9.7100e-003		105.6782	105.6782	2.6000e-004	0.0166	110.6345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1340	0.0802	1.1765	2.6000e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		262.8769	262.8769	7.5800e-003	7.1300e-003	265.1901
Total	**0.1395**	**0.3169**	**1.2422**	**3.6000e-003**	**0.3019**	**3.6200e-003**	**0.3055**	**0.0803**	**3.4100e-003**	**0.0837**		**368.5551**	**368.5551**	**7.8400e-003**	**0.0237**	**375.8245**

3.5 HDD - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751		4,848.0020	4,848.0020	1.2209		4,878.5232
Total	**1.5594**	**13.1769**	**18.9687**	**0.0504**		**0.6022**	**0.6022**		**0.5751**	**0.5751**		**4,848.0020**	**4,848.0020**	**1.2209**		**4,878.5232**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1005	0.0601	0.8824	1.9500e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555		197.1576	197.1576	5.6900e-003	5.3400e-003	198.8926
Total	**0.1060**	**0.2962**	**0.9479**	**2.9500e-003**	**0.2334**	**3.2300e-003**	**0.2366**	**0.0622**	**3.0500e-003**	**0.0652**		**302.5066**	**302.5066**	**5.9500e-003**	**0.0219**	**309.1823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751	0.0000	4,848.0020	4,848.0020	1.2209		4,878.5232
Total	**1.5594**	**13.1769**	**18.9687**	**0.0504**		**0.6022**	**0.6022**		**0.5751**	**0.5751**	**0.0000**	**4,848.0020**	**4,848.0020**	**1.2209**		**4,878.5232**

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1005	0.0601	0.8824	1.9500e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555		197.1576	197.1576	5.6900e-003	5.3400e-003	198.8926
Total	**0.1060**	**0.2962**	**0.9479**	**2.9500e-003**	**0.2334**	**3.2300e-003**	**0.2366**	**0.0622**	**3.0500e-003**	**0.0652**		**302.5066**	**302.5066**	**5.9500e-003**	**0.0219**	**309.1823**

3.6 Bore and Jack - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402		4,224.9674	4,224.9674	1.1924		4,254.7761
Total	**1.2316**	**10.4240**	**15.2434**	**0.0438**		**0.4673**	**0.4673**		**0.4402**	**0.4402**		**4,224.9674**	**4,224.9674**	**1.1924**		**4,254.7761**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	**0.0837**	**0.2828**	**0.7518**	**2.5200e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**258.6938**	**258.6938**	**4.6800e-003**	**0.0207**	**264.9840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402	0.0000	4,224.9674	4,224.9674	1.1924		4,254.7761
Total	**1.2316**	**10.4240**	**15.2434**	**0.0438**		**0.4673**	**0.4673**		**0.4402**	**0.4402**	**0.0000**	**4,224.9674**	**4,224.9674**	**1.1924**		**4,254.7761**

Mitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	**0.0837**	**0.2828**	**0.7518**	**2.5200e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**258.6938**	**258.6938**	**4.6800e-003**	**0.0207**	**264.9840**

3.7 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1694**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**		**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	**0.1398**	**0.3091**	**1.2288**	**3.7100e-003**	**0.3246**	**3.6300e-003**	**0.3282**	**0.0863**	**3.4200e-003**	**0.0898**		**378.7670**	**378.7670**	**7.6000e-003**	**0.0233**	**385.9097**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1694**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**	**0.0000**	**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	**0.1398**	**0.3091**	**1.2288**	**3.7100e-003**	**0.3246**	**3.6300e-003**	**0.3282**	**0.0863**	**3.4200e-003**	**0.0898**		**378.7670**	**378.7670**	**7.6000e-003**	**0.0233**	**385.9097**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.493657	0.054963	0.187598	0.144453	0.043526	0.008501	0.010722	0.015710	0.000733	0.000410	0.033593	0.001127	0.005006

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Unmitigated	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**		**1.3900e-003**

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**		**1.3900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paradise - Export Pipeline System

Butte County AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.95	Acre	5.95	259,182.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description

Construction Phase - from project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Trips and VMT - from notes and project description

Grading - from project description

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblGrading	AcresOfGrading	0.00	5.95
tblGrading	MaterialExported	0.00	60,800.00
tblGrading	MaterialImported	0.00	22,900.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	9.00	425.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	10,463.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	HaulingTripNumber	0.00	107.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	38.00	66.00
tblTripsAndVMT	WorkerTripNumber	18.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.6919	75.4622	104.0168	0.2506	1.9545	3.2398	5.1943	0.4851	3.0257	3.5108	0.0000	24,247.9896	24,247.9896	6.5793	0.1293	24,450.9972
2024	5.7799	41.7508	56.7428	0.1192	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,545.4017	11,545.4017	3.3868	0.0613	11,648.3339

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	**9.6919**	**75.4622**	**104.0168**	**0.2506**	**1.9545**	**3.2398**	**5.1943**	**0.4851**	**3.0257**	**3.5108**	**0.0000**	**24,247.9896**	**24,247.9896**	**6.5793**	**0.1293**	**24,450.9972**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.6919	75.4622	104.0168	0.2506	1.9545	3.2398	5.1943	0.4851	3.0257	3.5108	0.0000	24,247.9896	24,247.9896	6.5793	0.1293	24,450.9972
2024	5.7799	41.7508	56.7428	0.1192	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,545.4017	11,545.4017	3.3868	0.0613	11,648.3339
Maximum	**9.6919**	**75.4622**	**104.0168**	**0.2506**	**1.9545**	**3.2398**	**5.1943**	**0.4851**	**3.0257**	**3.5108**	**0.0000**	**24,247.9896**	**24,247.9896**	**6.5793**	**0.1293**	**24,450.9972**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**0.0000**	**1.3900e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**0.0000**	**1.3900e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	10/23/2023	5	60	
2	Pipe Installation	Trenching	10/1/2023	8/30/2024	5	240	
3	Structure Installation	Trenching	10/1/2023	11/24/2023	5	40	
4	HDD	Trenching	10/1/2023	12/22/2023	5	60	
5	Bore and Jack	Trenching	10/1/2023	12/22/2023	5	60	
6	Asphalt Replacement	Paving	6/10/2024	8/30/2024	5	60	

Acres of Grading (Site Preparation Phase): 5.95

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	3	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	3	8.00	510	0.38
Pipe Installation	Plate Compactors	3	8.00	8	0.43
Pipe Installation	Rollers	3	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pipe Installation	Tractors/Loaders/Backhoes	3	8.00	170	0.37
Structure Installation	Cement and Mortar Mixers	1	8.00	425	0.56
Structure Installation	Cranes	0	7.00	231	0.29
Structure Installation	Excavators	2	8.00	310	0.38
Structure Installation	Forklifts	0	8.00	89	0.20
Structure Installation	Generator Sets	0	8.00	84	0.74
Structure Installation	Plate Compactors	1	8.00	8	0.43
Structure Installation	Rollers	1	8.00	20	0.38
Structure Installation	Tractors/Loaders/Backhoes	2	8.00	170	0.37
Structure Installation	Welders	0	8.00	46	0.45
HDD	Air Compressors	0	6.00	78	0.48
HDD	Bore/Drill Rigs	1	8.00	650	0.50
HDD	Generator Sets	1	8.00	84	0.74
HDD	Other Material Handling Equipment	1	8.00	168	0.40
HDD	Pumps	1	8.00	84	0.74
HDD	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Bore and Jack	Bore/Drill Rigs	1	8.00	650	0.50
Bore and Jack	Generator Sets	1	8.00	84	0.74
Bore and Jack	Other Material Handling Equipment	1	8.00	168	0.40
Bore and Jack	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Removal	5	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	15	66.00	0.00	640.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Structure Installation	7	24.00	0.00	107.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
HDD	5	18.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Bore and Jack	4	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284		1,935.6213	1,935.6213	0.4635		1,947.2098
Total	**0.8688**	**7.5463**	**11.6657**	**0.0201**	**0.2629**	**0.3458**	**0.6087**	**0.0352**	**0.3284**	**0.3636**		**1,935.6213**	**1,935.6213**	**0.4635**		**1,947.2098**

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	**0.0749**	**0.3135**	**0.6238**	**2.3400e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**240.7908**	**240.7908**	**4.9200e-003**	**0.0214**	**247.2779**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284	0.0000	1,935.6213	1,935.6213	0.4635		1,947.2098
Total	**0.8688**	**7.5463**	**11.6657**	**0.0201**	**0.2629**	**0.3458**	**0.6087**	**0.0352**	**0.3284**	**0.3636**	**0.0000**	**1,935.6213**	**1,935.6213**	**0.4635**		**1,947.2098**

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	**0.0749**	**0.3135**	**0.6238**	**2.3400e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**240.7908**	**240.7908**	**4.9200e-003**	**0.0214**	**247.2779**

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565		8,300.0372	8,300.0372	2.6617		8,366.5794
Total	**4.2846**	**34.6138**	**40.4198**	**0.0861**		**1.4719**	**1.4719**		**1.3565**	**1.3565**		**8,300.0372**	**8,300.0372**	**2.6617**		**8,366.5794**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3291	0.2704	2.6243	6.3100e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		637.4051	637.4051	0.0220	0.0224	644.6447
Total	**0.3342**	**0.5265**	**2.6914**	**7.3100e-003**	**0.7808**	**6.3200e-003**	**0.7872**	**0.2073**	**5.9000e-003**	**0.2132**		**742.9888**	**742.9888**	**0.0223**	**0.0390**	**755.1798**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565	0.0000	8,300.0372	8,300.0372	2.6617		8,366.5794
Total	**4.2846**	**34.6138**	**40.4198**	**0.0861**		**1.4719**	**1.4719**		**1.3565**	**1.3565**	**0.0000**	**8,300.0372**	**8,300.0372**	**2.6617**		**8,366.5794**

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3291	0.2704	2.6243	6.3100e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		637.4051	637.4051	0.0220	0.0224	644.6447
Total	**0.3342**	**0.5265**	**2.6914**	**7.3100e-003**	**0.7808**	**6.3200e-003**	**0.7872**	**0.2073**	**5.9000e-003**	**0.2132**		**742.9888**	**742.9888**	**0.0223**	**0.0390**	**755.1798**

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563		8,303.2596	8,303.2596	2.6627		8,369.8278
Total	**4.1746**	**32.6462**	**39.7510**	**0.0862**		**1.3630**	**1.3630**		**1.2563**	**1.2563**		**8,303.2596**	**8,303.2596**	**2.6627**		**8,369.8278**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3055	0.2386	2.4034	6.1000e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		616.7894	616.7894	0.0198	0.0206	623.4290
Total	**0.3105**	**0.4908**	**2.4704**	**7.0800e-003**	**0.7808**	**6.0600e-003**	**0.7869**	**0.2073**	**5.6500e-003**	**0.2130**		**720.3136**	**720.3136**	**0.0200**	**0.0369**	**731.8079**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563	0.0000	8,303.2596	8,303.2596	2.6627		8,369.8278
Total	**4.1746**	**32.6462**	**39.7510**	**0.0862**		**1.3630**	**1.3630**		**1.2563**	**1.2563**	**0.0000**	**8,303.2596**	**8,303.2596**	**2.6627**		**8,369.8278**

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3055	0.2386	2.4034	6.1000e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		616.7894	616.7894	0.0198	0.0206	623.4290
Total	**0.3105**	**0.4908**	**2.4704**	**7.0800e-003**	**0.7808**	**6.0600e-003**	**0.7869**	**0.2073**	**5.6500e-003**	**0.2130**		**720.3136**	**720.3136**	**0.0200**	**0.0369**	**731.8079**

3.4 Structure Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075		3,097.6724	3,097.6724	0.9943		3,122.5294
Total	**1.0442**	**7.8626**	**11.9759**	**0.0321**		**0.3334**	**0.3334**		**0.3075**	**0.3075**		**3,097.6724**	**3,097.6724**	**0.9943**		**3,122.5294**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0800e-003	0.2570	0.0673	1.0000e-003	0.0282	2.0800e-003	0.0302	7.7200e-003	1.9900e-003	9.7100e-003		105.9136	105.9136	2.4000e-004	0.0167	110.8805
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1197	0.0983	0.9543	2.2900e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		231.7837	231.7837	8.0200e-003	8.1600e-003	234.4163
Total	**0.1248**	**0.3553**	**1.0216**	**3.2900e-003**	**0.3019**	**3.6300e-003**	**0.3055**	**0.0803**	**3.4200e-003**	**0.0837**		**337.6973**	**337.6973**	**8.2600e-003**	**0.0248**	**345.2967**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075	0.0000	3,097.6724	3,097.6724	0.9943		3,122.5294
Total	**1.0442**	**7.8626**	**11.9759**	**0.0321**		**0.3334**	**0.3334**		**0.3075**	**0.3075**	**0.0000**	**3,097.6724**	**3,097.6724**	**0.9943**		**3,122.5294**

Mitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0800e-003	0.2570	0.0673	1.0000e-003	0.0282	2.0800e-003	0.0302	7.7200e-003	1.9900e-003	9.7100e-003		105.9136	105.9136	2.4000e-004	0.0167	110.8805
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1197	0.0983	0.9543	2.2900e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		231.7837	231.7837	8.0200e-003	8.1600e-003	234.4163
Total	**0.1248**	**0.3553**	**1.0216**	**3.2900e-003**	**0.3019**	**3.6300e-003**	**0.3055**	**0.0803**	**3.4200e-003**	**0.0837**		**337.6973**	**337.6973**	**8.2600e-003**	**0.0248**	**345.2967**

3.5 HDD - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751		4,848.0020	4,848.0020	1.2209		4,878.5232
Total	**1.5594**	**13.1769**	**18.9687**	**0.0504**		**0.6022**	**0.6022**		**0.5751**	**0.5751**		**4,848.0020**	**4,848.0020**	**1.2209**		**4,878.5232**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0898	0.0737	0.7157	1.7200e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555		173.8378	173.8378	6.0100e-003	6.1200e-003	175.8122
Total	**0.0948**	**0.3299**	**0.7828**	**2.7200e-003**	**0.2334**	**3.2300e-003**	**0.2366**	**0.0622**	**3.0500e-003**	**0.0652**		**279.4214**	**279.4214**	**6.2500e-003**	**0.0227**	**286.3472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751	0.0000	4,848.0020	4,848.0020	1.2209		4,878.5232
Total	**1.5594**	**13.1769**	**18.9687**	**0.0504**		**0.6022**	**0.6022**		**0.5751**	**0.5751**	**0.0000**	**4,848.0020**	**4,848.0020**	**1.2209**		**4,878.5232**

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0898	0.0737	0.7157	1.7200e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555		173.8378	173.8378	6.0100e-003	6.1200e-003	175.8122
Total	**0.0948**	**0.3299**	**0.7828**	**2.7200e-003**	**0.2334**	**3.2300e-003**	**0.2366**	**0.0622**	**3.0500e-003**	**0.0652**		**279.4214**	**279.4214**	**6.2500e-003**	**0.0227**	**286.3472**

3.6 Bore and Jack - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402		4,224.9674	4,224.9674	1.1924		4,254.7761
Total	**1.2316**	**10.4240**	**15.2434**	**0.0438**		**0.4673**	**0.4673**		**0.4402**	**0.4402**		**4,224.9674**	**4,224.9674**	**1.1924**		**4,254.7761**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	**0.0749**	**0.3135**	**0.6238**	**2.3400e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**240.7908**	**240.7908**	**4.9200e-003**	**0.0214**	**247.2779**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402	0.0000	4,224.9674	4,224.9674	1.1924		4,254.7761
Total	**1.2316**	**10.4240**	**15.2434**	**0.0438**		**0.4673**	**0.4673**		**0.4402**	**0.4402**	**0.0000**	**4,224.9674**	**4,224.9674**	**1.1924**		**4,254.7761**

Mitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	**0.0749**	**0.3135**	**0.6238**	**2.3400e-003**	**0.1878**	**2.9700e-003**	**0.1907**	**0.0501**	**2.8100e-003**	**0.0529**		**240.7908**	**240.7908**	**4.9200e-003**	**0.0214**	**247.2779**

3.7 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1694**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**		**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Unmitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	**0.1254**	**0.3462**	**1.0139**	**3.3800e-003**	**0.3246**	**3.6300e-003**	**0.3283**	**0.0863**	**3.4200e-003**	**0.0898**		**346.5019**	**346.5019**	**8.0300e-003**	**0.0244**	**353.9722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1694**	**8.2676**	**13.5076**	**0.0226**		**0.3967**	**0.3967**		**0.3657**	**0.3657**	**0.0000**	**2,175.3266**	**2,175.3266**	**0.6960**		**2,192.7259**

Mitigated Construction Off-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	**0.1254**	**0.3462**	**1.0139**	**3.3800e-003**	**0.3246**	**3.6300e-003**	**0.3283**	**0.0863**	**3.4200e-003**	**0.0898**		**346.5019**	**346.5019**	**8.0300e-003**	**0.0244**	**353.9722**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.493657	0.054963	0.187598	0.144453	0.043526	0.008501	0.010722	0.015710	0.000733	0.000410	0.033593	0.001127	0.005006

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Unmitigated	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**		**1.3900e-003**

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	**0.1215**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3000e-003**	**1.3000e-003**	**0.0000**		**1.3900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paradise - Export Pipeline System

Butte County AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.95	Acre	5.95	259,182.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description

Construction Phase - from project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Off-road Equipment - based on project description

Trips and VMT - from notes and project description

Grading - from project description

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblGrading	AcresOfGrading	0.00	5.95
tblGrading	MaterialExported	0.00	60,800.00
tblGrading	MaterialImported	0.00	22,900.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	9.00	425.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	10,463.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	HaulingTripNumber	0.00	107.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	38.00	66.00
tblTripsAndVMT	WorkerTripNumber	18.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2898	2.2667	3.1007	7.4100e-003	0.0555	0.0975	0.1530	0.0138	0.0911	0.1048	0.0000	650.3021	650.3021	0.1760	3.2900e-003	655.6809
2024	0.4299	3.1545	4.1334	8.9600e-003	0.0748	0.1318	0.2066	0.0199	0.1215	0.1414	0.0000	786.5617	786.5617	0.2320	3.4500e-003	793.3901

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	**0.4299**	**3.1545**	**4.1334**	**8.9600e-003**	**0.0748**	**0.1318**	**0.2066**	**0.0199**	**0.1215**	**0.1414**	**0.0000**	**786.5617**	**786.5617**	**0.2320**	**3.4500e-003**	**793.3901**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2898	2.2667	3.1007	7.4100e-003	0.0555	0.0975	0.1530	0.0138	0.0911	0.1048	0.0000	650.3014	650.3014	0.1760	3.2900e-003	655.6802
2024	0.4299	3.1545	4.1334	8.9600e-003	0.0748	0.1318	0.2066	0.0199	0.1215	0.1414	0.0000	786.5609	786.5609	0.2320	3.4500e-003	793.3893
Maximum	**0.4299**	**3.1545**	**4.1334**	**8.9600e-003**	**0.0748**	**0.1318**	**0.2066**	**0.0199**	**0.1215**	**0.1414**	**0.0000**	**786.5609**	**786.5609**	**0.2320**	**3.4500e-003**	**793.3893**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-1-2023**	**10-31-2023**	1.1089	1.1089
2	**11-1-2023**	**1-31-2024**	1.8684	1.8684
3	**2-1-2024**	**4-30-2024**	1.2090	1.2090
4	**5-1-2024**	**7-31-2024**	1.4188	1.4188
5	**8-1-2024**	**9-30-2024**	0.5087	0.5087
		Highest	1.8684	1.8684

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0222**	**0.0000**	**5.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0000**	**1.1000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0222**	**0.0000**	**5.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0000**	**1.1000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	10/23/2023	5	60	
2	Pipe Installation	Trenching	10/1/2023	8/30/2024	5	240	
3	Structure Installation	Trenching	10/1/2023	11/24/2023	5	40	
4	HDD	Trenching	10/1/2023	12/22/2023	5	60	
5	Bore and Jack	Trenching	10/1/2023	12/22/2023	5	60	
6	Asphalt Replacement	Paving	6/10/2024	8/30/2024	5	60	

Acres of Grading (Site Preparation Phase): 5.95

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	3	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	3	8.00	510	0.38
Pipe Installation	Plate Compactors	3	8.00	8	0.43
Pipe Installation	Rollers	3	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Tractors/Loaders/Backhoes	3	8.00	170	0.37
Structure Installation	Cement and Mortar Mixers	1	8.00	425	0.56
Structure Installation	Cranes	0	7.00	231	0.29
Structure Installation	Excavators	2	8.00	310	0.38
Structure Installation	Forklifts	0	8.00	89	0.20
Structure Installation	Generator Sets	0	8.00	84	0.74
Structure Installation	Plate Compactors	1	8.00	8	0.43
Structure Installation	Rollers	1	8.00	20	0.38
Structure Installation	Tractors/Loaders/Backhoes	2	8.00	170	0.37
Structure Installation	Welders	0	8.00	46	0.45
HDD	Air Compressors	0	6.00	78	0.48
HDD	Bore/Drill Rigs	1	8.00	650	0.50
HDD	Generator Sets	1	8.00	84	0.74
HDD	Other Material Handling Equipment	1	8.00	168	0.40
HDD	Pumps	1	8.00	84	0.74
HDD	Tractors/Loaders/Backhoes	1	8.00	95	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Bore and Jack	Bore/Drill Rigs	1	8.00	650	0.50
Bore and Jack	Generator Sets	1	8.00	84	0.74
Bore and Jack	Other Material Handling Equipment	1	8.00	168	0.40
Bore and Jack	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Removal	5	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	15	66.00	0.00	640.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Structure Installation	7	24.00	0.00	107.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
HDD	5	18.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Bore and Jack	4	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8900e-003	0.0000	7.8900e-003	1.0600e-003	0.0000	1.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0261	0.2264	0.3500	6.0000e-004		0.0104	0.0104		9.8500e-003	9.8500e-003	0.0000	52.6790	52.6790	0.0126	0.0000	52.9944
Total	**0.0261**	**0.2264**	**0.3500**	**6.0000e-004**	**7.8900e-003**	**0.0104**	**0.0183**	**1.0600e-003**	**9.8500e-003**	**0.0109**	**0.0000**	**52.6790**	**52.6790**	**0.0126**	**0.0000**	**52.9944**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	**2.1600e-003**	**9.0100e-003**	**0.0190**	**7.0000e-005**	**5.4000e-003**	**9.0000e-005**	**5.4800e-003**	**1.4400e-003**	**8.0000e-005**	**1.5300e-003**	**0.0000**	**6.6600**	**6.6600**	**1.3000e-004**	**5.7000e-004**	**6.8333**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8900e-003	0.0000	7.8900e-003	1.0600e-003	0.0000	1.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0261	0.2264	0.3500	6.0000e-004		0.0104	0.0104		9.8500e-003	9.8500e-003	0.0000	52.6789	52.6789	0.0126	0.0000	52.9943
Total	**0.0261**	**0.2264**	**0.3500**	**6.0000e-004**	**7.8900e-003**	**0.0104**	**0.0183**	**1.0600e-003**	**9.8500e-003**	**0.0109**	**0.0000**	**52.6789**	**52.6789**	**0.0126**	**0.0000**	**52.9943**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	**2.1600e-003**	**9.0100e-003**	**0.0190**	**7.0000e-005**	**5.4000e-003**	**9.0000e-005**	**5.4800e-003**	**1.4400e-003**	**8.0000e-005**	**1.5300e-003**	**0.0000**	**6.6600**	**6.6600**	**1.3000e-004**	**5.7000e-004**	**6.8333**

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1393	1.1250	1.3136	2.8000e-003		0.0478	0.0478		0.0441	0.0441	0.0000	244.7142	244.7142	0.0785	0.0000	246.6761
Total	**0.1393**	**1.1250**	**1.3136**	**2.8000e-003**		**0.0478**	**0.0478**		**0.0441**	**0.0441**	**0.0000**	**244.7142**	**244.7142**	**0.0785**	**0.0000**	**246.6761**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	8.1000e-003	2.1500e-003	3.0000e-005	8.8000e-004	7.0000e-005	9.5000e-004	2.4000e-004	6.0000e-005	3.1000e-004	0.0000	3.1090	3.1090	1.0000e-005	4.9000e-004	3.2548
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0102	7.8200e-003	0.0867	2.1000e-004	0.0234	1.4000e-004	0.0236	6.2300e-003	1.3000e-004	6.3600e-003	0.0000	19.3571	19.3571	6.1000e-004	6.1000e-004	19.5548
Total	**0.0104**	**0.0159**	**0.0888**	**2.4000e-004**	**0.0243**	**2.1000e-004**	**0.0245**	**6.4700e-003**	**1.9000e-004**	**6.6700e-003**	**0.0000**	**22.4661**	**22.4661**	**6.2000e-004**	**1.1000e-003**	**22.8095**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1393	1.1250	1.3136	2.8000e-003		0.0478	0.0478		0.0441	0.0441	0.0000	244.7139	244.7139	0.0785	0.0000	246.6758
Total	**0.1393**	**1.1250**	**1.3136**	**2.8000e-003**		**0.0478**	**0.0478**		**0.0441**	**0.0441**	**0.0000**	**244.7139**	**244.7139**	**0.0785**	**0.0000**	**246.6758**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	8.1000e-003	2.1500e-003	3.0000e-005	8.8000e-004	7.0000e-005	9.5000e-004	2.4000e-004	6.0000e-005	3.1000e-004	0.0000	3.1090	3.1090	1.0000e-005	4.9000e-004	3.2548
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0102	7.8200e-003	0.0867	2.1000e-004	0.0234	1.4000e-004	0.0236	6.2300e-003	1.3000e-004	6.3600e-003	0.0000	19.3571	19.3571	6.1000e-004	6.1000e-004	19.5548
Total	**0.0104**	**0.0159**	**0.0888**	**2.4000e-004**	**0.0243**	**2.1000e-004**	**0.0245**	**6.4700e-003**	**1.9000e-004**	**6.6700e-003**	**0.0000**	**22.4661**	**22.4661**	**6.2000e-004**	**1.1000e-003**	**22.8095**

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3653	2.8565	3.4782	7.5400e-003		0.1193	0.1193		0.1099	0.1099	0.0000	659.1017	659.1017	0.2114	0.0000	664.3858
Total	**0.3653**	**2.8565**	**3.4782**	**7.5400e-003**		**0.1193**	**0.1193**		**0.1099**	**0.1099**	**0.0000**	**659.1017**	**659.1017**	**0.2114**	**0.0000**	**664.3858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6000e-004	0.0215	5.7900e-003	9.0000e-005	2.3700e-003	1.8000e-004	2.5500e-003	6.5000e-004	1.7000e-004	8.2000e-004	0.0000	8.2069	8.2069	2.0000e-005	1.2900e-003	8.5918
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0255	0.0186	0.2133	5.5000e-004	0.0631	3.5000e-004	0.0634	0.0168	3.2000e-004	0.0171	0.0000	50.4259	50.4259	1.4800e-003	1.5100e-003	50.9140
Total	**0.0260**	**0.0401**	**0.2191**	**6.4000e-004**	**0.0655**	**5.3000e-004**	**0.0660**	**0.0174**	**4.9000e-004**	**0.0179**	**0.0000**	**58.6328**	**58.6328**	**1.5000e-003**	**2.8000e-003**	**59.5057**

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3653	2.8565	3.4782	7.5400e-003		0.1193	0.1193		0.1099	0.1099	0.0000	659.1009	659.1009	0.2114	0.0000	664.3850
Total	**0.3653**	**2.8565**	**3.4782**	**7.5400e-003**		**0.1193**	**0.1193**		**0.1099**	**0.1099**	**0.0000**	**659.1009**	**659.1009**	**0.2114**	**0.0000**	**664.3850**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6000e-004	0.0215	5.7900e-003	9.0000e-005	2.3700e-003	1.8000e-004	2.5500e-003	6.5000e-004	1.7000e-004	8.2000e-004	0.0000	8.2069	8.2069	2.0000e-005	1.2900e-003	8.5918
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0255	0.0186	0.2133	5.5000e-004	0.0631	3.5000e-004	0.0634	0.0168	3.2000e-004	0.0171	0.0000	50.4259	50.4259	1.4800e-003	1.5100e-003	50.9140
Total	**0.0260**	**0.0401**	**0.2191**	**6.4000e-004**	**0.0655**	**5.3000e-004**	**0.0660**	**0.0174**	**4.9000e-004**	**0.0179**	**0.0000**	**58.6328**	**58.6328**	**1.5000e-003**	**2.8000e-003**	**59.5057**

3.4 Structure Installation - 2023

Unmitigated Construction On-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0209	0.1573	0.2395	6.4000e-004		6.6700e-003	6.6700e-003		6.1500e-003	6.1500e-003	0.0000	56.2032	56.2032	0.0180	0.0000	56.6542
Total	**0.0209**	**0.1573**	**0.2395**	**6.4000e-004**		**6.6700e-003**	**6.6700e-003**		**6.1500e-003**	**6.1500e-003**	**0.0000**	**56.2032**	**56.2032**	**0.0180**	**0.0000**	**56.6542**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	5.0000e-003	1.3300e-003	2.0000e-005	5.4000e-004	4.0000e-005	5.8000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.9192	1.9192	0.0000	3.0000e-004	2.0092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7500e-003	0.0194	5.0000e-005	5.2400e-003	3.0000e-005	5.2700e-003	1.4000e-003	3.0000e-005	1.4200e-003	0.0000	4.3317	4.3317	1.4000e-004	1.4000e-004	4.3759
Total	**2.4000e-003**	**6.7500e-003**	**0.0207**	**7.0000e-005**	**5.7800e-003**	**7.0000e-005**	**5.8500e-003**	**1.5500e-003**	**7.0000e-005**	**1.6100e-003**	**0.0000**	**6.2509**	**6.2509**	**1.4000e-004**	**4.4000e-004**	**6.3851**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0209	0.1573	0.2395	6.4000e-004		6.6700e-003	6.6700e-003		6.1500e-003	6.1500e-003	0.0000	56.2032	56.2032	0.0180	0.0000	56.6542
Total	**0.0209**	**0.1573**	**0.2395**	**6.4000e-004**		**6.6700e-003**	**6.6700e-003**		**6.1500e-003**	**6.1500e-003**	**0.0000**	**56.2032**	**56.2032**	**0.0180**	**0.0000**	**56.6542**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	5.0000e-003	1.3300e-003	2.0000e-005	5.4000e-004	4.0000e-005	5.8000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.9192	1.9192	0.0000	3.0000e-004	2.0092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7500e-003	0.0194	5.0000e-005	5.2400e-003	3.0000e-005	5.2700e-003	1.4000e-003	3.0000e-005	1.4200e-003	0.0000	4.3317	4.3317	1.4000e-004	1.4000e-004	4.3759
Total	**2.4000e-003**	**6.7500e-003**	**0.0207**	**7.0000e-005**	**5.7800e-003**	**7.0000e-005**	**5.8500e-003**	**1.5500e-003**	**7.0000e-005**	**1.6100e-003**	**0.0000**	**6.2509**	**6.2509**	**1.4000e-004**	**4.4000e-004**	**6.3851**

3.5 HDD - 2023

Unmitigated Construction On-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0468	0.3953	0.5691	1.5100e-003		0.0181	0.0181		0.0173	0.0173	0.0000	131.9410	131.9410	0.0332	0.0000	132.7717
Total	**0.0468**	**0.3953**	**0.5691**	**1.5100e-003**		**0.0181**	**0.0181**		**0.0173**	**0.0173**	**0.0000**	**131.9410**	**131.9410**	**0.0332**	**0.0000**	**132.7717**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5700e-003	1.9700e-003	0.0218	5.0000e-005	5.9000e-003	3.0000e-005	5.9300e-003	1.5700e-003	3.0000e-005	1.6000e-003	0.0000	4.8731	4.8731	1.5000e-004	1.5000e-004	4.9229
Total	**2.7300e-003**	**9.4500e-003**	**0.0238**	**8.0000e-005**	**6.7100e-003**	**9.0000e-005**	**6.8000e-003**	**1.7900e-003**	**9.0000e-005**	**1.8800e-003**	**0.0000**	**7.7429**	**7.7429**	**1.6000e-004**	**6.0000e-004**	**7.9273**

Mitigated Construction On-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0468	0.3953	0.5691	1.5100e-003		0.0181	0.0181		0.0173	0.0173	0.0000	131.9409	131.9409	0.0332	0.0000	132.7715
Total	**0.0468**	**0.3953**	**0.5691**	**1.5100e-003**		**0.0181**	**0.0181**		**0.0173**	**0.0173**	**0.0000**	**131.9409**	**131.9409**	**0.0332**	**0.0000**	**132.7715**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5700e-003	1.9700e-003	0.0218	5.0000e-005	5.9000e-003	3.0000e-005	5.9300e-003	1.5700e-003	3.0000e-005	1.6000e-003	0.0000	4.8731	4.8731	1.5000e-004	1.5000e-004	4.9229
Total	**2.7300e-003**	**9.4500e-003**	**0.0238**	**8.0000e-005**	**6.7100e-003**	**9.0000e-005**	**6.8000e-003**	**1.7900e-003**	**9.0000e-005**	**1.8800e-003**	**0.0000**	**7.7429**	**7.7429**	**1.6000e-004**	**6.0000e-004**	**7.9273**

3.6 Bore and Jack - 2023

Unmitigated Construction On-Site

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Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0370	0.3127	0.4573	1.3100e-003		0.0140	0.0140		0.0132	0.0132	0.0000	114.9848	114.9848	0.0325	0.0000	115.7960
Total	**0.0370**	**0.3127**	**0.4573**	**1.3100e-003**		**0.0140**	**0.0140**		**0.0132**	**0.0132**	**0.0000**	**114.9848**	**114.9848**	**0.0325**	**0.0000**	**115.7960**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	**2.1600e-003**	**9.0100e-003**	**0.0190**	**7.0000e-005**	**5.4000e-003**	**9.0000e-005**	**5.4800e-003**	**1.4400e-003**	**8.0000e-005**	**1.5300e-003**	**0.0000**	**6.6600**	**6.6600**	**1.3000e-004**	**5.7000e-004**	**6.8333**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0370	0.3127	0.4573	1.3100e-003		0.0140	0.0140		0.0132	0.0132	0.0000	114.9846	114.9846	0.0325	0.0000	115.7959
Total	**0.0370**	**0.3127**	**0.4573**	**1.3100e-003**		**0.0140**	**0.0140**		**0.0132**	**0.0132**	**0.0000**	**114.9846**	**114.9846**	**0.0325**	**0.0000**	**115.7959**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	**2.1600e-003**	**9.0100e-003**	**0.0190**	**7.0000e-005**	**5.4000e-003**	**9.0000e-005**	**5.4800e-003**	**1.4400e-003**	**8.0000e-005**	**1.5300e-003**	**0.0000**	**6.6600**	**6.6600**	**1.3000e-004**	**5.7000e-004**	**6.8333**

3.7 Asphalt Replacement - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0273	0.2480	0.4052	6.8000e-004		0.0119	0.0119		0.0110	0.0110	0.0000	59.2027	59.2027	0.0189	0.0000	59.6762
Paving	7.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0351**	**0.2480**	**0.4052**	**6.8000e-004**		**0.0119**	**0.0119**		**0.0110**	**0.0110**	**0.0000**	**59.2027**	**59.2027**	**0.0189**	**0.0000**	**59.6762**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.3600e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8138	2.8138	1.0000e-005	4.4000e-004	2.9458
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4500e-003	2.5100e-003	0.0288	7.0000e-005	8.5200e-003	5.0000e-005	8.5700e-003	2.2700e-003	4.0000e-005	2.3100e-003	0.0000	6.8108	6.8108	2.0000e-004	2.0000e-004	6.8767
Total	**3.6100e-003**	**9.8700e-003**	**0.0308**	**1.0000e-004**	**9.3300e-003**	**1.1000e-004**	**9.4400e-003**	**2.4900e-003**	**1.0000e-004**	**2.5900e-003**	**0.0000**	**9.6246**	**9.6246**	**2.1000e-004**	**6.4000e-004**	**9.8224**

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0273	0.2480	0.4052	6.8000e-004		0.0119	0.0119		0.0110	0.0110	0.0000	59.2026	59.2026	0.0189	0.0000	59.6762
Paving	7.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0351**	**0.2480**	**0.4052**	**6.8000e-004**		**0.0119**	**0.0119**		**0.0110**	**0.0110**	**0.0000**	**59.2026**	**59.2026**	**0.0189**	**0.0000**	**59.6762**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.3600e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8138	2.8138	1.0000e-005	4.4000e-004	2.9458
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4500e-003	2.5100e-003	0.0288	7.0000e-005	8.5200e-003	5.0000e-005	8.5700e-003	2.2700e-003	4.0000e-005	2.3100e-003	0.0000	6.8108	6.8108	2.0000e-004	2.0000e-004	6.8767
Total	**3.6100e-003**	**9.8700e-003**	**0.0308**	**1.0000e-004**	**9.3300e-003**	**1.1000e-004**	**9.4400e-003**	**2.4900e-003**	**1.0000e-004**	**2.5900e-003**	**0.0000**	**9.6246**	**9.6246**	**2.1000e-004**	**6.4000e-004**	**9.8224**

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.493657	0.054963	0.187598	0.144453	0.043526	0.008501	0.010722	0.015710	0.000733	0.000410	0.033593	0.001127	0.005006

5.0 Energy Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Unmitigated	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004

6.2 Area by SubCategory

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Total	**0.0222**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0000**	**1.1000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Total	**0.0222**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0000**	**1.1000e-004**

7.0 Water Detail

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

E

Vegetation Community Descriptions and Special-Status Species Accounts

Technical Memorandum

Date:	Thursday, September 30, 2021
Project:	Paradise Sewer Project
To:	Town of Paradise
From:	Dan Williams, Biologist, HDR
Subject:	Vegetation Community Descriptions and Special-Status Species Accounts

Introduction

This memorandum describes the vegetation communities and special-status species identified during desktop review database queries and initial field surveys performed by HDR in support of the Paradise Sewer Project (proposed project) during spring 2021. The study area for these field studies is defined as the proposed project area/footprint and a 0.5-mile buffer. A biological resources and habitat assessment of the study area was conducted by HDR biologists Kelly Bartron and Dan Williams on February 23-25, 2021. During these assessments, vegetation communities in and within 500 feet of the proposed project area/footprint were characterized and mapped by hand, habitats were assessed for suitability to special-status species that had been identified through the database queries as having the potential to occur in the study area, and all plant and wildlife species were identified and recorded. **Attachment 1** is a mapbook that shows the study area and the vegetation communities mapped within it.

Project Background

The Town of Paradise in Butte County, California, is proposing to construct and operate a sewer collection system in Paradise and to build an 18-mile export pipeline to convey wastewater from Paradise to the City of Chico Water Pollution Control Plant (WPCP). The Paradise Sewer Project would replace private, individual septic systems that are managed by property owners.

The proposed project area/footprint includes the following components:

- **Collection System** – a wastewater collection system consisting of service connections to individual parcels with a designated sewer service area. The collection system would include construction of buried gravity and pressure lines, manholes, and pump stations, and would be located in Paradise.
- **Export Pipeline** – an 18-mile export pipeline to convey wastewater from Paradise to the Chico WPCP. The export pipeline would include construction of pipelines, three horizontal directional drilling (HDD) borings under waterways, two microtunnel borings (one under Highway 99 and one under a railroad crossing), a transition chamber (near the eastern city limits of Chico where the sewer line would change from gravity downslope to a force main to cross the flat topography of the valley), and a flow control and metering structure located at or near the Chico WPCP.
- **Connection to Chico WPCP** – connection of the export pipeline to the Chico WPCP via the flow control and metering structure.

Project Location and Environmental Setting

Paradise is in central Butte County, in the western foothills of the Sierra Nevada Mountains, and is situated approximately 12 miles east of Chico, which sits on the Sacramento Valley floor. Elevations in the study area range from approximately 2,320 feet above sea level at the highest point of the sewer service area to approximately 135 feet above sea level at the Chico WPCP.

The sewer service area is completely within the Paradise town limits, and is composed mostly of montane hardwood-conifer, ponderosa pine, and mixed chaparral habitats. The export pipeline would run from the southwest corner of Paradise, downslope under Skyway through blue oak-foothill pine and valley oak savanna habitats, to just east of the Chico city limits. At this point, the pipeline would leave the roadway for a little over 1 mile, crossing annual grassland habitat with vernal pools, then crossing under Butte Creek and its associated valley foothill riparian habitat via trenchless HDD boring. After crossing under Highway 99 using microtunnel technology, the pipeline would cross one more 0.2 mile stretch of annual grassland habitat between Southgate Avenue and McFadden Lane before rejoining roadway for the remainder of the route, to be installed under county roads through mostly agricultural land, the majority of which is almond or walnut orchard. West of Highway 99, the pipeline would cross under two more creeks (Comanche Creek and Little Chico Creek) via trenchless HDD boring before reaching its connection to the Chico WPCP.

Methodology

Prior to performing the initial field studies, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) QuickView Tool in BIOS 5 (CDFW 2021a) and the US Fish and Wildlife Service (USFWS) Information Planning and Conservation (IPaC) System (USFWS 2021) were queried to determine which special-status wildlife species and sensitive communities have the potential to occur in the study area. A query of the CNDDB provided a list of processed and unprocessed occurrences for special-status species in the California US Geological Survey (USGS) 7.5-minute quadrangles (quads) that the proposed project intersects (i.e., Paradise East, Paradise West, Cherokee, Hamlin Canyon, Chico, and Ord Ferry) and all the quads surrounding these six quads. A shapefile of the proposed project area/footprint was entered into the USFWS IPaC System, and the system was queried to produce an official list of federally protected species that have the potential to occur in the study area as well as designated critical habitat. Results of these database queries are included as **Attachment 2**.

Vegetation communities in the study area were characterized by reviewing CDFW's *California Wildlife Habitat Relationships System* (CDFW 2021b) vegetation community maps and ground-truthing during surveys to refine vegetation mapping. Non-sensitive vegetation communities in the study area include annual grassland, blue oak woodland, blue oak-foothill pine woodland, cropland, deciduous orchard-vineyard, developed, disturbed/ruderal, irrigated row and field crops, mixed chaparral, montane hardwood-conifer, non-native woodland, pasture, ponderosa pine, and valley oak woodland.

Vegetation Community Descriptions

Each vegetation community and the common plant and wildlife species associated with them are described in the following sections.

Non-Sensitive Vegetation Communities

Non-sensitive vegetation communities in the study area include annual grassland, blue oak woodland, blue oak-foothill pine woodland, cropland, deciduous orchard-vineyard, developed, disturbed/ruderal, irrigated row and field crops, mixed chaparral, montane hardwood-conifer, non-native woodland, pasture, ponderosa pine, and valley oak woodland.

ANNUAL GRASSLAND

Much of the study area, especially the area adjacent to Skyway between Chico and Paradise, is characterized as annual grassland. The dominant species are non-native annual grasses, including Italian rye grass (*Festuca perennis*), oats (*Avena barbata* and *A. fatua*), a variety of bromes (*Bromus* ssp.), quaking grasses (*Briza maxima* and *B. minor*) and medusahead (*Elymus caput-medusae*). Associates include weedy forbs such as long-beaked filaree (*Erodium botrys*), field hedge parsley (*Torilis arvensis*), windmill pink (*Petrorhagia dubia*), and rose clover (*Trifolium hirtum*), with a sparse scattering of native species such as harvest brodiaea (*Brodiaea elegans* ssp. *elegans*). Much of the grassland in the study area appears to be grazed by cattle.

Annual grasslands provide foraging habitat for a wide variety of wildlife species including raptors, insectivorous and seed-eating birds, small mammals, amphibians, and reptiles. However, some wildlife species require special habitat features to be present for grasslands to be suitable to them such as cliffs, caves, ponds, or woody vegetation for breeding, resting, and escape cover. Reptiles commonly associated with this habitat type include western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis catenifer*), and valley garter snake (*Thamnophis sirtalis fitchi*). Birds commonly associated with this habitat include red-tailed hawk (*Buteo jamaicensis*), savannah sparrow (*Passerculus sandwichensis*), and western meadowlark (*Sturnella neglecta*). Mammals commonly found in this habitat type include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), western harvest mouse (*Reithrodontomys megalotis*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), and coyote (*Canis latrans*).

BLUE OAK WOODLAND

Much of the habitat in the middle elevations of the study area, along Skyway between Chico and Paradise, is characterized by blue oak (*Quercus douglasii*) woodland with an annual grassland understory composed of species similar to the annual grassland communities in the study area.

Blue oak woodlands produce acorns used as forage by a variety of wildlife species, including acorn woodpecker (*Melanerpes formicivorus*), California scrub-jay (*Aphelocoma californica)*, and mule deer (*Odocoileus hemionus*). Trees containing cavities provide nesting habitat for birds such as western bluebird (*Sialia mexicana*), tree swallow (*Tachycineta bicolor*), and northern flicker (*Colaptes auratus*) as well as potential roost sites for bats which prefer to roost in trees such as hoary bat (*Lasiurus cinereus*). Raptors, including white-tailed kite (*Elanus leucurus*), American kestrel (*Falco sparverius*), and great horned owl (*Bubo virginianus*) may nest in these woodlands. Coyotes and gray foxes (*Urocyon cinereoargenteus*) may forage in this habitat, and reptiles commonly associated with this habitat type include southern alligator lizard (*Elgaria multicarinata*), California kingsnake (*Lampropeltis californiae*), and western rattlesnake (*Crotalus oreganus*).

BLUE OAK-FOOTHILL PINE

Blue oak-foothill pine occurs mainly along Skyway between Chico and Paradise in the middle elevation portions of the study area. The blue oak-foothill pine habitat that occurs in the study area is

mainly characterized by blue oak woodland with an annual grassland understory composed of species similar to annual grassland communities in the study area, but with California buckeye (*Aesculus californica*) and California foothill pine (*Pinus sabiniana*) contributing to the sparse tree canopy.

Species associates are similar to those listed in the blue oak woodland habitat type. Wildlife species dominant in annual grassland habitat are present beneath the oak-pine canopy.

CROPLAND

Only a small portion of the westernmost part of the study area is characterized as cropland, as the majority of the farmlands in the study area are characterized as deciduous orchard. Croplands typically do not conform to normal habitat stages and are regulated by rotational crop cycles. Cropland habitats can either be annual or perennial, vary according to location in the state, and germinate at various times of the year. Additionally, they can occur in association with orchard-vineyard, irrigated pasture, residential-park, and wildlife habitats such as riparian, chaparral, wetlands, desert, and herbaceous types.

Many wildlife species have adapted to cropland habitat including Swainson's hawk, white-tailed kite, coyote, and gray fox. Introduced non-native species such as ring-necked pheasant (*Phasianus colchicus*) and European starling (*Sturna vulgaris*) forage extensively in cropland habitat. Ducks, geese, sandhill cranes (*Antigone canadensis*), and other species that use waste grains after harvest are also known to occur in cropland.

DECIDUOUS ORCHARD-VINEYARD

Deciduous orchard-vineyard is prevalent throughout the western portion of the study area from Highway 99 west to the Chico WPCP. The overwhelming majority of this habitat type in the study area is deciduous orchard, with only one small vineyard present along Hegan Lane. Deciduous orchards tend to be single species, tree dominated habitats that include almonds, apricots, nectarines, peaches, pecans, plums, walnuts, and figs. The orchards in the study area are primarily planted with almond and walnut trees. Trees are planted linearly and uniformly with an understory of low-growing grasses, legumes, and other herbaceous species; however, the understory composition is dependent on management methods. Common understory associates may include perennial grasses such as Bermuda grass (*Cynodon dactylon*) or johnsongrass (*Sorghum halepense*); or annual grasses such as soft chess brome (*Bromus hordeaceus*), annual ryegrass (*Lolium multiflorum*), red brome (*Bromus madritensis*), wild oat, and others; or forbs such as English plantain (*Plantago lanceolata*), charlock mustard (*Sinapis arvensis*), fiddleneck (*Amsinckia* spp.), and red-stemmed filaree (*Erodium cicutarium*). Orchard habitats may be associated with other agricultural types such as row and field crops or pasture, and some are near urban habitat types. They are frequently associated with valley-foothill riparian, mixed chaparral, and annual grasslands.

Wildlife associates include mule deer, black-tailed jackrabbit, western gray squirrel (*Sciurus griseus*) and bird species which feed on fruit or nuts such as yellow-billed magpie (*Pica nuttalli*) and American crow (*Corvus brachyrhynchos*). Other bird species more passively use orchards for cover and nesting such as mourning dove (*Zenaida macroura*) and wild turkey (*Meleagris gallopavo*).

DEVELOPED

Developed portions of the study area include the existing industrial and residential properties, existing roads, recreational areas, and various other areas with a history of disturbance supporting

ornamental or introduced vegetation, mainly in the Town of Paradise and the City of Chico proper. There are a few city parks that occur within the study area that include a mix of native, ornamental, and introduced tree species and mowed lawn. Because of the high degree of disturbance, these areas generally have a low habitat value for wildlife, although a number of species adapted for urban conditions can utilize these areas, such as western fence lizard, mourning dove, American robin (*Turdus migratorius*), house finch (*Haemorhous mexicanus*), and eastern fox squirrel (*Sciurus niger*).

DISTURBED/RUDERAL

Disturbed/ruderal portions of the study area include the road shoulders, dirt lots, lined irrigation ditches, and various other areas with a history of disturbance supporting ruderal vegetation. These areas are a mix of semi-barren ground with sparse vegetation consisting primarily of non-native annual grasses and invasive weeds. Because of the high degree of disturbance, these areas generally have a low habitat value for wildlife, although several species adapted for disturbed conditions can utilize these areas, such as western fence lizard, killdeer (*Charadrius vociferus*), California ground squirrel, and Botta's pocket gopher.

IRRIGATED ROW AND FIELD CROPS

A small patch of irrigated row and field crop occurs at the western end of the study area. Row and field crops do not conform to normal habitat stages. Irrigated row and field crops can include broccoli, cantaloupe and other melons, lettuce, onion, squash, asparagus, and strawberries. Crops are typically cyclical and follow a rotation schedule with off season plantings such as alfalfa used as a nitrogen fixer. Irrigated row and field crops tend to be associated with other planted and farmed landscapes such as orchards, vineyards, and pastures.

As most wildlife species are not welcome by growers, irrigated row and field crops typically have low wildlife habitat suitability, although some species have adapted to this vegetation community. Associated species are similar to those that may occur in cropland habitats. Waterfowl may utilize flooded or irrigated areas.

MIXED CHAPARRAL

Mixed chaparral occurs in the east central portion of the study area along and north of Skyway just west of Paradise. It is comprised of stiff, brushy vegetation and is often found on the periphery of, or forming the understory of, blue oak-foothill pine communities. Dominant species include ceanothus (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), and various manzanitas (*Arctostaphylos* spp.). Common associates include chamise (*Adenostoma fasciculatum*), toyon (*Heteromeles arbutifolia*), yerba santa (*Eriodictyon californicum*), and birch leaf mountain-mahogany (*Cercocarpus betuloides*).

Wildlife associates include reptiles such as coast horned lizard (*Phrynosoma blainvillii*), California tiger whiptail (*Aspidoscelis tigris munda*), and California striped racer (*Coluber lateralis lateralis*), birds such as wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), and blue-gray gnatcatcher (*Polioptila caerulea*), and mammals such as Audubon's cottontail (*Sylvilagus audubonii*) and mountain lion (*Puma concolor*).

MONTANE HARDWOOD-CONIFER

Montane hardwood-conifer can be found in the eastern portion of the study area, from along Skyway east of Tuscan Ridge and throughout the Town of Paradise. Associates can include ponderosa pine (*Pinus ponderosa*), Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), Pacific madrone (*Arbutus menziesii*), California incense-cedar (*Calocedrus decurrens*), bay laurel (*Umbellularia californica*), California black oak (*Quercus kelloggii*), and interior live oak (*Q. wislizeni*).

Understory vegetation is mostly scattered woody shrubs including manzanita, mountain-mahogany, poison oak (*Toxicodendron diversilobum*), and a few forbs. Wildlife associates may include propagators of acorns such as Steller's jay (*Cyanocitta stelleri*), acorn woodpecker, and western gray squirrel, plus those that forage for acorns including wild turkey, mountain quail (*Oreortyx pictus*), band-tailed pigeon (*Patagioenas fasciata*), California ground squirrel, dusky-footed woodrat (*Neotoma fuscipes*), mule deer, and black bear (*Ursus americanus*).

NON-NATIVE WOODLAND

Non-native woodland describes a specific part of the study area north of the pipeline alignment between Skyway and Highway 99 which is designated as part of the Mendocino National Forest; a 209-acre parcel known as the Chico Seed Orchard where research, seed banking, and gene conservation is carried out for a wide variety of coniferous and deciduous tree species, many of which are not indigenous to the local area. Species associates include those listed in the deciduous orchard-vineyard habitat type.

PASTURE

Pasture lands tend to be composed of a mix of perennial grasses or legumes with 100 percent canopy cover. Non-native invasive plant species are common in pasture lands. Irrigated pasture lands are typically a permanent habitat associated with agriculture and established on soils unsuitable for other purposes. Pasture lands are also typically associated with a decent water supply. Pasture in the study area is restricted to one small area associated with the Chico State University farm along Hegan Lane.

Wildlife associates include ground-nesting birds such as waterfowl, ring-necked pheasant, northern harrier (*Circus hudsonius*), and sandhill crane. Irrigated pastures provide feeding and roosting sites for many wetland associates including shorebirds, wading birds, gulls, waterfowl, and raptors. Mule deer are also known to utilize pastures for grazing.

PONDEROSA PINE

Ponderosa pine can be found in small, scattered patches in the northern portion of the study area as elevations increase. The ponderosa pine vegetation community includes pure stands of ponderosa pine as well as stands of mixed species in which at least 50 percent of the canopy consists of ponderosa pine. These stands can vary from open and patchy to contiguous and dense. Typical tree associates include white fir (*Abies concolor*), incense-cedar, Jeffrey pine (*Pinus jeffreyi*), sugar pine (*Pinus lambertiana*), Douglas-fir, canyon live oak (*Quercus chrysolepis*), California black oak, Pacific madrone, and tanoak.

Shrub associates may include manzanita, ceanothus, mountain-misery (*Chamaebatia foliolosa*), Pacific dogwood (*Cornus nuttallii*), California buckthorn, and poison-oak. Grass and forb associates may include Orcutt brome (*Bromus orcuttianus*), carex (*Carex* spp.), bluegrass (*Poa* spp.), bottlebrush squirreltail (*Elymus elymoides*), lupine (*Lupinus* spp.), purple nightshade (*Solanum xanti*), and streptanthus (*Streptanthus* spp.).

Ponderosa pine may act as transitional or migratory habitat for deer and other wildlife species. Birds like hairy woodpecker (*Dryobates villosus*) and pygmy nuthatch (*Sitta pygmaea*) require conifers for food and shelter. Mammals such as North American porcupine (*Erethizon dorsatum*) and black bear are common in this community. Numerous bat species may also utilize crevices behind the bark of ponderosa pine trees for daily roosting sites.

VALLEY OAK WOODLAND

Small patches of valley oak woodland occur along Skyway between Paradise and Chico, as well as along the various county roads within the City of Chico. This vegetation community is dominated almost exclusively by valley oaks (*Quercus lobata*). Common associates include California sycamore (*Platanus racemosa*), northern California black walnut (*Juglans hindsii*), interior live oak, and blue oak. Understory associates may include poison oak, California wild grape (*Vitis californica*), toyon, and California blackberry (*Rubus ursinus*). Various oats (*Avena* spp.), brome, and barley (*Hordeum vulgare*) are expected as part of the ground cover. Other common associates may include those similarly found in annual grasslands. In areas where valley oak woodland extends to the foothills, it transitions to blue oak woodlands or blue oak-foothill pine habitats, or valley-foothill riparian if occurring near stream courses. Common wildlife associates include western fence lizard, California scrub-jay, oak titmouse (*Baeolophus inornatus*), white-breasted nuthatch (*Sitta carolinensis*), phainopepla (*Phainopepla nitens*), and western gray squirrel.

Sensitive Communities

Sensitive communities included are those that are of special concern to resource agencies or those that are protected under the California Environmental Quality Act (CEQA), Fish and Game Code (FGC), Sections 1600–1603, and/or Clean Water Act (CWA) Section 401 and Section 404. These include sensitive vegetation communities as well as sensitive aquatic resources. Of the vegetation communities identified in the study area, one is considered a sensitive habitat type: valley-foothill riparian. The valley-foothill riparian sensitive community and common plant and wildlife species associated with it, as well as sensitive aquatic resources identified in the study area, are described in the following sections.

VALLEY-FOOTHILL RIPARIAN

Riparian habitats are protected under FGC Section 1602. Valley-foothill riparian is documented along Butte Creek parallel to and west of Skyway, as well as along Comanche Creek and Little Chico Creek (**Attachment 1**, pages 19–21, and pages 26–28). Common canopy associates may include cottonwood (*Populus* spp.), California sycamore, and valley oak. Subcanopy associates may include alder (*Alnus* spp.), boxelder (*Acer negundo*), wild grape, wild rose (*Rosa acicularis*), elderberry, poison oak, and willows (*Salix* spp.). The herbaceous layer may consist of similar species to that of annual grassland with the addition of aquatic associates such as miner's lettuce (*Claytonia perfoliate*), poison-hemlock (*Conium maculatum*), and hoary nettle (*Urtica dioica*).

Valley-foothill riparian habitats may provide water, food, dispersal corridors, nesting habitat, and thermal refuge for an abundance of wildlife. Common wildlife associates include those found in valley oak woodlands and annual grasslands with the addition of some aquatic / marginal aquatic dependent amphibians, reptiles, and birds such as Pacific chorus frog (*Pseudacris sierra*), western pond turtle (*Actinemys marmorata*), and osprey (*Pandion haliaeetus*).

AQUATIC RESOURCES

Aquatic resources are considered a sensitive habitat type or land cover type because they provide important ecosystem functions to flora, fauna, and their habitat. Some functions include movement corridors, migratory and/or dispersal corridors, foraging habitat, and cover. Further, aquatic resources are capable of protecting surrounding land cover types from large precipitation events that may cause flooding and resulting adverse effects on biological resources. Five types of aquatic resources were identified in the study area: perennial channel, intermittent channel, ephemeral channel, wetland, and ditch.

Perennial Channel

Perennial channels typically flow continuously throughout an average rainfall year, often with the streambed located below the water table for most of the year. Five perennial channels were observed in the proposed project area/footprint and generally flow from north-northeast to south-southwest. These channels include Honey Run and an unnamed channel in the northeastern portion of the proposed project area/footprint, Butte Creek, Butte Creek Diversion Channel, and Comanche Creek at the western end of the proposed project area/footprint (**Attachment 1**, pages 4–11, 20, and 26).

Vegetation cover in Honey Run and the unnamed channel is approximately 5 to 20 percent herbaceous cover with 5 to 15 percent tree, shrub, and sapling cover. Vegetation cover in Butte Creek and Comanche Creek is approximately 15 to 50 percent herbaceous cover with approximately 10 to 50 percent trees, shrubs, and saplings cover. Honey Run and the unnamed channel are sinuous, medium gradient channels with sediment texture in the low-flow channel consisting of medium-coarse silt to small cobbles. Coarse silt to large cobbles and boulders are present in the low-flow channel of Butte Creek and Comanche Creek with sinuous, medium to high gradient stream profiles. Honey Run and the unnamed channel exhibited flow at or near the ordinary high water mark. The water level in Comanche Creek was above the ordinary high water mark. Butte Creek Diversion Channel could not be accessed to assess vegetation cover, stream profile characteristics, sediment texture, or water levels. Butte Creek, Butte Creek Diversion Channel, and Comanche Creek flow under several bridge crossings. Several culverts are present where the channels flow under roads or other structures. Vegetation observed in and near Honey Run was likely burned during the 2018 Camp Fire, and a swimming pool or some other form of impoundment is near the southwestern portion of Honey Run prior to flowing west, exiting the proposed project area/footprint.

Intermittent Channel

Intermittent channels typically flow for only a portion of the year, often during the wet season. The wet season is typically in the winter and spring during periods of sustained precipitation events when the streambed may be below the water table or when snow melt provides sustained water flow. Other intermittent sources of water may be human-made in which flow regimes are controlled by irrigation systems or other forms of human-made water conveyance flowing into and/or out of channels.

Four intermittent channels were observed in the proposed project area/footprint and generally flowing from north-northeast to south-southwest (**Attachment 1**, pages 5, 7, 10, 11, 27, and 28). Three unnamed, intermittent channels are in the northeastern portion of the proposed project area/footprint. Vegetation cover in these channels ranges from approximately 5 to 85 percent herbaceous cover and 0 to 85 percent tree, shrub, and sapling cover. Sediment texture in the low-flow portions of the channels ranges from fine silt to large cobbles. Stream profiles have a low to medium gradient and are sinuous. Water levels were at or near the ordinary high water mark at lower elevations or downstream reaches of the channel while higher elevations or upstream reaches were dry. Little Chico Creek is in the western portion of the proposed project area/footprint and flows under two bridge crossings. The eastern bridge crossing includes the Crouch Avenue Alternative while the western crossing includes the Preferred Alternative. Vegetation cover consists of approximately 10 to 15 percent tree, shrub, and sapling cover and 5 percent herbaceous cover. Little Chico Creek is dry and sinuous, has a low to medium gradient stream profile, and has medium silt to small cobbles in the low-flow portion of the channel.

Ephemeral Channel

Ephemeral channels typically flow only in direct response to, or immediately after, a precipitation event such as rain or snow. One ephemeral channel was observed in the northeastern portion of the proposed project area/footprint near Pearson Road and Black Olive Drive flowing from north-northeast to south-southwest (**Attachment 1**, page 11). Based on review of aerial imagery and online data as mentioned previously, the upstream portions of this channel may diverge from intermittent channels; however, potential hydrologic connectivity could not be confirmed due to access restrictions.

This channel is dry and sinuous and had medium gradient stream profile. The channel reach near Buschmann Road and Sierra Park Drive has been graded along the streambed, bank, and top of the channel's banks. The channel reach nearest Pearson Road and Black Olive Drive has been heavily burned, and much of the streambed, bank, and vegetation along the top of the banks appears to be dead. Vegetation cover consists of approximately 5 to 10 percent herbaceous cover with a few small, isolated shrub patches with up to 80 percent cover. Sediment texture consist primarily of fine silt.

Potential Wetland

The three types of potential wetlands observed in the study area are vernal pool, scrub-shrub wetland, and freshwater emergent wetland. While data collection is incomplete due to lack of access, based on observations of hydric or wetland vegetation, hydric soil where accessible, and wetland hydrology, there are several potential wetlands along Skyway and in the northeastern portion of the proposed project area/footprint (**Attachment 1**, pages 4, 5, 7, and 10).

Vernal pools are a type of seasonal wetland that typically consist of a mosaic of mounds and depressional areas with swales intermixed. These swales are often seasonal and have a hydrological connection to pools, allowing inundation during the wet season. Vernal pools often have a characteristic impermeable layer such as clay, which prevents the pool from drying prematurely. Hydric, or wetland, plants are often endemic annual grasses and forbs. The vernal pools along Skyway are dominated by *Crassula* spp. and *Lasthenia* spp. Soils consist of rocky basalt with a biotic crust present in the first few centimeters of the soil surface. Wetland hydrology indicators in the proposed project area/footprint include a mosaic of mounds and depressional areas connected by seasonal swales, as described previously, and biotic crust with surface soil cracks. Over 50 vernal pools are estimated along the northern and southern portions of Skyway based on a binocular scan from the roadside.

One potential scrub-shrub wetland and two potential freshwater emergent wetlands were observed in the northeastern portion of the proposed project area/footprint. The potential scrub-shrub wetland near Honey Run appears to be an isolated depressional area with *Salix* spp. as the dominant overstory vegetation and *Juncus* spp. as the dominant herbaceous vegetation. Two potential freshwater emergent wetlands are present in the northeastern portion of the study area with *Typha* spp. and *Juncus* spp. as the dominant herbaceous cover. No surface water was observed in the vernal pools, scrub-shrub wetland, or freshwater emergent wetlands.

Ditch

Five roadside ditches are present in areas of the proposed project area/footprint that could be accessed (**Attachment 1**, pages 1, 2, 11, 21, and 26). These ditches primarily convey stormwater from roads to subsurface storm drains or surface streams.

Special-Status Species Accounts

Candidate, sensitive, and special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area or across their native habitat. These species have been identified and assigned a status ranking by governmental agencies such as CDFW and USFWS, and by private organizations such as California Native Plant Society (CNPS). The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

- Listed, proposed, or candidates for listing under the federal Endangered Species Act (50 CFR § 17.11 – listed; 61 FR 7591 – candidates)
- Listed or proposed for listing under the California Endangered Species Act (FGC 1992 Section 2050 et seq.; 14 California Code of Regulations [CCR] § 670.1 et seq.)
- Designated as species of special concern by CDFW
- Designated as fully protected by CDFW (FGC §§ 3511, 4700, 5050, and 5515)
- Species that meet the definition of rare or endangered under CEQA (14 CCR § 15380) including CNPS List Rank 1B and 2.

The results of USFWS, National Marine Fisheries Service (NMFS), CDFW, and CNPS database queries identified several special-status species with the potential to be impacted by the proposed project. Results of these database queries are provided as **Attachment 2**. In cases where a determination was made that no suitable habitat for a given species is present in the study area, that species is not analyzed further in this document. A table listing all of the species returned by the database queries and rationale for whether or not there is potential for them to occur in the study area is provided as **Attachment 3**. Accounts describing each special-status species with potential to occur in the study area are provided in the following sections.

Plants

The database queries and preliminary analysis of habitat suitability in the study area revealed the potential for 39 special-status plant species to occur in the study area. Descriptions of each of these species are provided in the following sections and are based on information obtained from the CNPS Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2021).

JEPSON'S ONION

Jepson's onion (*Allium jepsonii*) is a perennial herb (bulb) that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the lily family (Liliaceae) and blooms from April to August. It typically occurs in in chaparral, cismontane woodland, and lower montane coniferous forest with an elevation range of 984 to 3,707 feet. Jepson's onion has potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of mixed chaparral, blue oak-foothill pine, and montane hardwood-coniferous forests.

FERRIS' MILK-VETCH

Ferris' milk-vetch (*Astragalus tener* var*. ferrisiae*) is an annual herb that is native and endemic to California with a California Rare Plant Rank of 1B.1. It is in the legume family (Fabaceae) and blooms between March and June. It typically can be found in wetlands, meadows, valley grasslands, and riparian areas at elevations ranging from 0 to 263 feet. Ferris' milk-vetch has the potential to occur in the lower elevations of the study area (from the City of Chico west to the Chico WPCP) because of the presence of vernal pools, riparian areas, and grassland habitats.

BIG-SCALE BALSAMROOT

Big-scaled balsamroot (*Balsamorhiza macrolepis*) is a native perennial herb found throughout western North America with a California Rare Plant Rank of 1B.2. It is in the sunflower family (Asteraceae) and blooms between March and June. It can typically be found on slopes in foothill woodlands, chaparral, and valley grasslands at elevations ranging from 115 to 4,806 feet. The species is tolerant of low water and has the potential to occur in the study area because of the presence of chaparral, grassland, and foothill woodland habitats.

WATERSHIELD

Watershield (*Brasenia schreberi*) is a native aquatic perennial herb found throughout North America and in other parts of the world with a California Rare Plant Rank of 2B.3. It is in the watershield family (Cabombaceae) and blooms between April and October. It can typically be found in freshwater marshes, ponds, and slow streams at elevations ranging from 3 to 7,218 feet. The species has the potential to occur in the study area because of the presence of slow streams, particularly Comanche Creek and Little Chico Creek.

FLAGELLA-LIKE ATRACTYLOCARPUS

Flagella-like atractylocarpus (*Campylopodiella stenocarpa*) is a native California moss with a California Rare Plant Rank of 2B.2. It is part of the moss family (Dicranaceae) and is low water tolerant. This species is non-vascular and is known to occur in cismontane woodland, often along roadsides, at elevations ranging from 935 to 1,410 feet. Flagella-like atractylocarpus has the potential to occur in the study area, especially in blue oak and blue oak-foothill pine habitats.

DISSECTED-LEAVED TOOTHWORT

Dissected-leaved toothwort (*Cardamine pachystigma*) is a perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the mustard family (Brassicaceae) and blooms between February and May. The species is known to occur in both wetlands and non-wetlands in chaparral and lower montane coniferous forest communities ranging from 984 to 4,594 feet in elevation. Dissected-leaved toothwort has the potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of chaparral, blue oak-foothill pine, and montane hardwood-conifer communities.

CHAPARRAL SEDGE

Chaparral sedge (*Carex xerophila*) is a perennial herb that is native to California with a California Rare Plant Rank of 1B.2. It is in the sedge family (Cyperaceae) and blooms between March and June. It is known to occur in open forest, scrub, thicket edges, and chaparral habitats ranging from 902 to 2,527 feet in elevation. Chaparral sedge has the potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of open forests, scrub, and chaparral habitats.

PINK CREAMSACS

Pink creamsacs (*Castilleja rubicundula*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the paintbrush family (Orobanchaceae) and blooms between April and June. It typically favors open chaparral, cismontane woodlands, meadows, seeps, and valley and foothill grassland habitats ranging from 65 to 3,002 feet. Pink creamsacs has the potential to occur in the study area because of the presence of chaparral, woodland, and valley and foothill grassland habitats.

WHITE-STEMMED CLARKIA

White-stemmed clarkia (*Clarkia gracilis* ssp*. Albicaulis*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the willowherb family (Onagraceae) and blooms between May and July. It typically occurs in chaparral and cismontane woodlands at elevations ranging from 688 to 3,609 feet. White-stemmed clarkia has the potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of chaparral habitat.

MILDRED'S CLARKIA

Mildred's clarkia (*Clarkia mildrediae* ssp*. Mildrediae*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the willowherb family (Onagraceae) and blooms in July and August. The species is shade and low water tolerant. It typically occurs in lower montane coniferous forests and cismontane woodland habitats at elevations ranging from 902 to 5,676 feet. Mildred's clarkia has the potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of blue oak-foothill pine woodland and montane hardwood-conifer forest.

MOSQUIN'S CLARKIA

Mosquin's clarkia (*Clarkia mosquinii*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the willowherb family (Onagraceae) and blooms between May and July. The species is shade and low water tolerant. It typically occurs in cismontane woodland and lower montane coniferous forests at elevations ranging from 590 to 4,856 feet. Mosquin's clarkia has the potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of blue oak-foothill pine woodland and montane hardwood-conifer forest.

SILKY CRYPTANTHA

Silky cryptantha (*Cryptantha crinita*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the borage family (Boraginaceae) and blooms between April and May. It typically occurs in riparian areas, occasionally in wetlands, in foothill pine forests, yellow pine forests, and valley grasslands at elevations ranging from 295 to 3,675 feet. Silky cryptantha has the potential to occur in the study area (from the Butte Creek crossing and east through Paradise) because of the presence of foothill pine forests and valley grasslands.

RECURVED LARKSPUR

Recurved larkspur (*Delphinium recurvatum*) is a perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the ranunculus family (Ranunculaceae) and blooms between March and June. It typically occurs in shadscale scrub, foothill woodlands, valley grasslands and occasionally in wetlands at elevations ranging from 9 to 2,592 feet. Recurved larkspur has the potential to occur in the study area because of the presence of foothill woodlands and valley grasslands.

CLIFTON'S EREMOGONE

Clifton's eremogone (*Eremogone cliftonii*) is a perennial herb that is native to California with a California Rare Plant Rank of 1B.3. It is in the carnation family (Caryophyllaceae) and blooms between April and September. It is known to occur in open granitic soils in chaparral and lower and upper montane coniferous forests at elevations ranging from 1,492 to 6,825 feet. Clifton's eremogone has the potential to occur in the study area (within the sewer service area) because of the presence of chaparral and montane coniferous habitats underlain with granitic soils.

AHART'S BUCKWHEAT

Ahart's buckwheat (*Eriogonum umbellatum* var*. ahartii*) is a perennial herb that is native to California with a California Rare Plant Rank of 1B.2. It is in the knotweed family (Polygonaceae) and blooms between June and September. It typically occurs on slopes and in openings of chaparral and cismontane woodland habitats at elevations ranging from 902 to 4,856 feet. Ahart's buckwheat has the potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of chaparral and cismontane woodland habitats.

FERN-LEAVED MONKEYFLOWER

Fern-leaved monkeyflower (*Erythranthe filicifolia*) is an annual herb that is native to California with a California Rare Plant Rank of 1B.2. It is in the lopseed family (Phrymaceae) and blooms between April and June. It typically occurs in ephemeral seeps among granitic slabs in meadows, chaparral, and lower montane coniferous forests at elevations ranging from 1,148 to 5,610 feet. Fern-leaved monkeyflower has the potential to occur in the study area (from Lookout Point and east through Paradise) because of the presence of chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats.

HOOVER'S SPURGE

Hoover's spurge (*Euphorbia hooveri*) is an annual herb that is both native and endemic to California. It is listed as federally threatened and has a California Rare Plant Rank of 1B.2. It an annual herb in the spurge family (Euphorbiaceae) and blooms between July and September. It typically occurs in wetlands, vernal pools, riparian, and valley grassland habitats forming mats of thin, hairless stems. Germination is known to occur after pools or wetlands dry with the arrival of summer. The species can occur at an elevation range of 80 to 820 feet. Hoover's spurge has the potential to occur in the study area (from Tuscan Ridge west to the Chico WPCP) because of the presence of valley grassland habitats with vernal pools.

ADOBE-LILY

Adobe-lily (*Fritillaria pluriflora*) is a perennial bulb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the lily family (Liliaceae) and blooms between February and April. It is known to occur in adobe clay soils of foothill woodlands, chaparral, and valley grassland habitat types at elevations ranging from 147 to 3,100 feet. Adobe-lily has the potential to occur in the study area because of the presence of foothill woodlands, chaparral, and valley grassland habitats.

WOOLLY ROSE-MALLOW

Woolly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*) is a perennial herb that is native to California with a California Rare Plant Rank of 1B.2. It is in the mallow family (Malvaceae) and blooms between June and September. It typically occurs in freshwater marshes and wetland riparian habitat at elevations ranging from 0 to 509 feet. Woolly rose-mallow has the potential to occur in the lower elevations of the study area (from the City of Chico west to the Chico WPCP) because of the

presence of some small freshwater emergent wetland features and valley-foothill riparian habitat, especially along Butte Creek.

CALIFORNIA SATINTAIL

California satintail (*Imperata brevifolia*) is a perennial grass-like herb, that is native to California with a California Rare Plant Rank of 2B.1. It is in the blue grass family (Poaceae) and blooms between September and May. It typically occurs in chaparral, coastal scrub, Mojavean desert scrub, riparian, seep, and meadow habitat types at elevations ranging from 0 to 4,905 feet. California satintail has the potential to occur in the study area because of the presence of some small freshwater emergent wetland features as well as chaparral and riparian habitat.

RED BLUFF DWARF RUSH

Red Bluff dwarf rush (*Juncus leiospermus var. leiospermus*) is an annual grass-like herb that is native to California with a California Rare Plant Rank of CNPS 1B.1. It is in the rush family (Juncaceae) and blooms between March and May. It is known to occur in vernally mesic areas in chaparral, cismontane woodlands, meadows, seeps, valley and foothill grassland, and vernal pool habitats at elevations ranging from 98 to 4,118 feet. Red Bluff dwarf rush has the potential to occur in the study area because of the presence of chaparral, woodland, and valley and foothill grassland habitats with vernal pools.

COLUSA LAYIA

Colusa layia (*Layia septentrionalis*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the sunflower family (Asteraceae) and blooms between April and May. The species is known to inhabit foothill woodlands, chaparral, and valley grasslands at elevations ranging from 50 to 3,609 feet. Colusa layia has the potential to occur in the study area because of the presence of foothill woodlands, chaparral, and valley grasslands.

CANTELOW'S LEWISIA

Cantelow's lewisia (*Lewisia cantelovii*) is a perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the Miner's lettuce family (Montiaceae) and blooms between May and October. The species is known to occur in riparian and seep habitats in yellow pine forests, mixed evergreen forests, foothill woodlands, and chaparral vegetation communities at elevations ranging from 1,066 to 4,512 feet. Cantelow's lewisia has the potential to occur in the study area (from Lookout Point and east through Paradise) because of the presence of riparian, foothill woodland, and chaparral vegetation communities.

BUTTE COUNTY MEADOWFOAM

Butte County meadowfoam, (*Limnanthes floccosa* ssp*. californica*) is an annual herb that is both native and endemic to California. It is listed as federal and state endangered with a California Rare Plant Rank of 1B.1. It is in the meadowfoam family (Limnanthaceae) and blooms between March and May. The species is known to occur primarily on the margins of vernal swales located on alluvial terraces in annual grasslands with mima mound topography at elevations ranging from 115 to 1,215 feet. Butte County meadowfoam has the potential to occur in the study area (west of the sewer service area) because of the presence of annual grassland habitats with vernal pools.

VEINY MONARDELLA

Veiny monardella (*Monardella venosa*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.1. It is in the mint family (Lamiaceae) and blooms in June and July. The species is known to occur in heavy clay soils in cismontane woodland and

grassland communities at elevations ranging from 98 to 1,329 feet. Veiny monardella has the potential to occur in the study area (west of the sewer service area) because of the presence of cismontane woodland and grassland vegetation communities.

HAIRY ORCUTT GRASS

Hairy Orcutt grass (*Orcuttia pilosa*) is an annual grass-like herb that is both native and endemic to California. It is listed as federal and state endangered with a California Rare Plant Rank of 1B.1. It is in the grass family (Poaceae) and blooms between May and September. The species is known to occur in vernal pools within annual grasslands at elevations ranging from 85 to 660 feet. Hairy Orcutt grass has the potential to occur in the study area (from Tuscan Ridge west to the Chico WPCP) because of the presence of annual grassland habitats with vernal pools.

LEWIS ROSE'S RAGWORT

Lewis Rose's ragwort (*Packera eurycephala* var*. lewisrosei*) is a perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the sunflower family (Asteraceae) and blooms between March and July. The species is known to occur in chaparral, cismontane woodland, and lower montane coniferous forest at elevations ranging from 328 to 6,200 feet. Lewis Rose's ragwort has the potential to occur in the study area because of the presence of chaparral, blue oak-foothill pine, and montane hardwood-coniferous woodland communities.

AHART'S PARONYCHIA

Ahart's paronychia (*Paronychia ahartii*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.1. It is in the pink family (Caryophyllaceae) and blooms between March and June. The species is known to occur in cismontane woodland, grassland, and vernal pool habitats at elevations ranging from 1,066 to 4,512 feet. Ahart's paronychia has the potential to occur in the study area (from Lookout Point and east through Paradise) in blue oak-foothill pine, montane hardwood-conifer, and vernal pools within annual grassland vegetation communities.

SIERRA BLUE GRASS

Sierra blue grass (*Poa sierrae*) is a perennial grasslike herb that is both native and endemic to California with a California Rare Plant Rank of 1B.3. It is in the grass family (Poaceae) and blooms between April and June. The species is known to occur in openings in lower montane coniferous forest at elevations ranging from 1,148 to 6,282 feet. Sierra blue grass has the potential to occur in the study area (from Lookout Point and east through Paradise) because of the presence of blue oak-foothill pine and montane hardwood-conifer vegetation communities.

CALIFORNIA BEAKED-RUSH

California beaked-rush (*Rhynchospora californica*) is a perennial grasslike herb that is both native and endemic to California with a California Rare Plant Rank of 1B.1. It is in the sedge family (Cyperaceae) and blooms between May and July. The species is known to occur in bogs, fens, meadows, seeps, freshwater marshes and swamps, and lower montane coniferous forest vegetation communities at elevations ranging from 145 to 885 feet. California beaked-rush has the potential to occur in the study area (from Tuscan Ridge west to the Chico WPCP) because of the presence of small freshwater emergent wetland features within montane hardwood-conifer habitats.

BROWNISH BEAKED-RUSH

Brownish beaked-rush (*Rhynchospora capitellata*) is a perennial grasslike herb that is both native and endemic to California with a California Rare Plant Rank of 2B.2. It is in the sedge family

(Cyperaceae) and blooms in July and August. The species is known to occur in mesic soils in meadows, seeps, marshes, swamps, and montane coniferous forests at elevations ranging from 145 to 6,560 feet. Brownish beaked-rush has the potential to occur in the study area because of the presence of small freshwater emergent wetland features within montane hardwood-conifer habitats.

HALL'S RUPERTIA

Hall's rupertia (*Rupertia hallii*) is a perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the legume family (Fabaceae) and blooms between June and August. The species is known to occur along roadsides and in openings of cismontane woodland and lower montane coniferous forest at elevations ranging from 1,785 to 7,380 feet. Hall's rupertia has the potential to occur in the higher elevation portions of the study area (sewer service area) because of the presence of blue oak-foothill pine and montane hardwood-coniferous forests and the disturbed/ruderal areas adjacent to those habitat types.

SANFORD'S ARROWHEAD

Sanford's arrowhead (*Sagittaria sanfordii*) is a rhizomatous perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the water-plantain family (Alismataceae) and blooms between May and October. The species is known to occur in standing or slow-moving freshwater marshes, ponds, swamps, and ditches at elevations ranging from 0 to 1,985 feet. Sanford's arrowhead has the potential to occur in the study area because of the presence of slow-moving streams (especially Comanche Creek and Little Chico Creek).

FEATHER RIVER STONECROP

Feather River stonecrop (*Sedum albomarginatum*) is a perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the stonecrop family (Crassulaceae) and blooms in May and June. The species is known to occur in chaparral and lower montane coniferous forests at elevations ranging from 984 to 6,070 feet. Feather River stonecrop has the potential to occur in the study area (from Tuscan Ridge and east through Paradise) because of the presence of chaparral, blue oak-foothill pine, and montane hardwood-coniferous forest.

BUTTE COUNTY CHECKERBLOOM

Butte County checkerbloom (*Sidalcea robusta*) is a rhizomatous perennial herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the mallow family (Malvaceae) and blooms between April and June. The species is known to occur in chaparral and cismontane woodland communities at elevations ranging from 245 to 1,313 feet. Butte County checkerbloom is known to occur in the study area (between the Butte Creek crossing and the sewer service area) in chaparral and foothill woodland habitats.

SLENDER-LEAVED PONDWEED

Slender-leaved pondweed (*Stuckenia filiformis* ssp*. alpina*) is a perennial herb that is native to California with a California Rare Plant Rank of 2B.2. It is in the pondweed family (Potamogetonaceae) and blooms between May and July. The species is known to occur in shallow, clear water of lakes, drainage channels, freshwater marshes and swamps at elevations ranging from 15 to 7,628 feet. Slender-leaved pondweed has the potential to occur in slow-moving streams in the study area (especially Comanche Creek and Little Chico Creek).

BUTTE COUNTY GOLDEN CLOVER

Butte County golden clover (*Trifolium jokerstii*) is an annual herb that is both native and endemic to California with a California Rare Plant Rank of 1B.2. It is in the legume family (Fabaceae) and

blooms between March and May. The species is known to occur in mesic grasslands and vernal pools at elevations ranging from 145 to 1,313 feet. Butte County golden clover has the potential to occur in the study area (west of sewer service area) because of the presence of annual grassland habitats with vernal pools.

GREENE'S TUCTORIA

Greene's tuctoria (*Tuctoria greenei*) is an annual grass-like herb that is both native and endemic to California. It is listed as federally endangered and state rare with a California Rare Plant Rank of 1B.1. It is in the grass family (Poaceae) and blooms between May and September. The species is known to occur in shallow vernal pools (or at the shallow margins of deeper pools) at elevations ranging from 82 to 4,348 feet. Greene's tuctoria has the potential to occur in the study area because of the presence of annual grassland habitats with vernal pools.

BRAZILIAN WATERMEAL

Brazilian watermeal (*Wolffia brasiliensis*) is a perennial herb that is native to California, with a California Rare Plant Rank of 2B.3 which means it is rare in California but common elsewhere. It is in the arum family (Araceae) and blooms between April and December. The species is known to occur in shallow freshwater marshes and swamps at elevations ranging from 65 to 330 feet. Brazilian watermeal has the potential to occur in the study area because of the presence of small freshwater emergent wetlands.

Wildlife

The database queries and preliminary analysis of habitat suitability in the study area revealed the potential for 38 special-status wildlife species to occur in the study area. Descriptions of each of these species are provided in the following sections.

CROTCH BUMBLE BEE

Crotch bumble bee (*Bombus crotchii*) is an insect species which is a candidate for listing as state endangered in California. They nest underground, utilize open grassland and scrub habitats, and nectar from a variety of flowering plants including those in the following genera: *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia* (CDFW 2019a). Crotch bumble bee has the potential to occur in the study area in annual grassland and mixed chaparral habitats.

WESTERN BUMBLE BEE

Western bumble bee (*Bombus occidentalis*) is an insect species which is a candidate for listing as state endangered in California. They utilize open grassland, chaparral, and scrub habitats as well as mountain meadows and urban parks and gardens. They typically nest underground in abandoned rodent burrows, and in open west-southwest facing slopes bordered by trees, although they do sometimes nest in above-ground locations such as in logs or among railroad ties (CDFW 2019a). Western bumble bee has the potential to occur in the study area in annual grassland and mixed chaparral habitats, as well as in parks and gardens in Chico and Paradise.

CONSERVANCY FAIRY SHRIMP

Conservancy fairy shrimp (*Branchinecta conservatio*) is a federally endangered species of crustacean which is endemic to vernal pools in California, almost entirely in the Central Valley. While the majority of sites inhabited by this species are large and turbid pools which remain inundated much longer than typical vernal pools, they can be found in smaller vernal pools as well (USFWS 2012). Conservancy fairy shrimp has the potential to occur in vernal pools in the study area.

VERNAL POOL FAIRY SHRIMP

Vernal pool fairy shrimp (*Branchinecta lynchi*) is a federally threatened species of crustacean which is endemic to vernal pools in California and southern Oregon, especially on the eastern side of California's Central Valley. They are found only in cool water vernal pools, requiring water temperatures of 50°F or lower to hatch, and they are typically associated with smaller, shallower vernal pools (about 6 inches deep) that have relatively short periods of inundation (USFWS 2007a). Vernal pool fairy shrimp has the potential to occur in vernal pools in the study area.

VALLEY ELDERBERRY LONGHORN BEETLE

Valley elderberry longhorn beetle is a federally threatened species of insect which is endemic to California. It occurs in the Central Valley from Shasta County south to Fresno County and from the valley floor up to approximately 500 feet in elevation. This species is completely dependent on elderberry shrubs (*Sambucus* spp.) in which they spend their entire life cycle; developing in the pith of the elderberry stems and only emerging as adults for a brief period in spring to reproduce. They are most often found occupying elderberry shrubs within riparian habitat but can also be found in elderberry shrubs in annual grassland or oak savanna habitats (USFWS 2017). Valley elderberry longhorn beetle is known to occur in valley-foothill riparian habitat in the study area with elderberry shrubs present, such as along Butte Creek and Little Chico Creek.

VERNAL POOL TADPOLE SHRIMP

Vernal pool tadpole shrimp (*Lepidurus packardi*) is a federally endangered species of crustacean which is endemic to vernal pools in California, especially in California's Central Valley from Shasta County south to Tulare County. They can occur in pools with water temperatures ranging from 50 to 84°F, though hatching rates become significantly lower at temperatures above 68°F. While this species is more prolific in pools with inundation periods of 6 months or greater, they can persist in smaller pools with shorter inundation periods (USFWS 2007b). There is final critical habitat for this species within 1.5 miles of the study area. Vernal pool tadpole shrimp has the potential to occur in vernal pools in the study area.

RIFFLE SCULPIN

Riffle sculpin (*Cottus gulosus*) is a California species of special concern which occurs in clear and shaded permanent, cool, headwater streams with moderate gradients where riffles and rocky substrates predominate. They are mostly present in mid-elevation reaches, although they are present below dams with coldwater releases (Moyle 2002). Riffle sculpin has the potential to occur in the study area in Butte Creek, Comanche Creek, and Little Chico Creek.

HARDHEAD

Hardhead (*Mylopharodon conocephalus*) is a California species of special concern which occurs in the Sacramento-San Joaquin and Russian River drainages, including their tributaries. They prefer small to large streams in low to mid-elevation environments, though they may also inhabit lakes or reservoirs. They are usually found in clear deep streams with a slow but present flow. Though spawning may occur in pools, runs, or riffles, the bedding area will typically be characterized by gravel and rocky substrate (CDFW 2015). Hardhead has the potential to occur in perennial streams in the study area, especially Butte Creek.

STEELHEAD (CENTRAL VALLEY DPS)

The Central Valley Distinct Population Segment (DPS) of steelhead is a federally threatened anadromous fish species which journeys from the marine and estuarine waters of San Francisco and San Pablo Bays to the Sacramento and San Joaquin Rivers and their tributaries to spawn. Spawning

habitat includes gravel-bottomed, fast-flowing, well-oxygenated rivers and streams (NMFS 2016a). Central Valley steelhead are known to occur within the study area in Butte Creek.

CHINOOK SALMON (CENTRAL VALLEY SPRING-RUN ESU)

The Central Valley spring-run Evolutionarily Significant Unit (ESU) of chinook salmon is a federally and state threatened anadromous fish species which journeys from the Sacramento-San Joaquin River Delta into the Sacramento River and its tributaries to spawn starting in late March (NMFS 2016b). Central Valley spring-run Chinook salmon are known to occur within the study area in Butte Creek, and in fact Butte Creek is known to have the largest self-sustaining, naturally spawning, wild population of spring-run Chinook salmon in the Central Valley. The species was observed in Butte Creek during field studies for the Project in spring 2021.

FOOTHILL YELLOW-LEGGED FROG

Foothill yellow-legged frog (*Rana boylii*) is an amphibian species which statewide is considered a California species of special concern, and as of March 2020 in certain portions of its range, has been elevated to state threatened or endangered. Foothill yellow-legged frogs that could occur in the study area could be part of the Feather River clade which are listed as state threatened. The species prefers shallow flowing streams and rivers with at least cobble sized substrate. Breeding generally occurs at the margins of wide shallow channels with reduced flow variation near tributary confluences. Specifically, egg masses are placed in low flow locations on or under rocks with preferred substrates being boulders, cobbles, or gravel (CDFW 2019b). Foothill yellow-legged frogs are known to occur in perennial streams and valley-foothill riparian habitats in the study area, especially Butte Creek and Honey Run.

CALIFORNIA RED-LEGGED FROG

California red-legged frog (*Rana draytonii*) is a federally threatened species and a California species of special concern. This species is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, California red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep still or slow-moving water. Breeding occurs between late November and late April. California red-legged frogs estivate (period of inactivity) during the hot and dry months in upland habitats, typically within 300 feet of aquatic and riparian habitat. Upland habitats are composed of grasslands, woodlands, and/or vegetation that provide shelter, forage, and predator avoidance, including small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds (USFWS 2010). California red-legged frog has the potential to occur in perennial stream and valley-foothill riparian habitats in the study area, as well as annual grassland with small mammal burrows and connectivity to the above-mentioned aquatic habitats.

WESTERN SPADEFOOT

Western spadefoot (*Spea hammondii*) is an amphibian species which is considered a California species of special concern. They dwell underground for most of the year in burrows they dig themselves with the aid of a hard, black, wedge-shaped spade on each hindfoot. They emerge following winter rains to breed in vernal pools and other seasonal wetland features within grassland and sometimes valley-foothill hardwood habitats (Thomson et al. 2016). Western spadefoot has the potential to occur in vernal pools, annual grasslands, and valley oak, blue oak, and blue oak-foothill pine habitats in the study area.

WESTERN POND TURTLE

Western pond turtle is a reptile species which is considered a California species of special concern. They occupy various waterbodies, both natural and artificial, with exposed banks, logs, or other surfaces for basking, and connectivity to upland habitat with vegetative cover for nesting and overwintering (Thomson et al. 2016). Western pond turtles were observed basking on logs along Butte Creek during field studies for the Project in spring 2021, and are known to occur along Comanche Creek, Little Chico Creek and at the Chico WPCP ponds.

COAST HORNED LIZARD

Coast horned lizard is a reptile species which is considered a California species of special concern. They occupy sage scrub, dunes, alluvial scrub, annual grassland, chaparral, oak, riparian, coniferous forest, and saltbush scrub. They require loose, fine soil for burrowing, open areas for basking, and dense foliage for cover (Thomson et al. 2016). Coast horned lizard has the potential to occur in annual grassland, mixed chaparral, valley oak, blue oak, blue oak-foothill pine, and valley-foothill riparian habitats in the study area.

GIANT GARTER SNAKE

Giant garter snake (*Thamnophis gigas*) is a reptile species which is endemic to California's Central Valley and listed as federal and state threatened. They are a highly aquatic species, occupying marshes, sloughs, ponds, small lakes, low gradient streams, irrigation canals, rice fields, and associated uplands with at least some vegetation for escape, and burrows or soil crevices for refugia. They spend much of the year (usually October to March) in this underground refugia, then emerge in spring to breed. They are found from sea level to approximately 400 feet in elevation. Butte County is the northernmost extent of the range of this species (USFWS 2020). Giant garter snake has the potential to occur in perennial streams and valley-foothill riparian habitats in the lower elevation portions of the study area (from where Butte Creek crosses the study area, west to the Chico WPCP).

NORTHERN GOSHAWK

Northern goshawk (*Accipiter gentilis*) is an arboreal raptor which is considered a California species of special concern. They nest in mature, old-growth coniferous forests at high elevations in the Sierra Nevada and Cascade Mountains. They prefer stands with ponderosa pine and nest sites on north-facing slopes with nearby rivers, creeks, or streams. They prey mainly on small mammals such as rabbits and squirrels, and small to mid-sized birds such as robins and jays (Shuford and Gardali 2008). Northern goshawk has the potential to occur in montane hardwood-conifer and ponderosa pine habitats in the highest elevation portions of the study area (in the town of Paradise), though it is much more likely to occur as a migrant or winter visitor than to nest there.

TRICOLORED BLACKBIRD

Tricolored blackbird (*Agelaius tricolor*) is a state threatened species and a California species of special concern. It is a colonial species, nesting in populous colonies in fresh marshes with dense emergent vegetation or, increasingly with the loss of this preferred habitat, in dense patches of thorny shrubs such as Himalayan blackberry (*Rubus armeniacus*), or California wild rose (*Rosa californica*). The species is omnivorous, feeding mostly on insects, but also taking seeds and waste grains from croplands and grassy fields. For breeding habitat to be suitable, there must be foraging habitat and open water within 4 miles of the colony site (CDFW 2021b). Tricolored blackbird has the potential to occur in annual grassland, cropland, irrigated row and field crop, pasture, and valley-foothill riparian habitats in the study area. However, with a lack of suitable nesting habitat (dense

patches of thorny shrubs or fresh marshes with dense emergent vegetation), it is much more likely to forage in the study area than to nest there.

GREATER SANDHILL CRANE

Greater sandhill crane (*Antigone canadensis tabida*) is a tall wading bird that is a state threatened and state fully protected species in California. The species nests in the far northeastern corner of the state from Modoc Plateau south to Sierra Valley on the eastern side of the Sierra Nevada and Cascade Mountains. It overwinters in the Central Valley and low foothills in annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open emergent wetlands (CDFW 2021b). Greater sandhill crane has the potential to occur from fall through spring in annual grassland, cropland, irrigated row and field crop, and pasture habitats in the study area. Migrating flocks of greater sandhill cranes were observed flying high over the study area during field studies in Spring 2021. However, the study area is not in the nesting range of the species.

GOLDEN EAGLE

Golden eagle (*Aquila chrysaetos*) is protected by the Bald and Golden Eagle Protection Act and is a state fully protected species in California. This large raptor prefers rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, and open mountain slopes, cliffs, and rock outcrops for nesting. They forage over open grasslands and oak savanna habitats for their mainly mammalian prey which consists largely of rabbits and ground squirrels, though they will often prey on lizards, snakes, and birds (CDFW 2021b). Golden eagle has the potential to occur in annual grassland, mixed chaparral, blue oak, and blue oak-foothill pine habitats in the study area, though it is much more likely to occur as a migrant or winter visitor than to nest there.

LONG-EARED OWL

Long-eared owl (*Asio otus*) is a bird species which is considered a California species of special concern. They nest and roost in dense stands of live oak (*Quercus* spp.) and in riparian thickets with dense canopies near meadow edges. At higher elevations, they also nest in dense stands of conifers. In winter they often form large roost groups in riparian thickets or dense stands of willows (CDFW 2021b). Long-eared owl has the potential to occur in montane hardwood-conifer, ponderosa pine, blue oak-foothill pine, and valley-foothill riparian habitats in the study area. At the lower elevations of the study area (from Tuscan Ridge west to the Chico WPCP), they are much more likely to occur as an uncommon migrant or winter visitor than to nest.

BURROWING OWL

Burrowing owl (*Athene cunicularia*) is a crepuscular bird species which is considered a California species of special concern. They nest underground, and in California, they mainly take over the burrows of California ground squirrels or occupy human-made ground cavities such as drainpipes or culverts. They can persist in many kinds of highly disturbed areas such as airports, golf courses, and vacant lots. The most important elements of suitable habitat for the species are small mammal burrows and open ground with sparse vegetative cover for foraging (CDFW 2021b). Burrowing owl has the potential to occur in annual grassland, cropland, irrigated row and field crop, pasture, and disturbed/ruderal habitats mainly in the lower elevations of the study area (from Tuscan Ridge west to the Chico WPCP).

SWAINSON'S HAWK

Swainson's hawk is a state threatened raptor species which nests in oak savanna and cottonwood riparian woodland adjacent to their foraging habitat of grassland or agricultural fields. They often

follow behind farm equipment to forage for killed or maimed rodents and are also often observed foraging over grassy roadsides or highway medians. Swainson's hawks are a neotropical migrant species, mostly departing California by October for wintering grounds as far south as Argentina and returning in March and April to nest (CDFW 2021b). Swainson's hawks are known to occur in valley oak woodland, valley-foothill riparian, pasture, and irrigated row and field crop habitat in the study area. An active Swainson's hawk nest was found during field studies for the Project in spring 2021.

NORTHERN HARRIER

Northern harrier is a raptor species which is considered a California species of special concern. They occupy a variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, and croplands where they patrol low for their prey of mainly small mammals and birds. They nest on the ground in patches of dense, tall vegetation in undisturbed areas (Shuford and Gardali 2008). Northern harrier is known to occur in annual grassland, pasture, and irrigated row and field crop habitats in the study area, and one was observed in the study area during field studies for the Project in spring 2021. However, with the lack of truly suitable nesting habitat in the study area (tall vegetation in undisturbed areas), it is much more likely to occur as a migrant or winter visitor than to nest there.

WHITE-TAILED KITE

White-tailed kite is a state fully protected raptor species in California which nests in oak savanna, oak and willow riparian, and other open areas with scattered trees near their foraging habitat of open grasslands, meadows, and farmland. They are often seen hover foraging over roadsides or grassy highway medians in pursuit of their prey; mainly small mammals such as voles, mice, and pocket gophers, though birds, reptiles, and insects are sometimes taken (CDFW 2021b). White-tailed kite has the potential to occur in annual grassland, blue oak and valley oak woodland, valley-foothill riparian, irrigated row and field crop, pasture, and disturbed/ruderal habitats in the study area.

AMERICAN PEREGRINE FALCON

American peregrine falcon (*Falco peregrinus anatum*) is a state fully protected raptor species in California which is often observed making high-speed pursuits of its mainly avian prey through canyons or over wetlands, lakes, rivers, or other aquatic habitats. They mainly nest on cliff ledges, though they will often use high human-made structures such as bridges, skyscrapers, or electrical towers (CDFW 2021b). American peregrine falcon has the potential to occur in blue oak-foothill pine, ponderosa pine, and montane hardwood-conifer habitats as well as developed portions of the study area.

BALD EAGLE

Bald eagle (*Haliaeetus leucocephalus*) is protected by the Bald and Golden Eagle Protection Act and is listed as state endangered in California. They are highly piscivorous, preferring to nest near large bodies of water such as rivers, lakes, and reservoirs with abundant fish. They build massive nests which they return to year after year in very large old-growth trees with open, supportive branches (CDFW 2021b). Bald eagle is known to occur in the study area, and a pair was observed perched along and soaring over Butte Creek in the study area several times during field studies for the Project in spring 2021.

YELLOW-BREASTED CHAT

Yellow-breasted chat (*Icteria virens*) is a neotropical migrant songbird which is considered a California species of special concern. It occupies early successional riparian habitats with a well-

developed shrub layer and an open canopy along narrow borders of streams, creeks, sloughs, and rivers (CDFW 2021b). They often nest in dense thickets of blackberries and willows where their raucous song can be heard emanating from deep in the brush. Yellow-breasted chat has the potential to occur in valley-foothill riparian habitat in the study area.

LOGGERHEAD SHRIKE

Loggerhead shrike (*Lanius ludovicianus*) is a predatory songbird which is considered a California species of special concern. Shrikes are unique for their practice of impaling their prey (mostly small mammals, birds, and lizards) on thorny vegetation or barbed wire fences. This species prefers shrublands and open woodlands with a fair amount of grass cover and areas of bare ground. They require tall shrubs or trees, fences, or power lines for hunting perches and territorial advertisement, and thorny vegetation or barbed wire fences for impaling their prey (CDFW 2021b). Loggerhead shrike has the potential to occur in annual grassland, mixed chaparral, blue oak woodland, valley oak woodland, valley-foothill riparian, irrigated row and field crop, pasture, and disturbed/ruderal habitats in the study area.

CALIFORNIA BLACK RAIL

California black rail (*Laterallus jamaicensis coturniculus*) is a state threatened and fully protected species in California. It is one of the least known bird species in North America as it is a very small and very secretive denizen of saline, brackish, and fresh emergent wetlands where its loud, piercing call (mostly delivered at night) is often the only indication of its presence. They are mainly known from tidal wetlands in the San Francisco Bay Area and southern California baylands, and fresh marshes in the Lower Colorado River Valley and Imperial Valley near the Salton Sea. However, they are known to occupy a few scattered ephemeral wetland features in the Sacramento Valley and lower Sierra Nevada foothills (CDFW 2021b). California black rail has the potential to occur in small freshwater emergent wetland and vernal pools within annual grassland habitats in the study area.

PURPLE MARTIN

Purple martin (*Progne subis*) is a neotropical migrant bird species and is considered a California species of special concern. They are the largest swallow species in North America, and are colonial, returning from their wintering grounds in late March and early April. With the exception of the Sacramento area, where they have taken to nesting under highway bridges, purple martins prefer to nest in the mountains and foothills in forest edges with plentiful cavities and ample airspace above the canopy to allow for foraging of aerial insects (CDFW 2021b). Purple martins have the potential to occur in montane hardwood-conifer and valley-foothill riparian habitats in the study area. They could occur as a migrant in the lower elevation portions of the study area but are only likely to nest at higher elevations in and near the town of Paradise.

YELLOW WARBLER

Yellow warbler (*Setophaga petechia*) is a neotropical migrant bird species and is considered a California species of special concern. They are usually found in cottonwood willow riparian habitat along creeks and rivers, though they also nest in montane shrubbery in open coniferous forests (CDFW 2021b). Yellow warblers have the potential to occur in montane hardwood-conifer and valley-foothill riparian habitats in the study area. They could occur as a migrant in the lower elevation portions of the study area but are most likely to nest at higher elevations in and near the town of Paradise.

CALIFORNIA SPOTTED OWL

California spotted owl (*Strix occidentalis occidentalis*) is considered a California species of special concern which ranges throughout the west slopes of the Sierra Nevada Mountains. They prefer older forests in areas of high canopy cover, with a multi-layered canopy, old decadent trees, a high number of large trees, and coarse downed woody debris (CDFW 2021b). California spotted owl has the potential to occur in montane hardwood-conifer and ponderosa pine habitats at the highest elevation portions of the study area. However, this species is much more likely to occur during migration or winter in the study area and is not likely to nest there due to the lack of old-growth, dense canopy forest.

PALLID BAT

Pallid bat (*Antrozous pallidus*) is a cave, cliff, and crevice-roosting bat which is considered a California species of special concern. While they mostly roost in rocky places, pallid bats sometimes choose to roost in hollow trees, buildings, or other human-made structures. They occupy a wide variety of habitats including grasslands, shrublands, and woodlands, from sea-level up to montane coniferous forests. They are most common in open, dry habitats with rocky areas for roosting (CDFW 2021b). Pallid bat has the potential to occur in all habitats in the study area and could potentially roost in hollow trees or buildings in the study area.

TOWNSEND'S BIG-EARED BAT

Townsend's big-eared bat (*Corynorhinus townsendii*) is a building, cave, mine, and tunnel-roosting bat which is considered a California species of special concern. They range nearly throughout California (with the exception of the highest elevations of the Sierra Nevada Mountains) and occupy a wide variety of habitat, though they prefer more mesic sites. They are able to hover-glean, and forage on habitat edges, taking moths, beetles, and other soft-bodied insects from brush and trees. They may use different sites for day roosts, night roosts, maternity roosts, and hibernacula. They are extremely sensitive to disturbance at roost sites and will abandon a roost easily (CDFW 2021b). Townsend's big-eared bat has the potential to occur in all habitats in the study area and could potentially roost in buildings or other human-made structures with dark, quiet recesses in the study area.

WESTERN MASTIFF BAT

Western mastiff bat (*Eumops perotis californicus*) is a building, cliff, and crevice-roosting bat which is considered a California species of special concern. While they mostly roost in rocky places, western mastiff bats sometimes choose to roost in hollow trees, buildings, or other human-made structures as long as there is a vertical face for them to drop off to take flight. They occupy a wide variety of arid to semi-arid habitats including grasslands, chaparral, coniferous and deciduous woodlands, and developed areas. They are most common in open, dry habitats with an abundance of crevices or buildings for roosting (CDFW 2021b). Western mastiff bat has the potential to occur in all habitats in the study area and could potentially roost in buildings or other human-made structures in the study area.

WESTERN RED BAT

Western red bat (*Lasiurus blossevillii*) is a tree-roosting bat which is considered a California species of special concern. While they mostly roost in rocky places, western red bats sometimes choose to roost in hollow trees, buildings, or other human-made structures. They occupy a wide variety of habitats including grasslands, shrublands, and woodlands, from sea-level up to montane coniferous forests. Roosts are most often in edge habitats adjacent to fields, streams, or urban areas (CDFW

2021b). Western red bat has the potential to occur in all habitats in the study area and could potentially roost in trees or buildings in the study area.

AMERICAN BADGER

American badger (*Taxidea taxus*) is a burrowing carnivorous mammal in the family Mustelidae which is considered a California species of special concern. They are most abundant in dry, open stages of grassland, shrubland, and woodland habitats, most crucially with friable soils for them to dig their burrows and pursue their fossorial mammal prey (CDFW 2021b). American badger has the potential to occur in annual grassland, mixed chaparral, and blue oak-foothill pine habitats in the study area, especially in the open habitats between Chico and Paradise.

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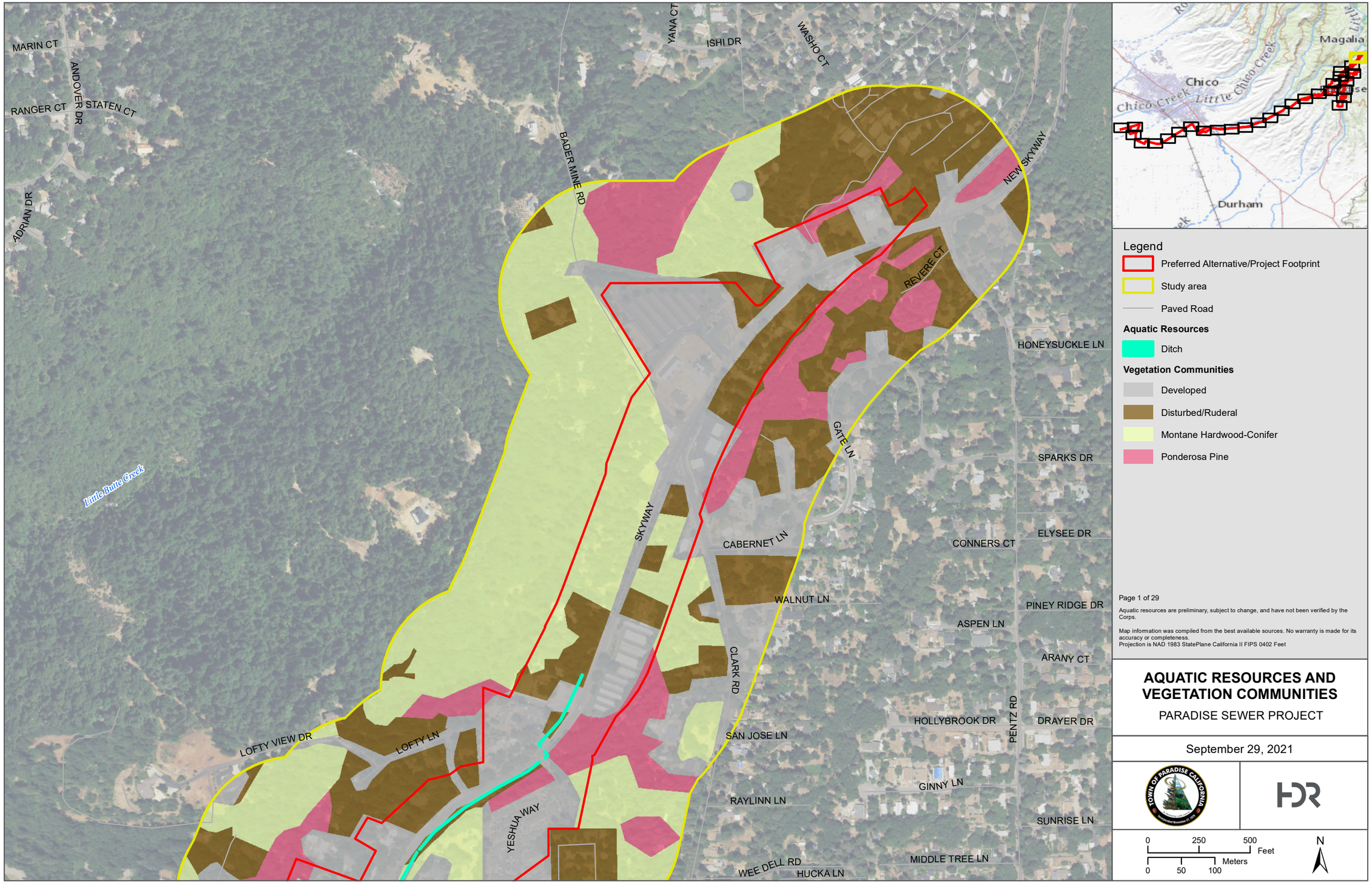
Attachment 1

Aquatic Resources and Vegetation Communities Mapbook



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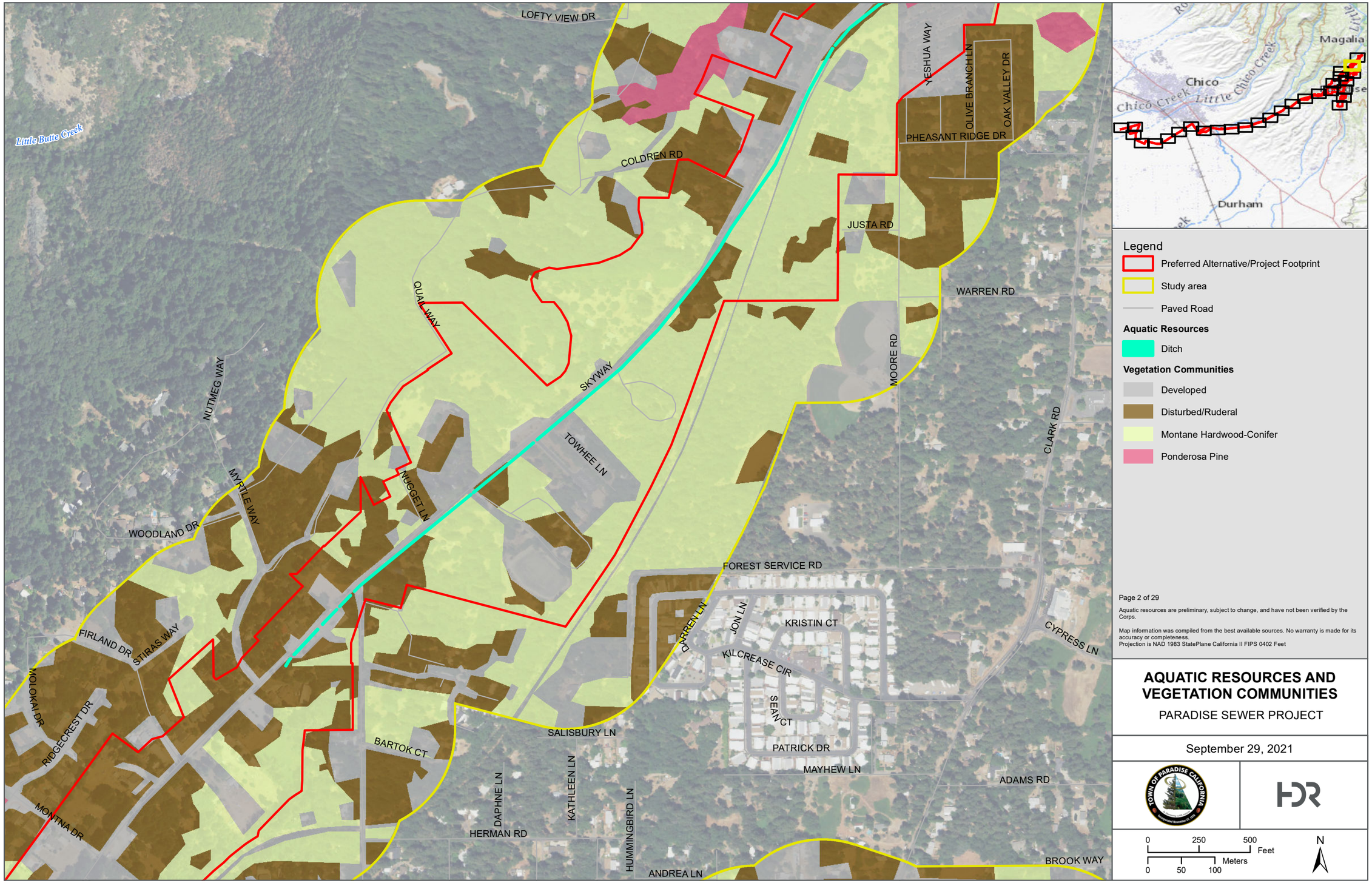

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

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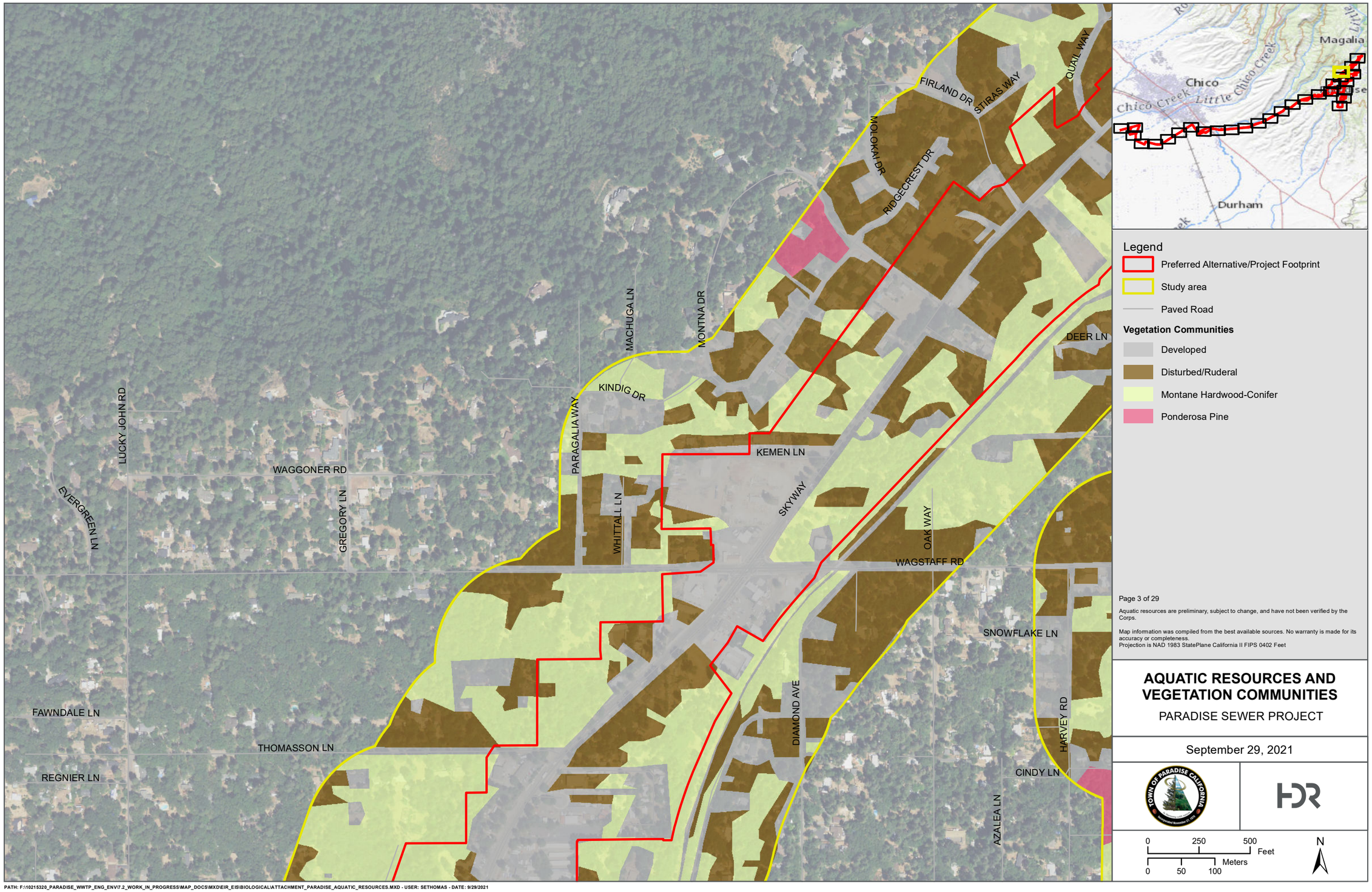

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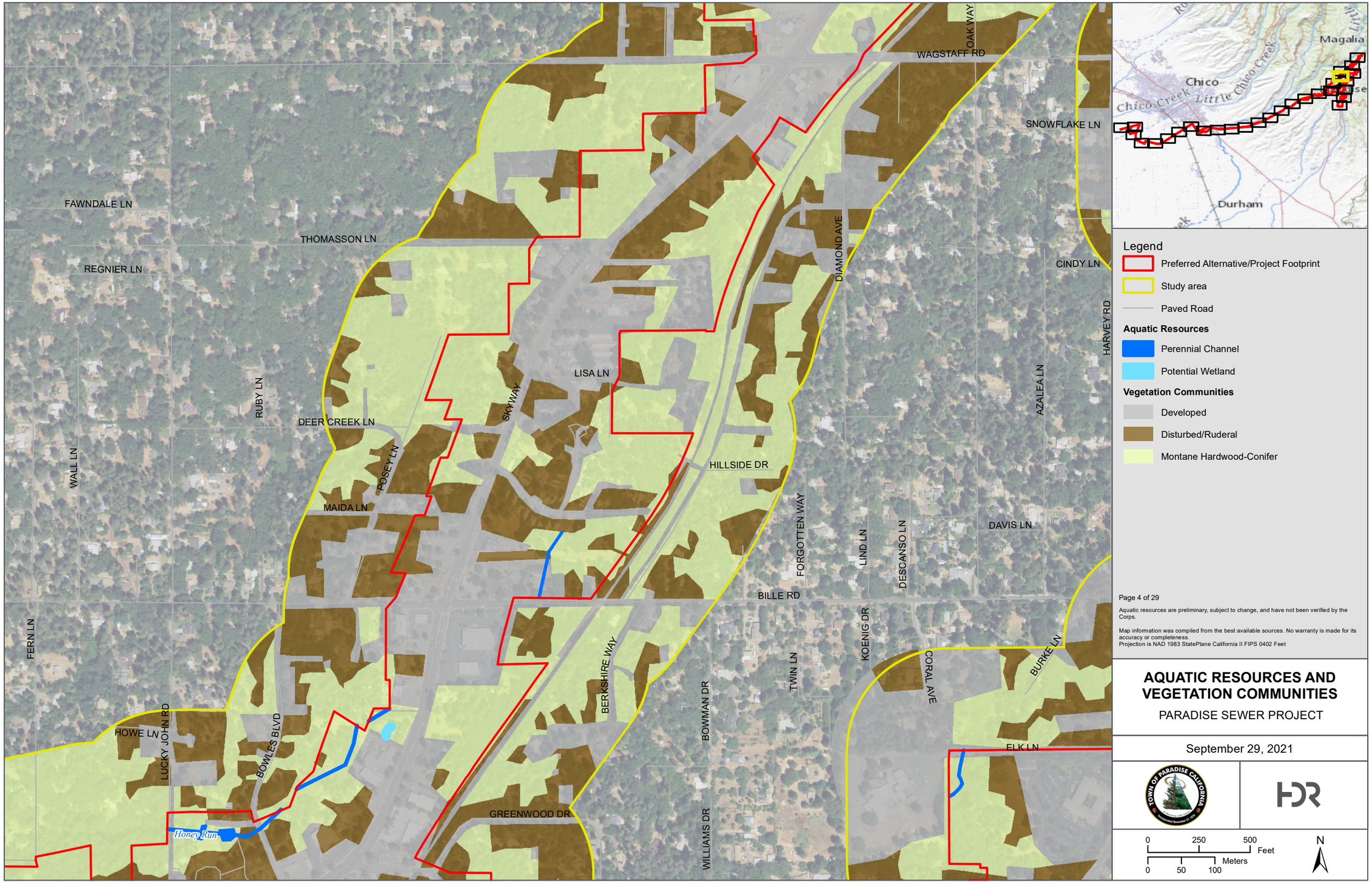

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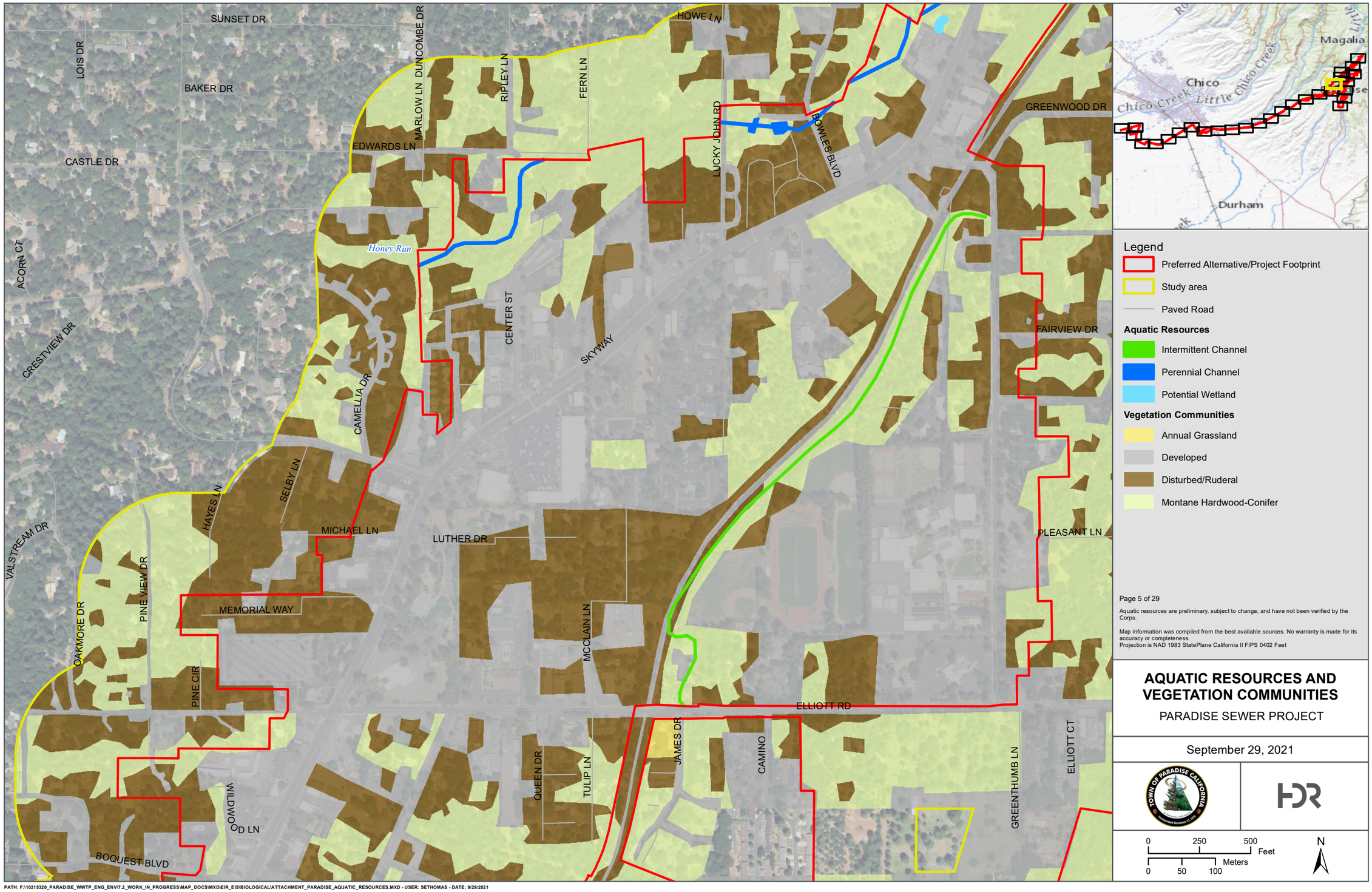

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

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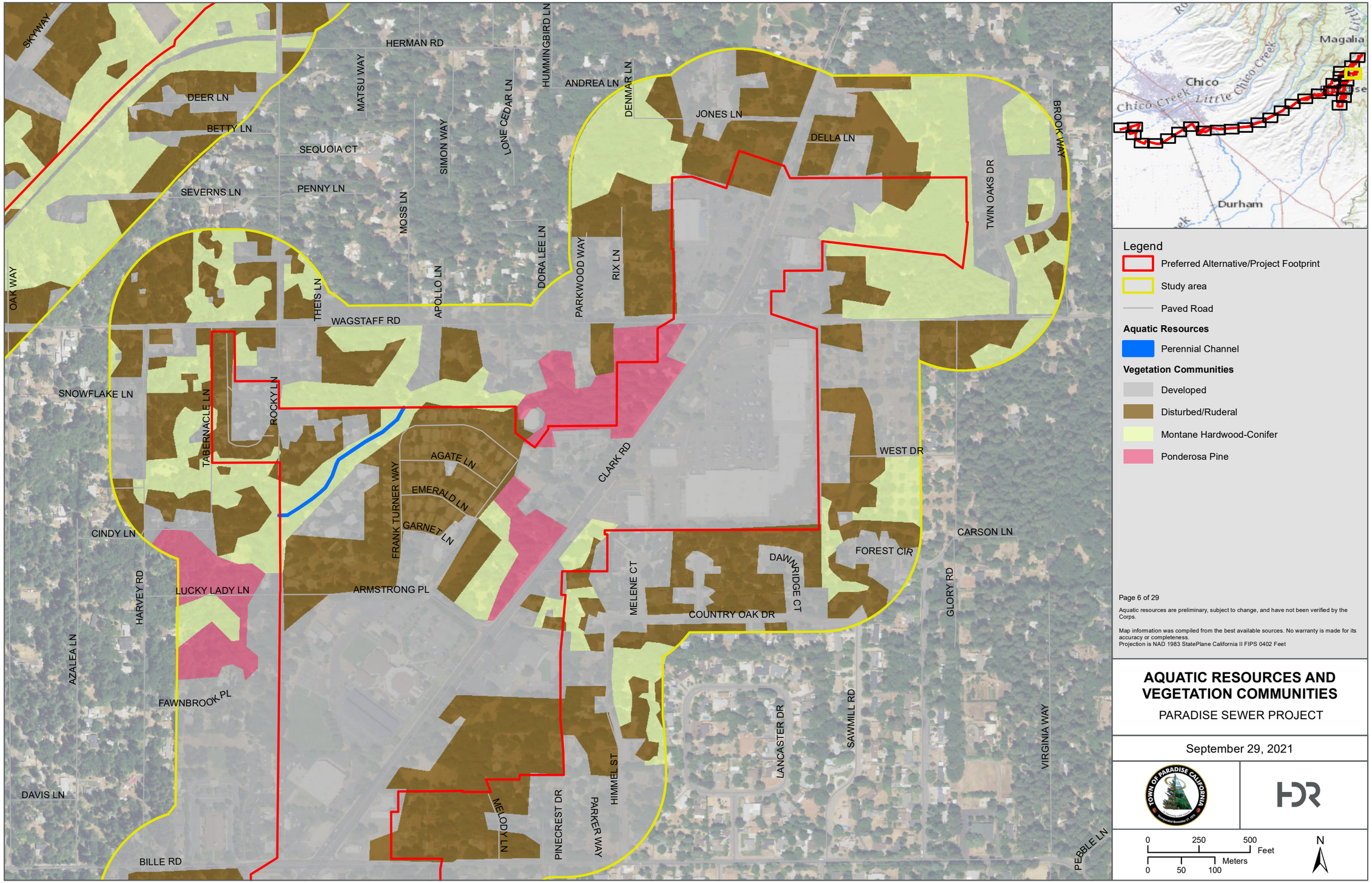

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Aquatic Resources

- Perennial Channel

Vegetation Communities

- Developed
- Disturbed/Ruderal
- Montane Hardwood-Conifer
- Ponderosa Pine

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

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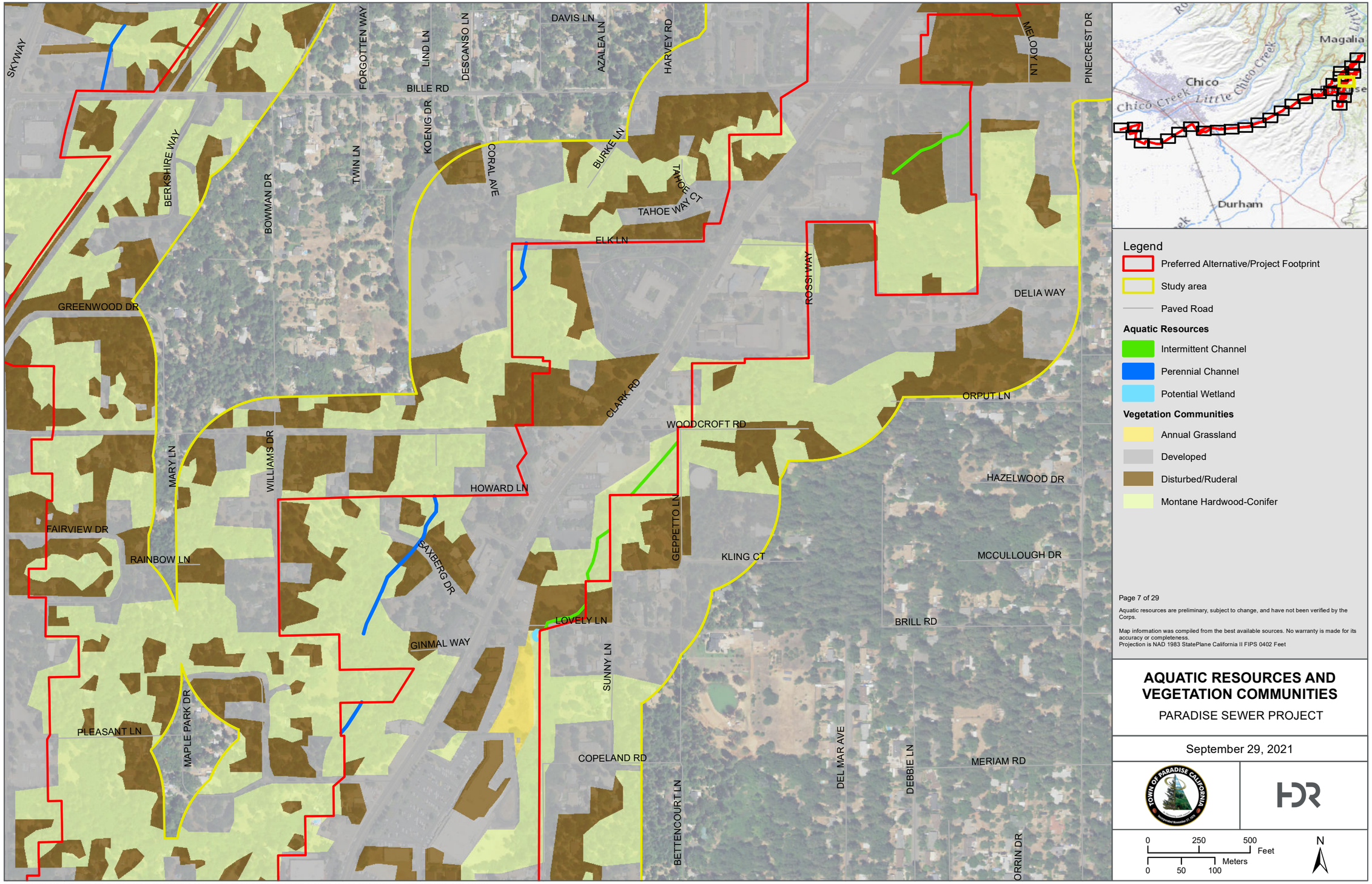

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Aquatic Resources

- Intermittent Channel
- Perennial Channel
- Potential Wetland

Vegetation Communities

- Annual Grassland
- Developed
- Disturbed/Ruderal
- Montane Hardwood-Conifer

Page 7 of 29

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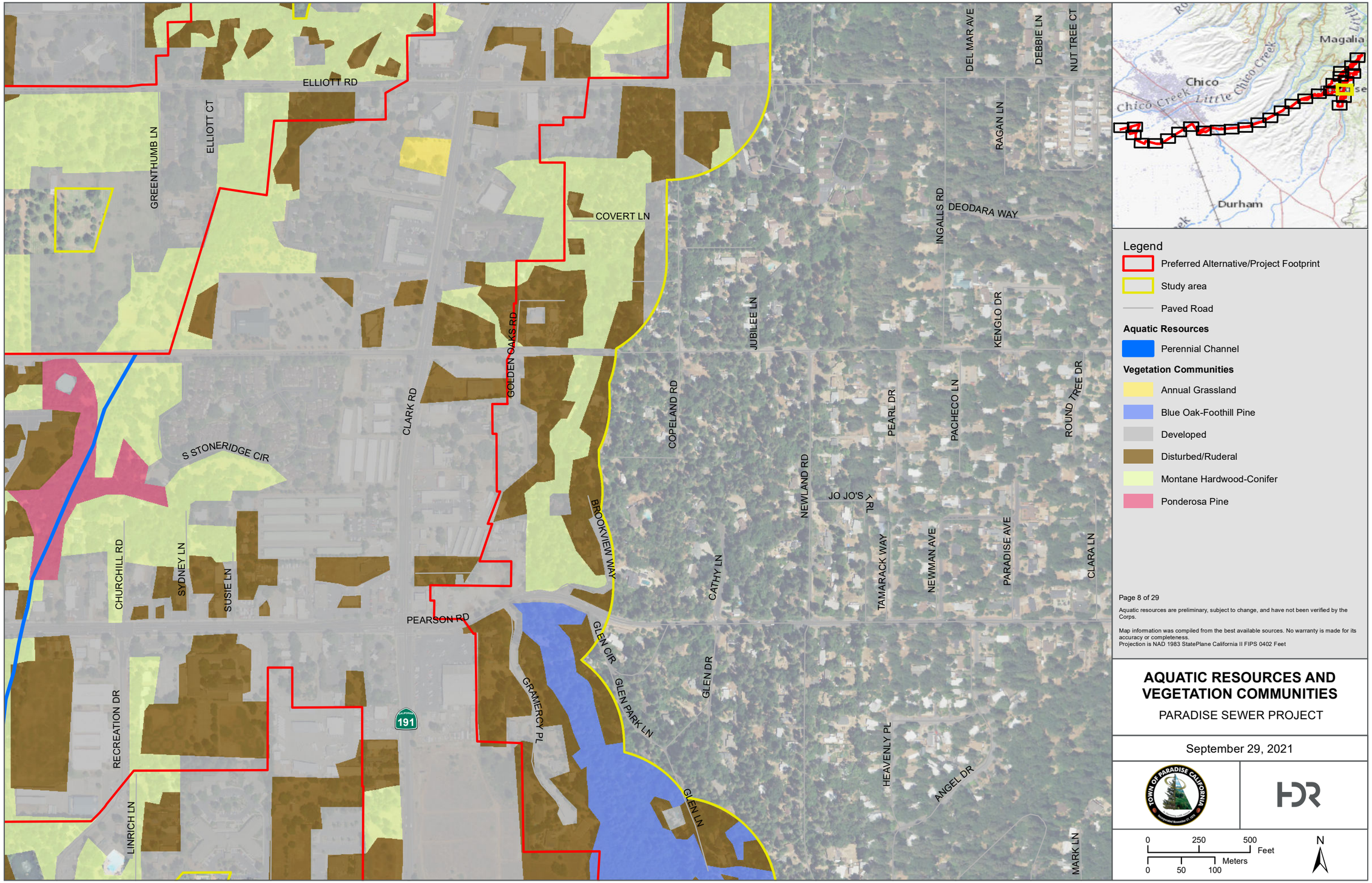
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GREENTHUMB LN
COVERT LN
GOLDEN OAKS RD
CLARK RD
S STONERIDGE CIR
CHURCHILL RD
SYDNEY LN
SUSIE LN
PEARSON RD
RECREATION DR
LINRICH LN
191
BROOKVIEW WAY
GRAMERCY PL
GLEN CIR
GLEN PARK LN
GLEN LN
GLEN DR
COPELAND RD
JUBILEE LN
INGALLS RD
DEODARA WAY
DEL MAR AVE
DEBBIE LN
NUT TREE CT
RAGAN LN
KENGLO DR
PEARL DR
PACHECO LN
ROUND TREE DR
NEWLAND RD
JO JO'S TRL
CATHY LN
TAMARACK WAY
NEWMAN AVE
PARADISE AVE
CLARA LN
HEAVENLY PL
ANGEL DR
MARK LN
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Aquatic Resources
Perennial Channel
Vegetation Communities
Annual Grassland
Blue Oak-Foothill Pine
Developed
Disturbed/Ruderal
Montane Hardwood-Conifer
Ponderosa Pine
Page 8 of 29
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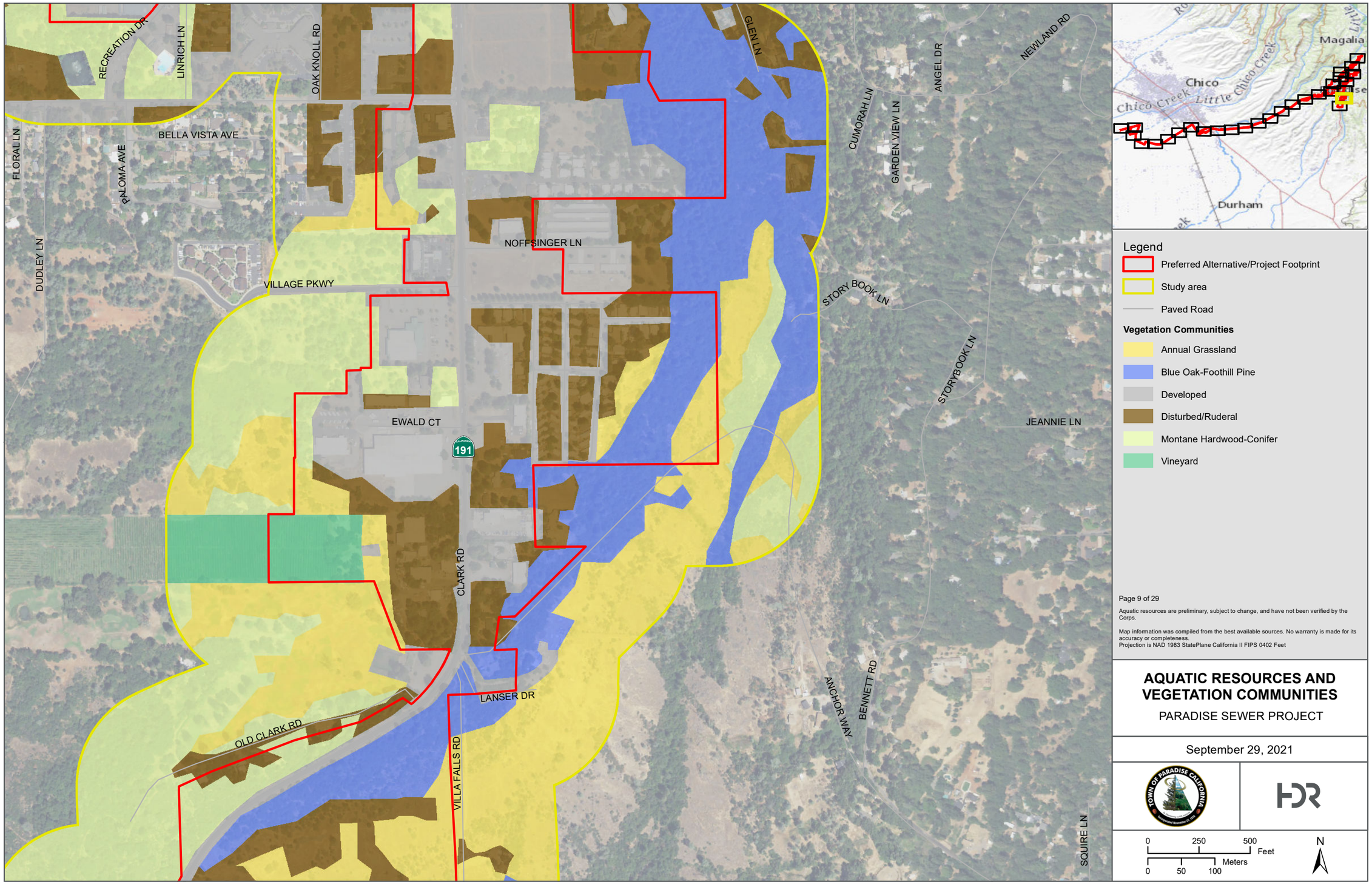

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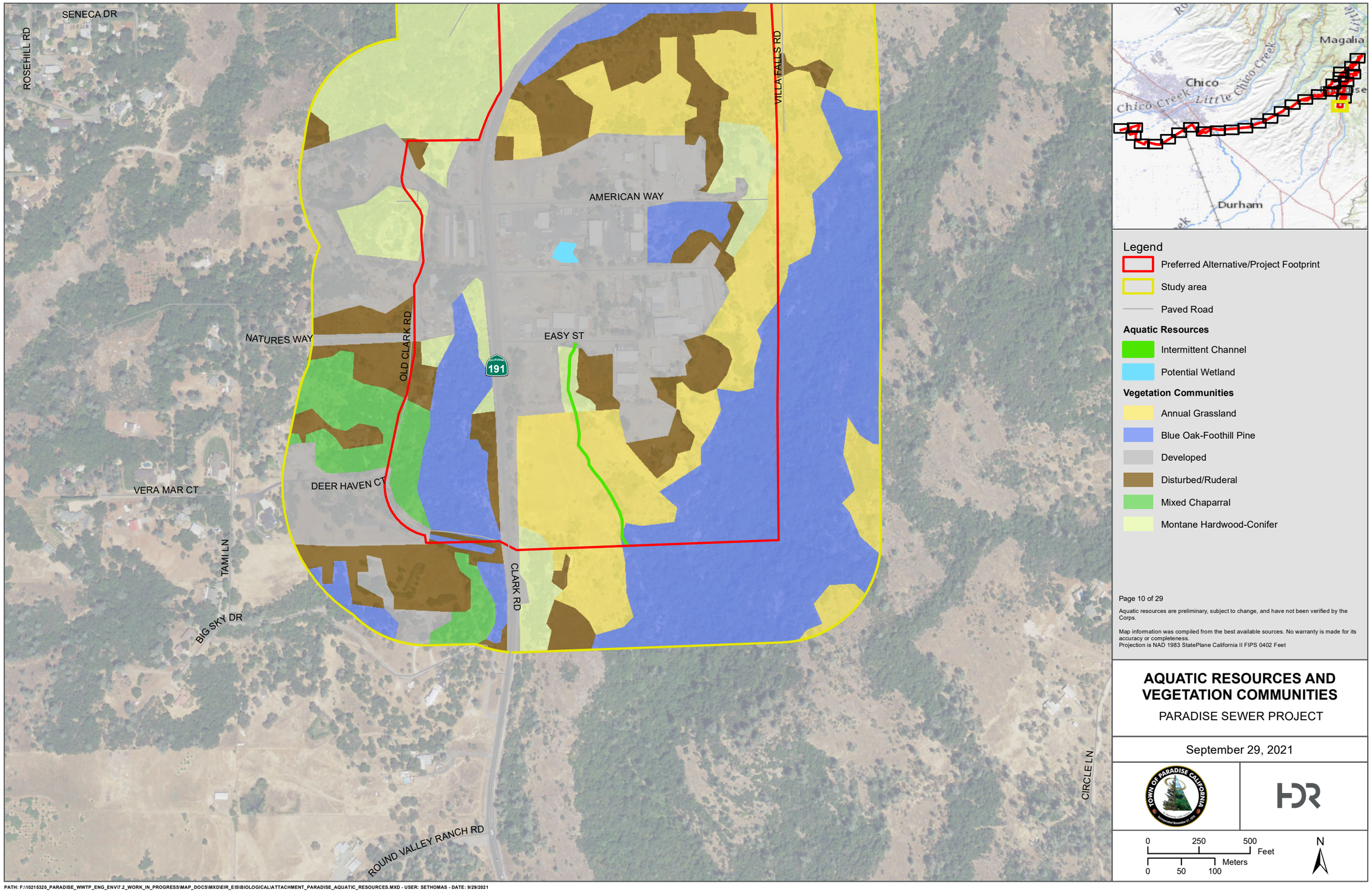
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ROSEHILL RD
AMERICAN WAY
VILLA FALLS RD
NATURES WAY
OLD CLARK RD
EASY ST
191
VERA MAR CT
DEER HAVEN CT
TAMI LN
CLARK RD
BIG SKY DR
CIRCLE LN
ROUND VALLEY RANCH RD
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Aquatic Resources
Intermittent Channel
Potential Wetland
Vegetation Communities
Annual Grassland
Blue Oak-Foothill Pine
Developed
Disturbed/Ruderal
Mixed Chaparral
Montane Hardwood-Conifer
Page 10 of 29
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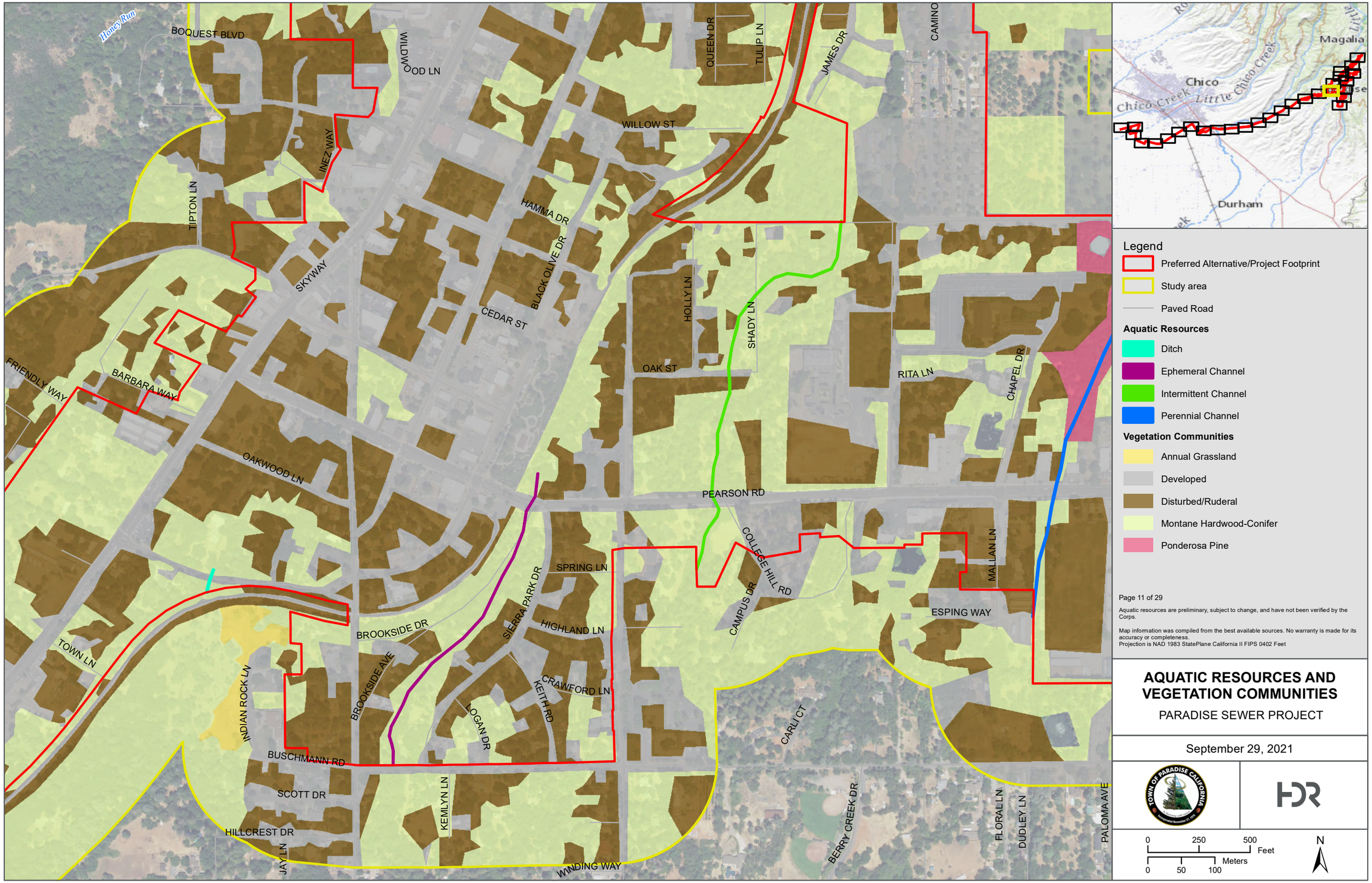

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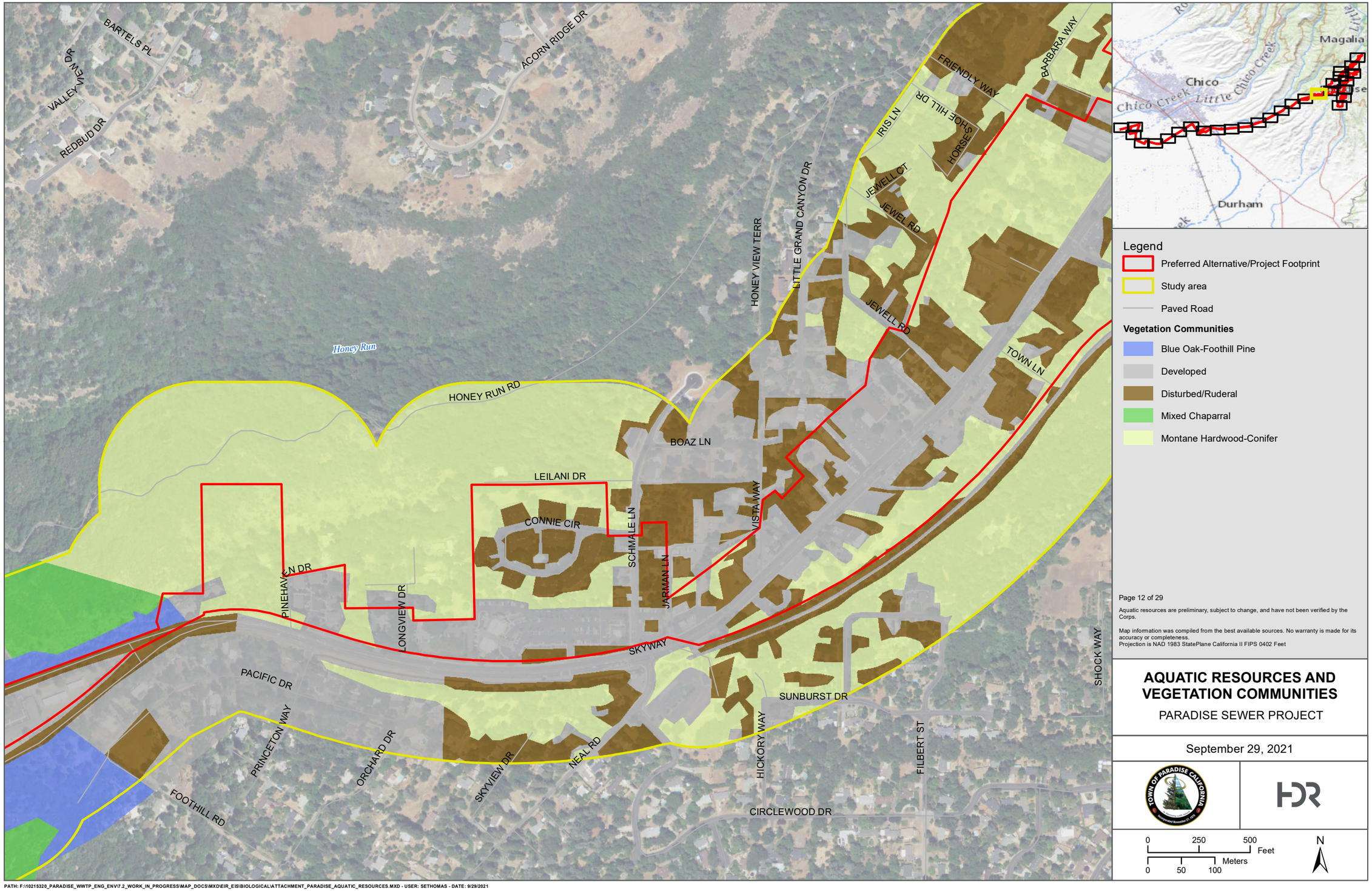

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Vegetation Communities

- Blue Oak-Foothill Pine
- Developed
- Disturbed/Ruderal
- Mixed Chaparral
- Montane Hardwood-Conifer

Page 12 of 29

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

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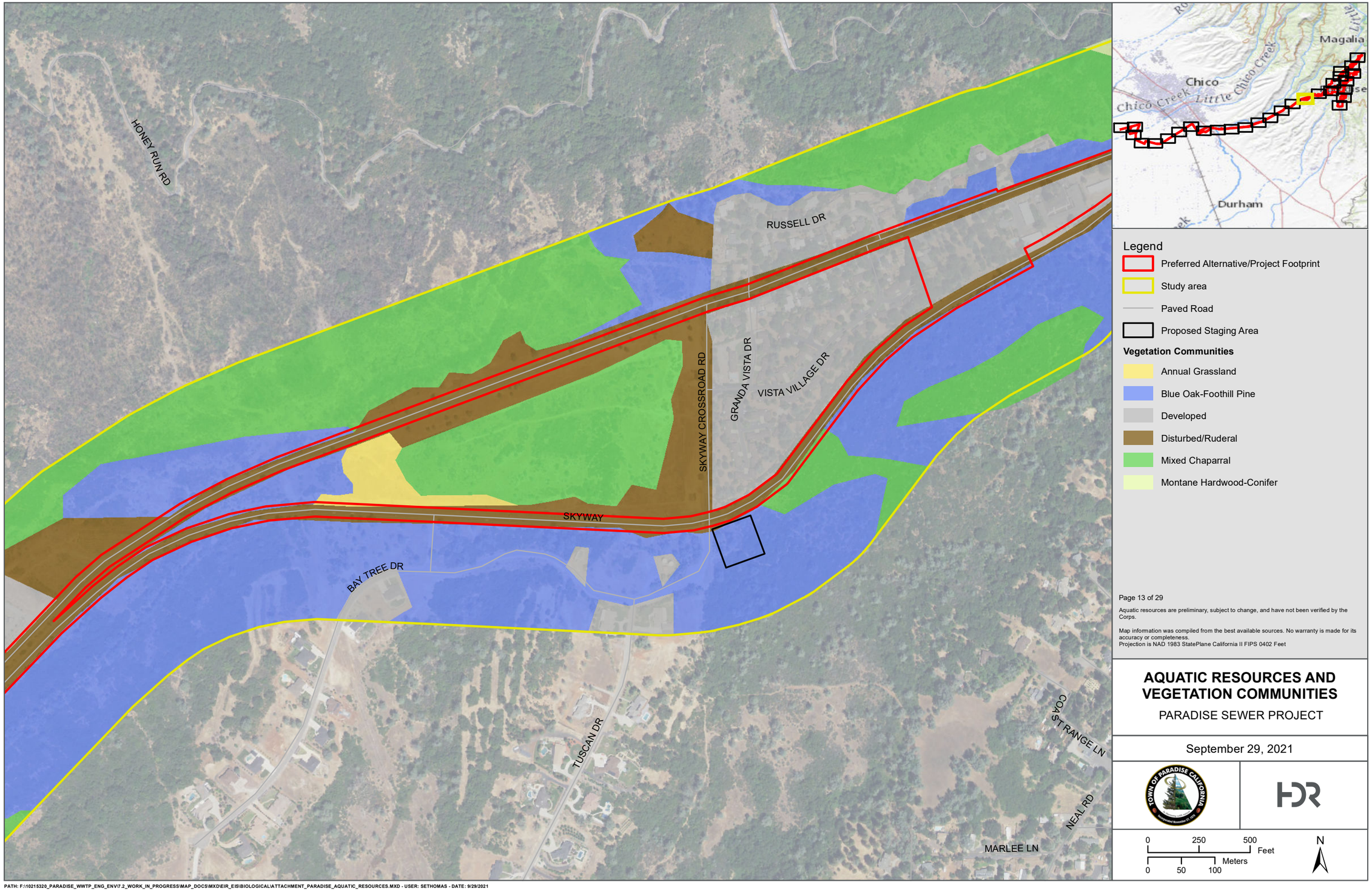

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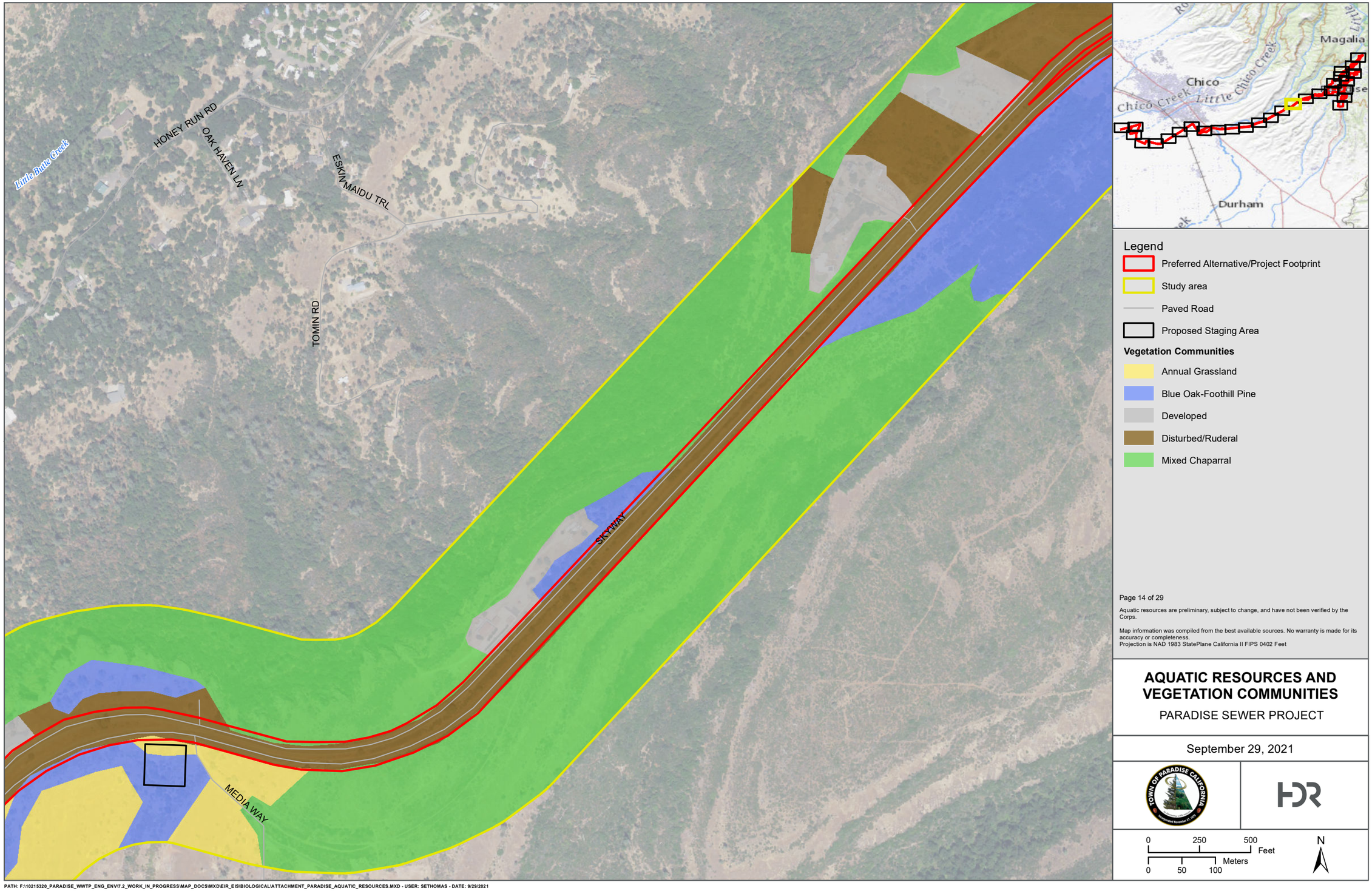
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HONEY RUN RD
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TOMIN RD
SKYWAY
MEDIA WAY
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Proposed Staging Area
Vegetation Communities
Annual Grassland
Blue Oak-Foothill Pine
Developed
Disturbed/Ruderal
Mixed Chaparral
Page 14 of 29
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PARADISE SEWER PROJECT
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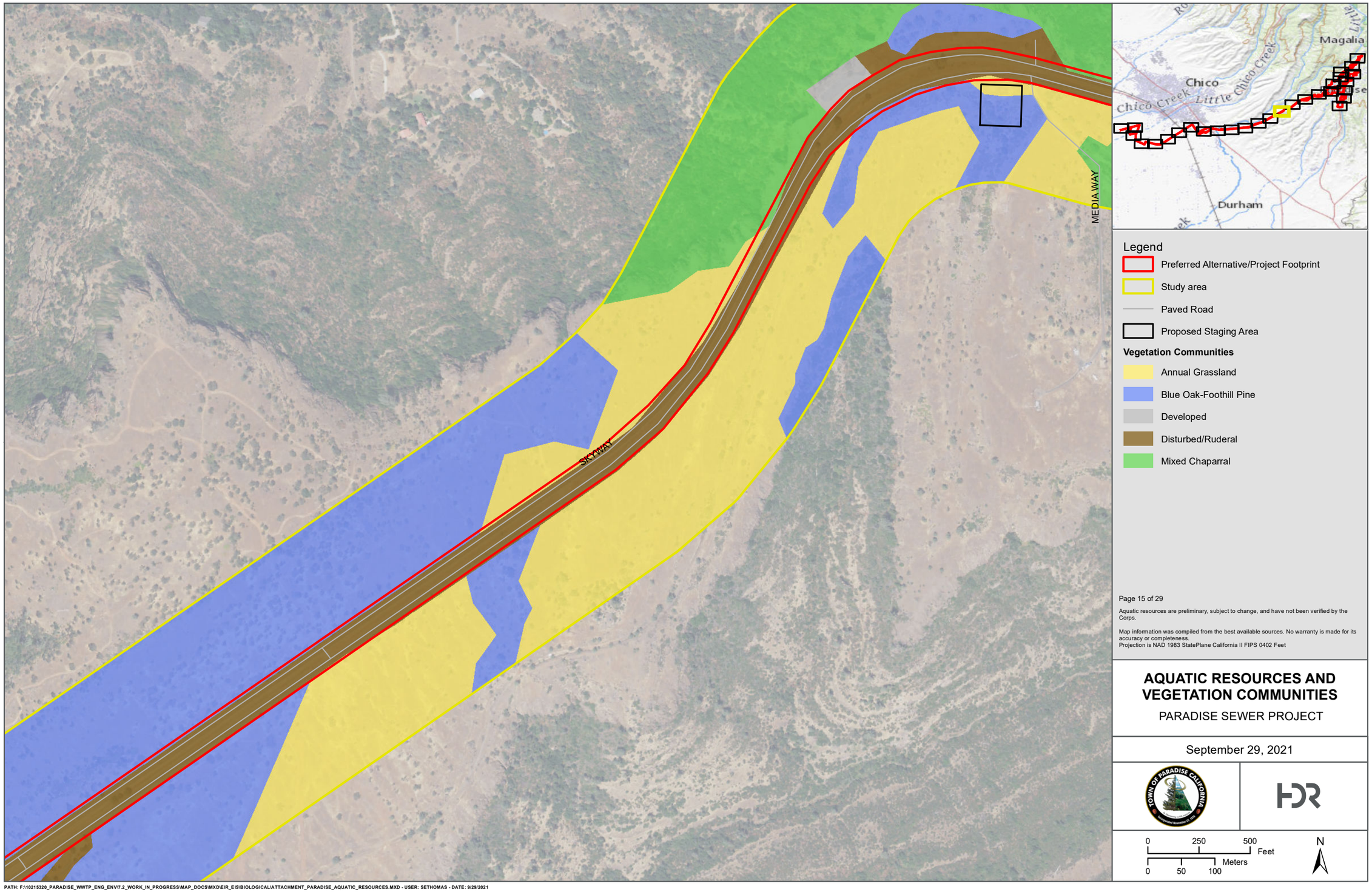
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Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Proposed Staging Area
Vegetation Communities
Annual Grassland
Blue Oak-Foothill Pine
Developed
Disturbed/Ruderal
Mixed Chaparral
Page 15 of 29
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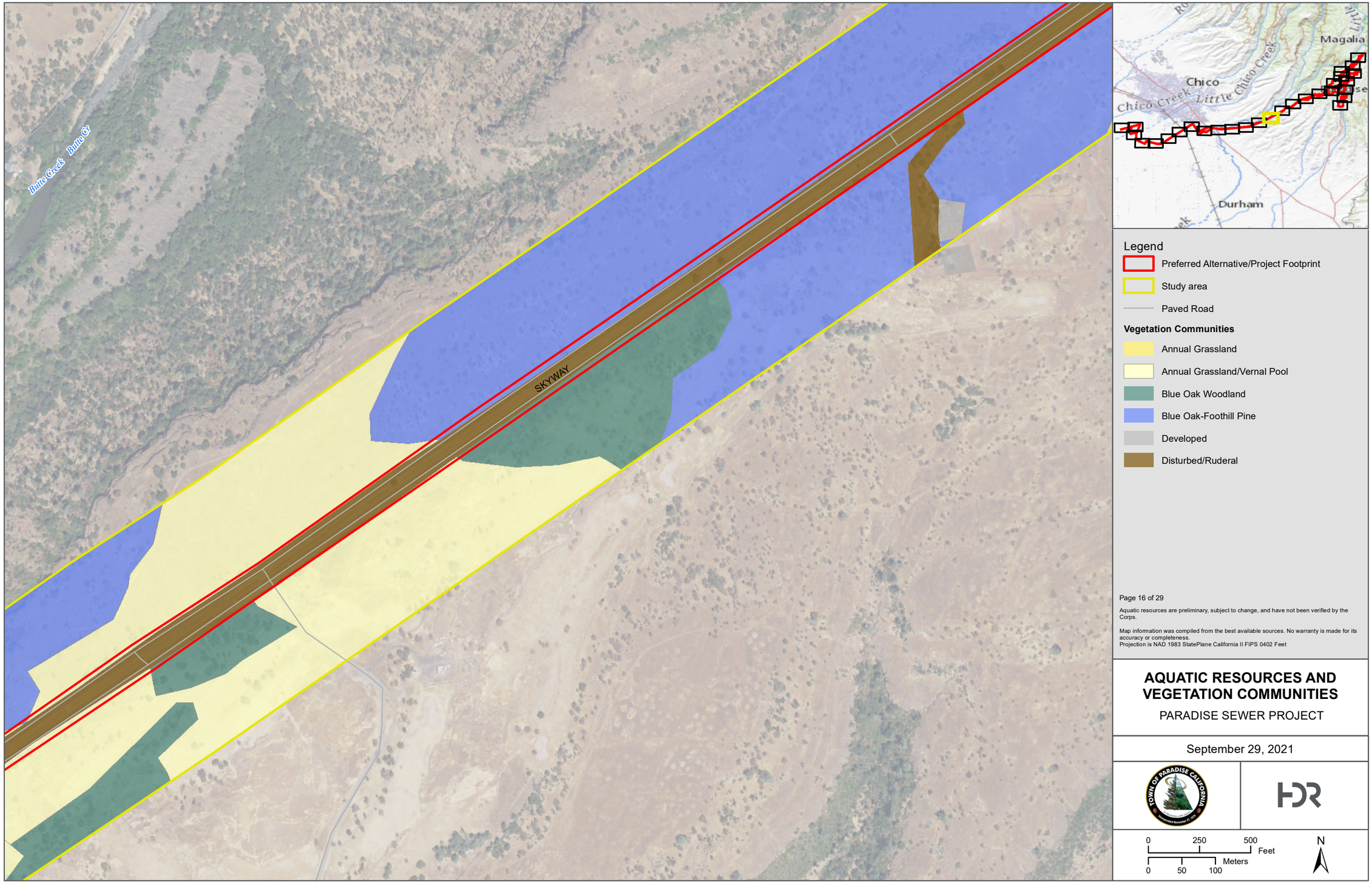
Butte Creek
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Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Vegetation Communities
Annual Grassland
Annual Grassland/Vernal Pool
Blue Oak Woodland
Blue Oak-Foothill Pine
Developed
Disturbed/Ruderal
Page 16 of 29
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PARADISE SEWER PROJECT
September 29, 2021
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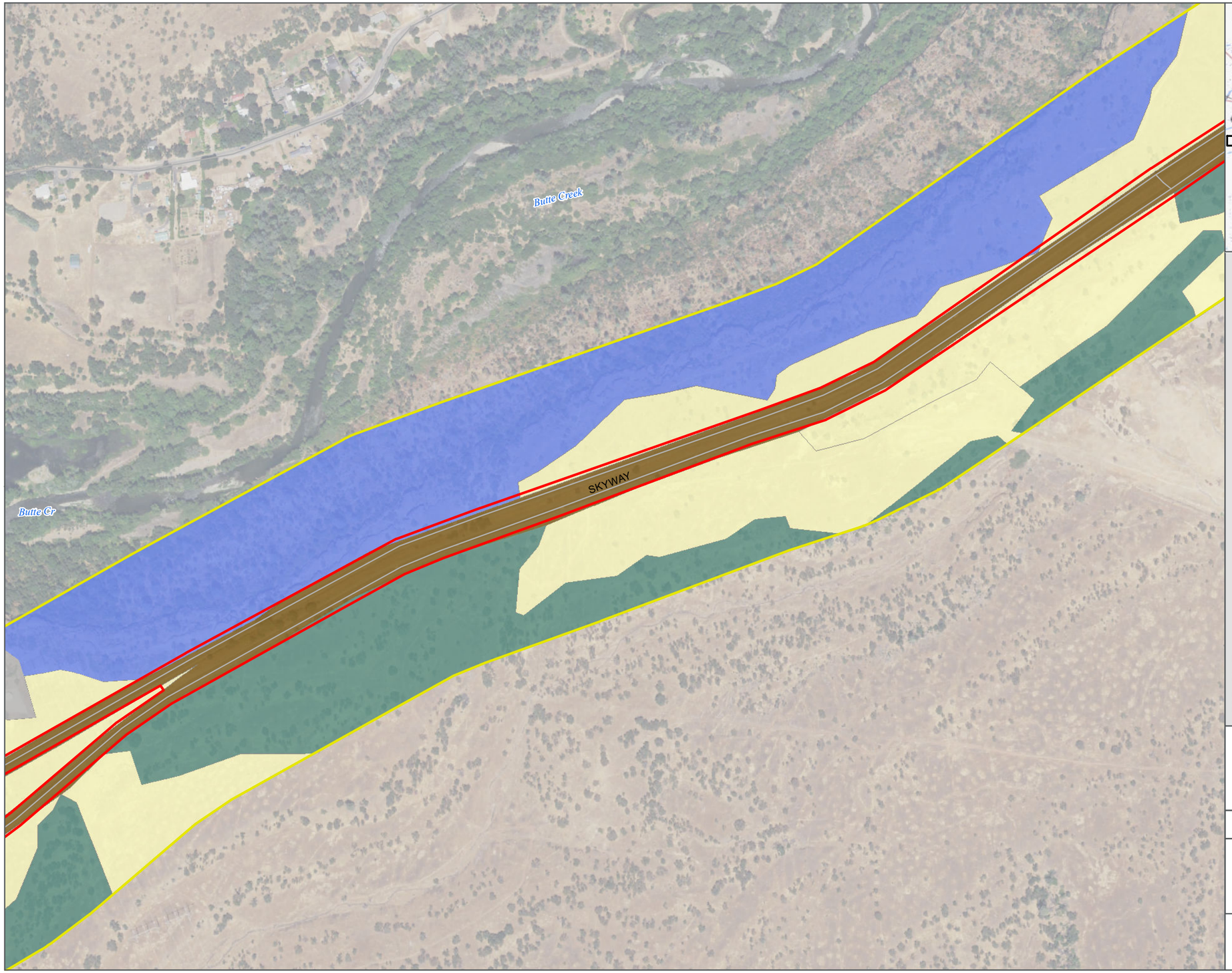

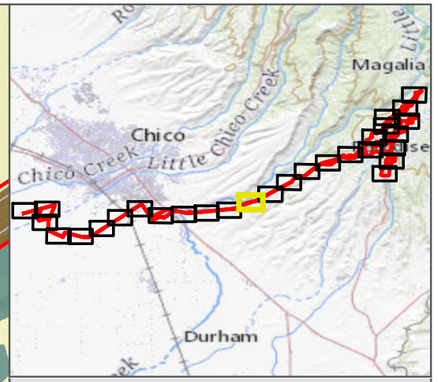

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Vegetation Communities

- Annual Grassland/Vernal Pool
- Blue Oak Woodland
- Blue Oak-Foothill Pine
- Developed
- Disturbed/Ruderal

Page 17 of 29

Aquatic resources are preliminary, subject to change, and have not been verified by the Corps.

Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 StatePlane California II FIPS 0402 Feet

AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

N

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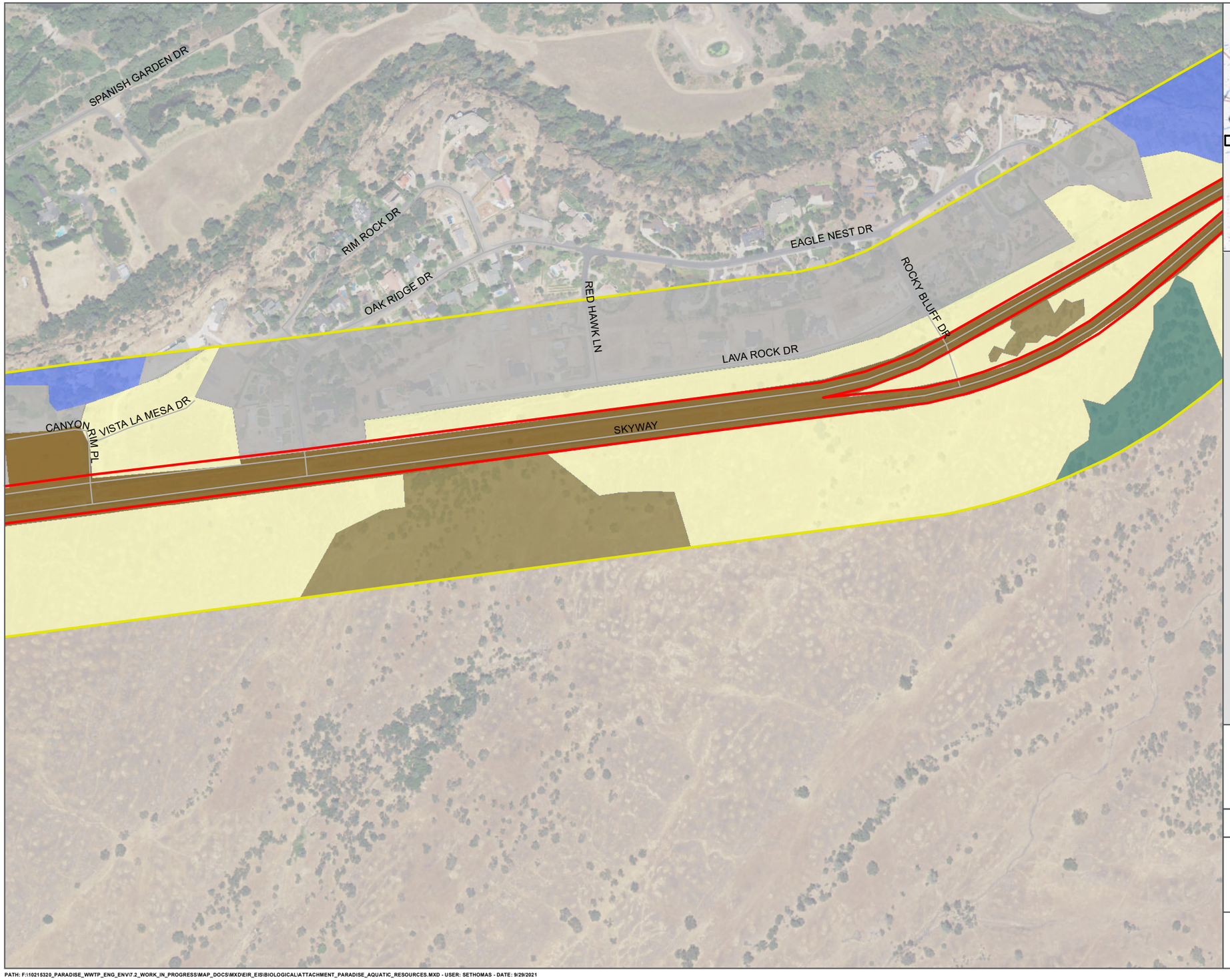

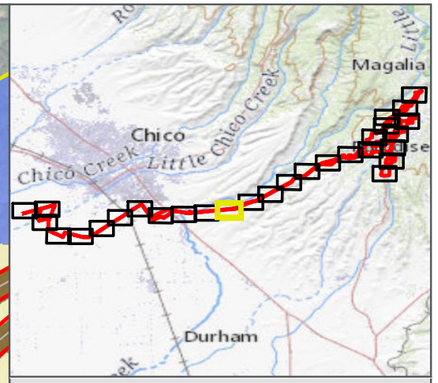

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Vegetation Communities

- Annual Grassland/Vernal Pool
- Blue Oak Woodland
- Blue Oak-Foothill Pine
- Developed
- Disturbed/Ruderal
- Valley Oak Woodland

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

N

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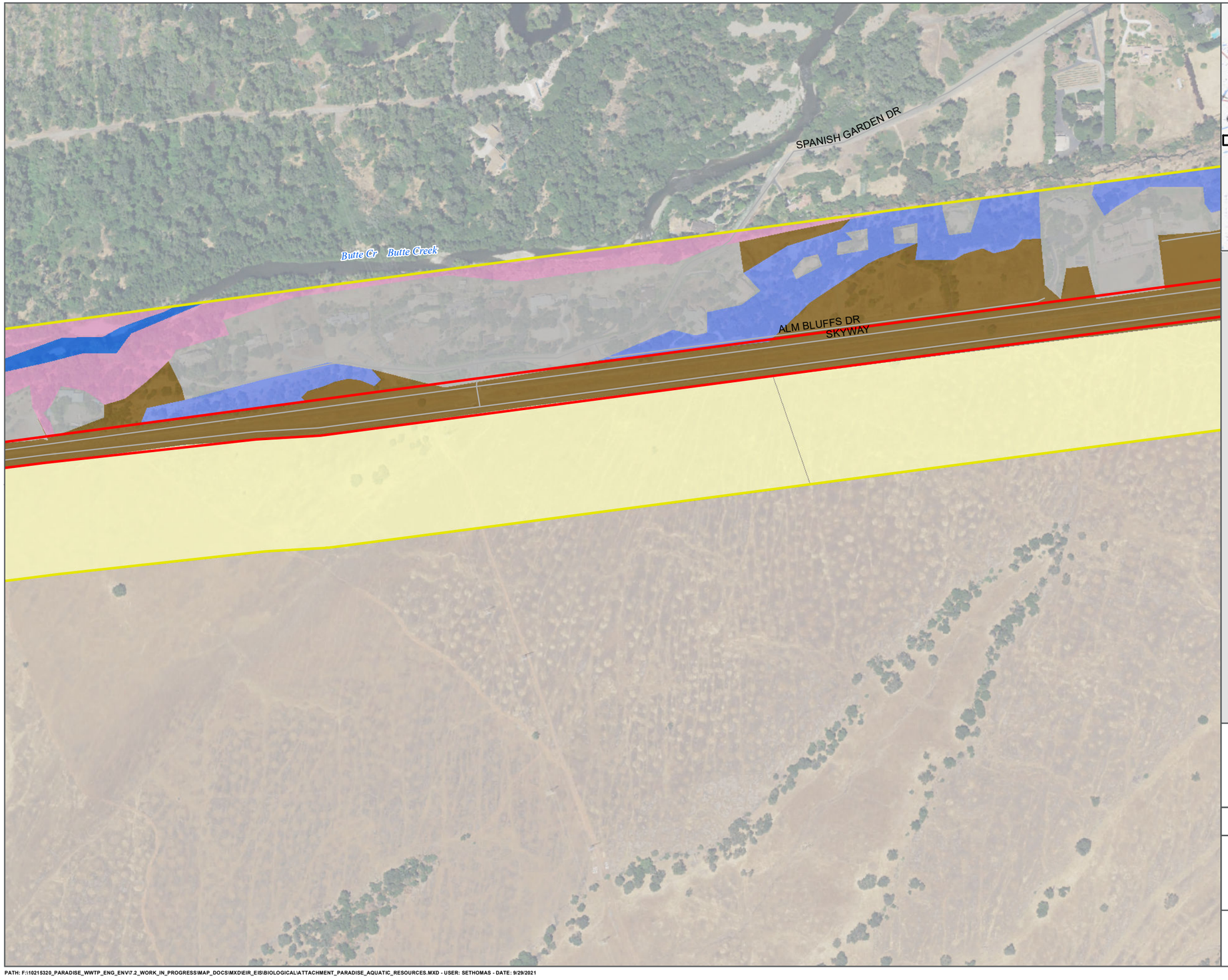

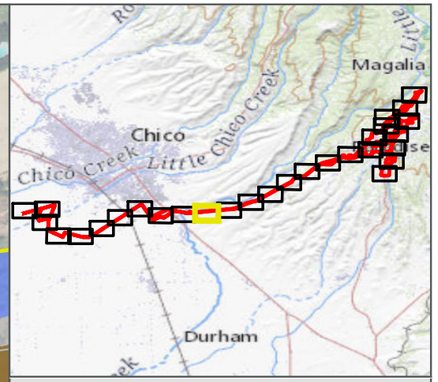

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Vegetation Communities

- Annual Grassland/Vernal Pool
- Blue Oak-Foothill Pine
- Developed
- Disturbed/Ruderal
- Valley Foothill Riparian
- Water

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

N

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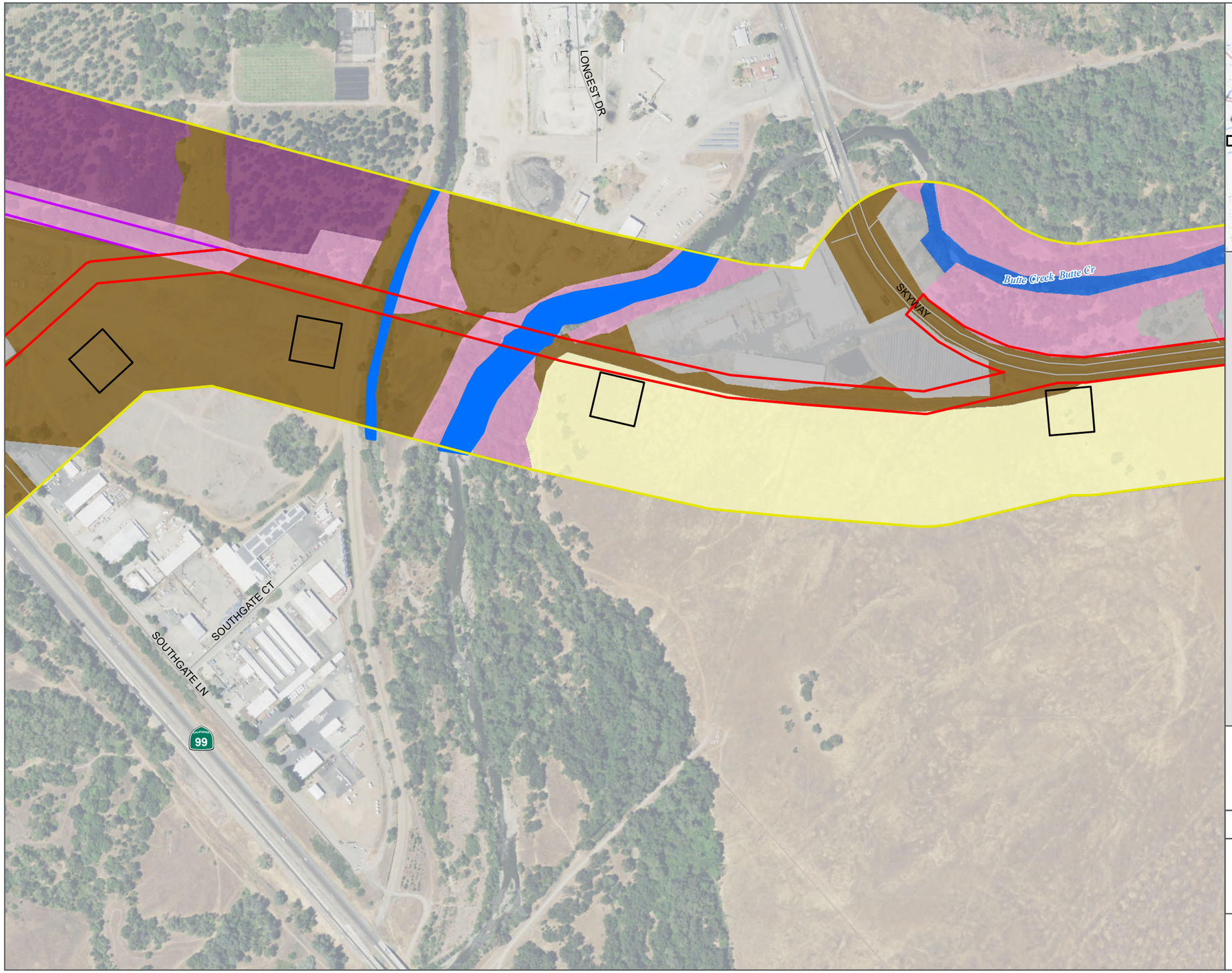

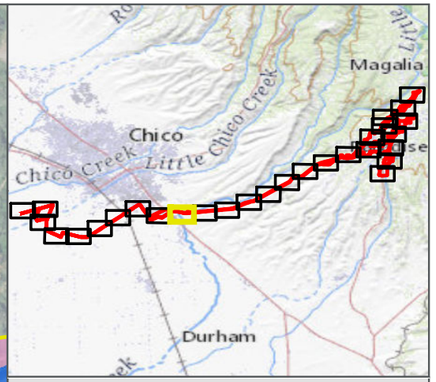

Legend

- Preferred Alternative/Project Footprint
- Norfield Ave Alternative
- Study area
- Paved Road
- Proposed Staging Area

Aquatic Resources

- Perennial Channel

Vegetation Communities

- Annual Grassland/Vernal Pool
- Developed
- Disturbed/Ruderal
- Non-native Woodland
- Valley Foothill Riparian
- Water

Page 20 of 29

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

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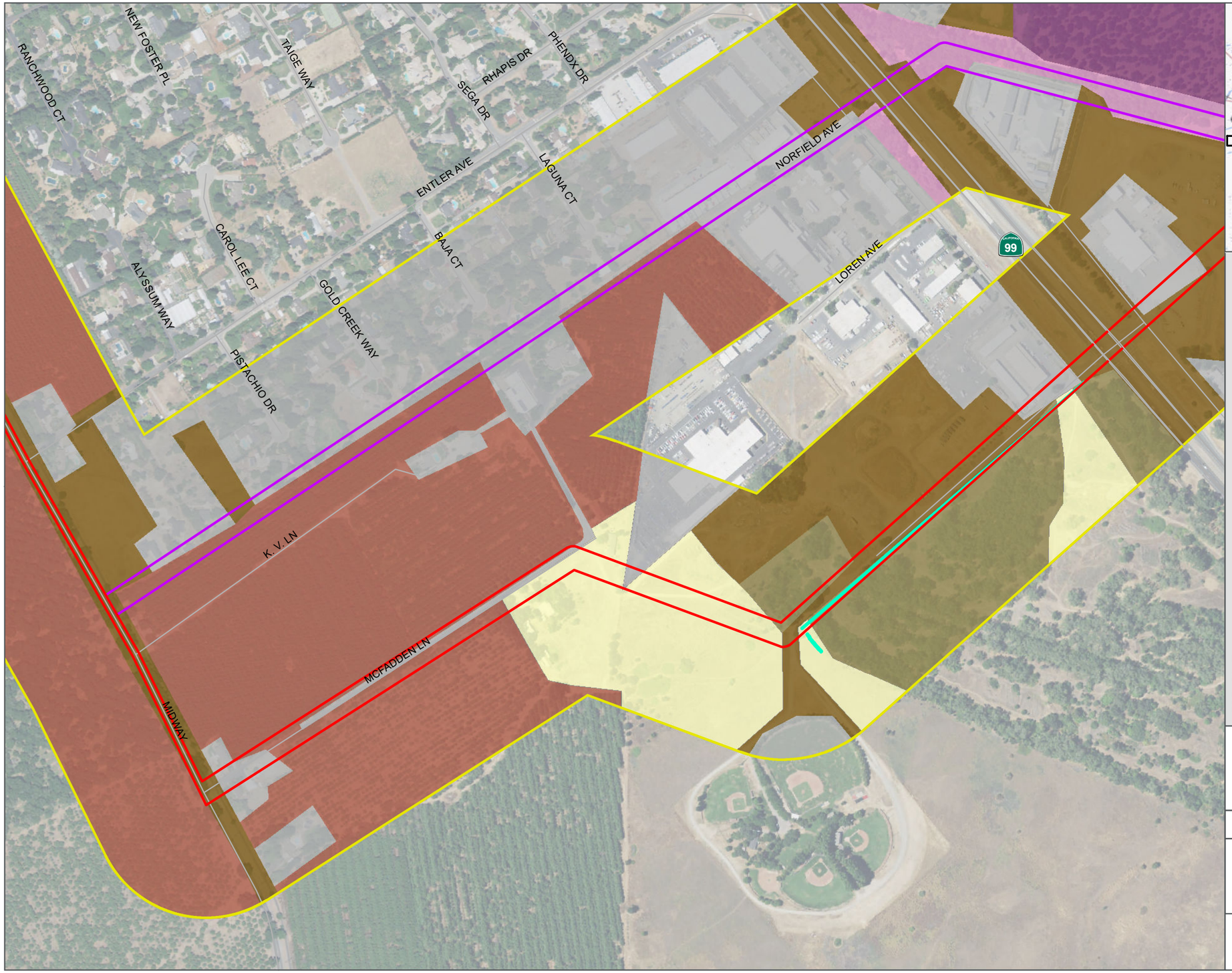

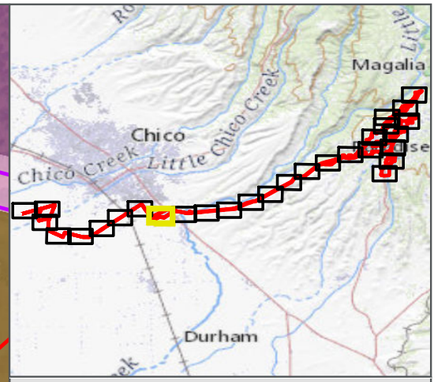

Legend

- Preferred Alternative/Project Footprint
- Norfield Ave Alternative
- Study area
- Paved Road

Aquatic Resources

- Ditch

Vegetation Communities

- Annual Grassland/Vernal Pool
- Deciduous Orchard
- Developed
- Disturbed/Ruderal
- Non-native Woodland
- Valley Foothill Riparian
- Valley Oak Woodland

Page 21 of 29

Aquatic resources are preliminary, subject to change, and have not been verified by the Corps.

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

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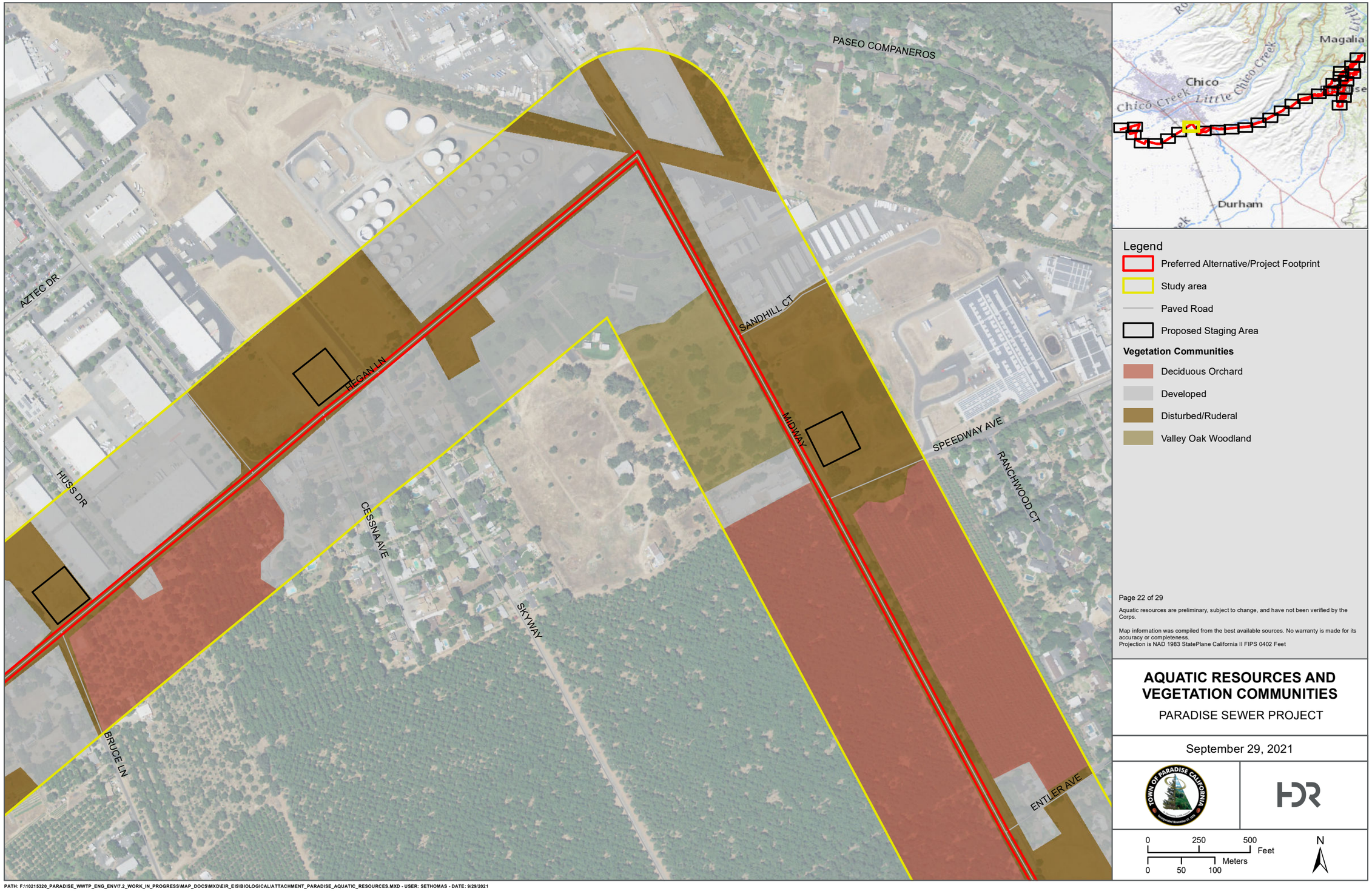
PASEO COMPANEROS
AZTEC DR
HEGAN LN
SANDHILL CT
MIDWAY
SPEEDWAY AVE
RANCHWOOD CT
HUSS DR
CESSNA AVE
SKYWAY
BRUCE LN
ENTLER AVE
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Proposed Staging Area
Vegetation Communities
Deciduous Orchard
Developed
Disturbed/Ruderal
Valley Oak Woodland
Page 22 of 29
Aquatic resources are preliminary, subject to change, and have not been verified by the Corps.
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Projection is NAD 1983 StatePlane California II FIPS 0402 Feet
AQUATIC RESOURCES AND VEGETATION COMMUNITIES
PARADISE SEWER PROJECT
September 29, 2021
0 250 500 Feet
0 50 100 Meters
N
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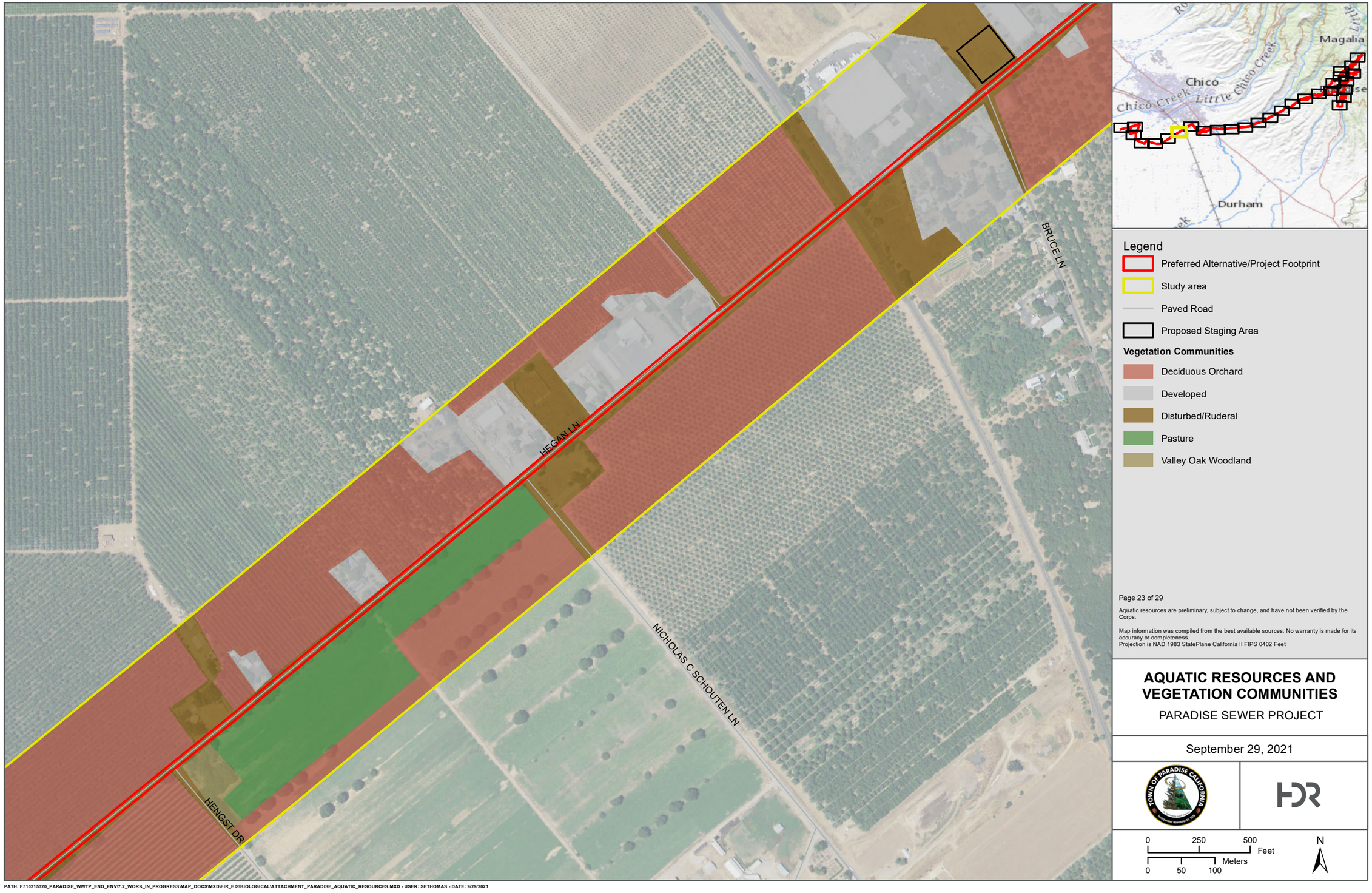
HEGAN LN
BRUCE LN
NICHOLAS C SCHOUTEN LN
HENGST DR
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Proposed Staging Area
Vegetation Communities
Deciduous Orchard
Developed
Disturbed/Ruderal
Pasture
Valley Oak Woodland
Page 23 of 29
Aquatic resources are preliminary, subject to change, and have not been verified by the Corps.
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Projection is NAD 1983 StatePlane California II FIPS 0402 Feet
AQUATIC RESOURCES AND VEGETATION COMMUNITIES
PARADISE SEWER PROJECT
September 29, 2021
0 250 500 Feet
0 50 100 Meters
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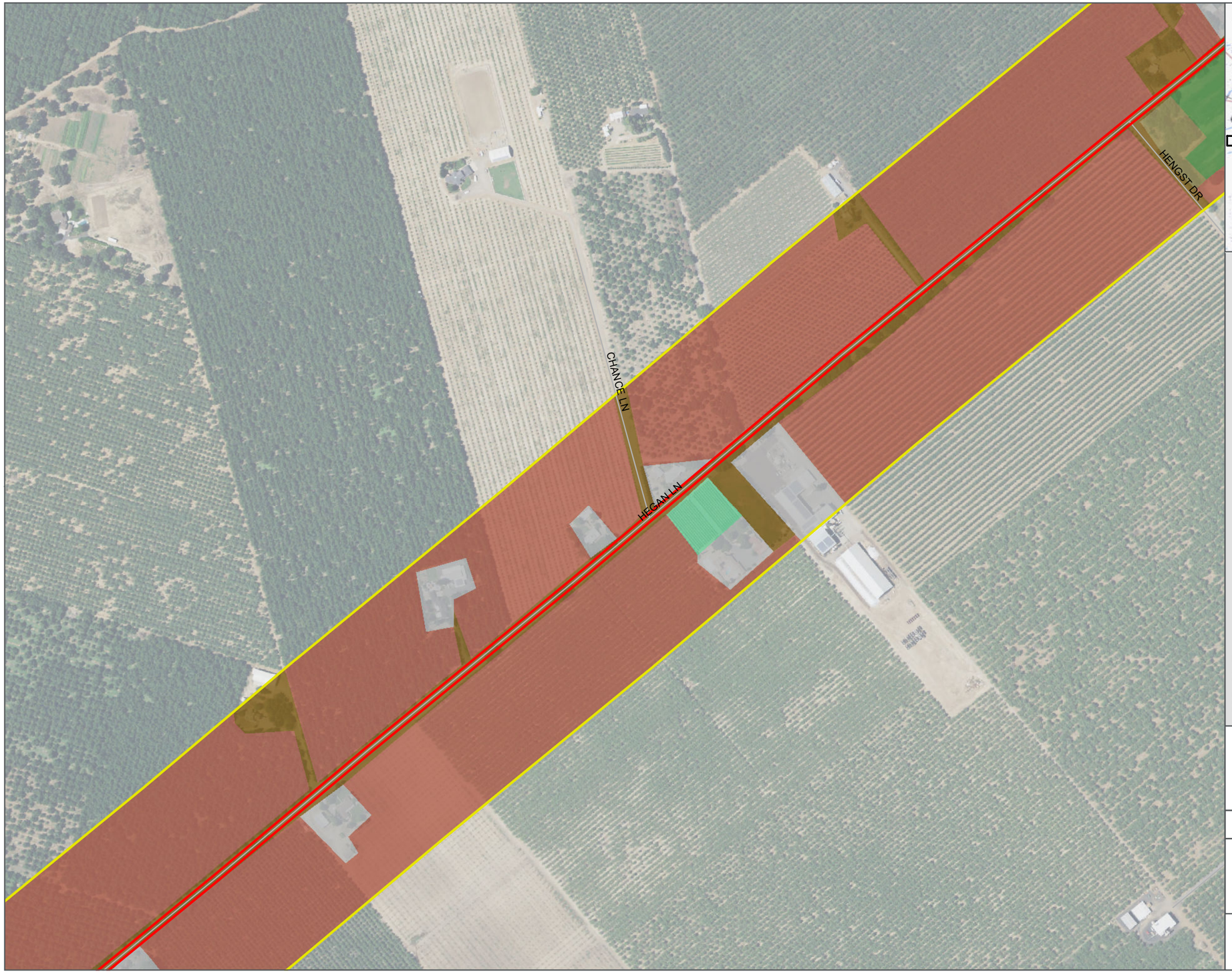

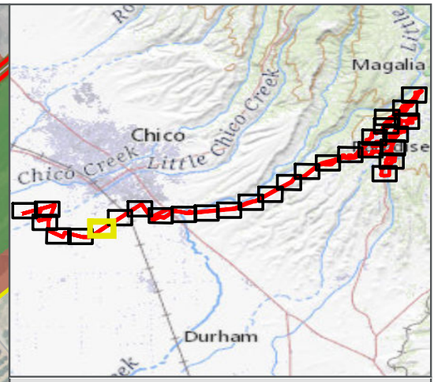

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Vegetation Communities

- Deciduous Orchard
- Developed
- Disturbed/Ruderal
- Pasture
- Valley Oak Woodland
- Vineyard

Page 24 of 29

Aquatic resources are preliminary, subject to change, and have not been verified by the Corps.

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

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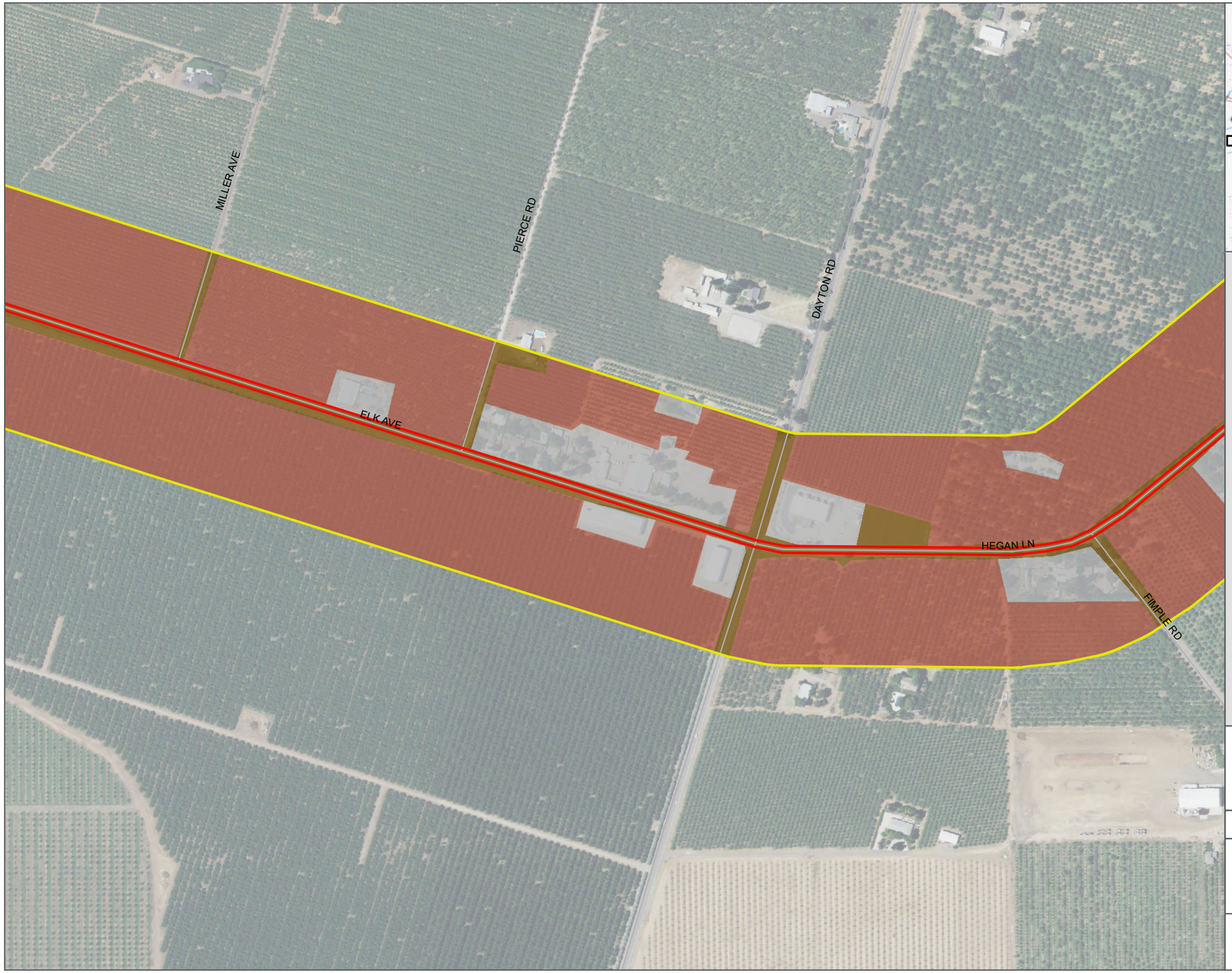

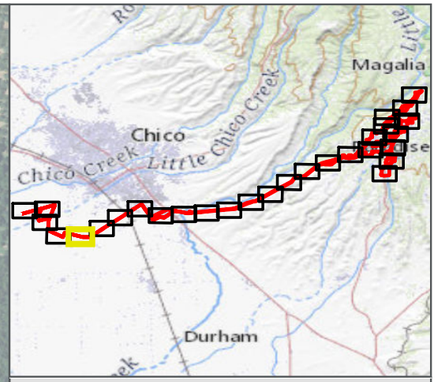

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road

Vegetation Communities

- Deciduous Orchard
- Developed
- Disturbed/Ruderal

Page 25 of 29

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

N

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STEVENS AVE
CROUCH AVE
ELK AVE
LONE PINE AVE
BUOY LN
BATTLE VIEW RD
Comanche Creek
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Study area
Paved Road
Aquatic Resources
Ditch
Perennial Channel
Vegetation Communities
Deciduous Orchard
Developed
Disturbed/Ruderal
Valley Foothill Riparian
Page 26 of 29
Aquatic resources are preliminary, subject to change, and have not been verified by the Corps.
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AQUATIC RESOURCES AND VEGETATION COMMUNITIES
PARADISE SEWER PROJECT
September 29, 2021
0 250 500 Feet
0 50 100 Meters
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Little Chico Cr
Little Chico Creek
TAFFEE AVE
CHICO AVE
CROUCH AVE
EDGAR AVE
COSBY AVE
Comanche Creek
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Crouch Ave Alternative
Study area
Paved Road
Aquatic Resources
Intermittent Channel
Vegetation Communities
Cropland
Deciduous Orchard
Developed
Disturbed/Ruderal
Valley Foothill Riparian
Page 27 of 29
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Projection is NAD 1983 StatePlane California II FIPS 0402 Feet
AQUATIC RESOURCES AND VEGETATION COMMUNITIES
PARADISE SEWER PROJECT
September 29, 2021
0 250 500 Feet
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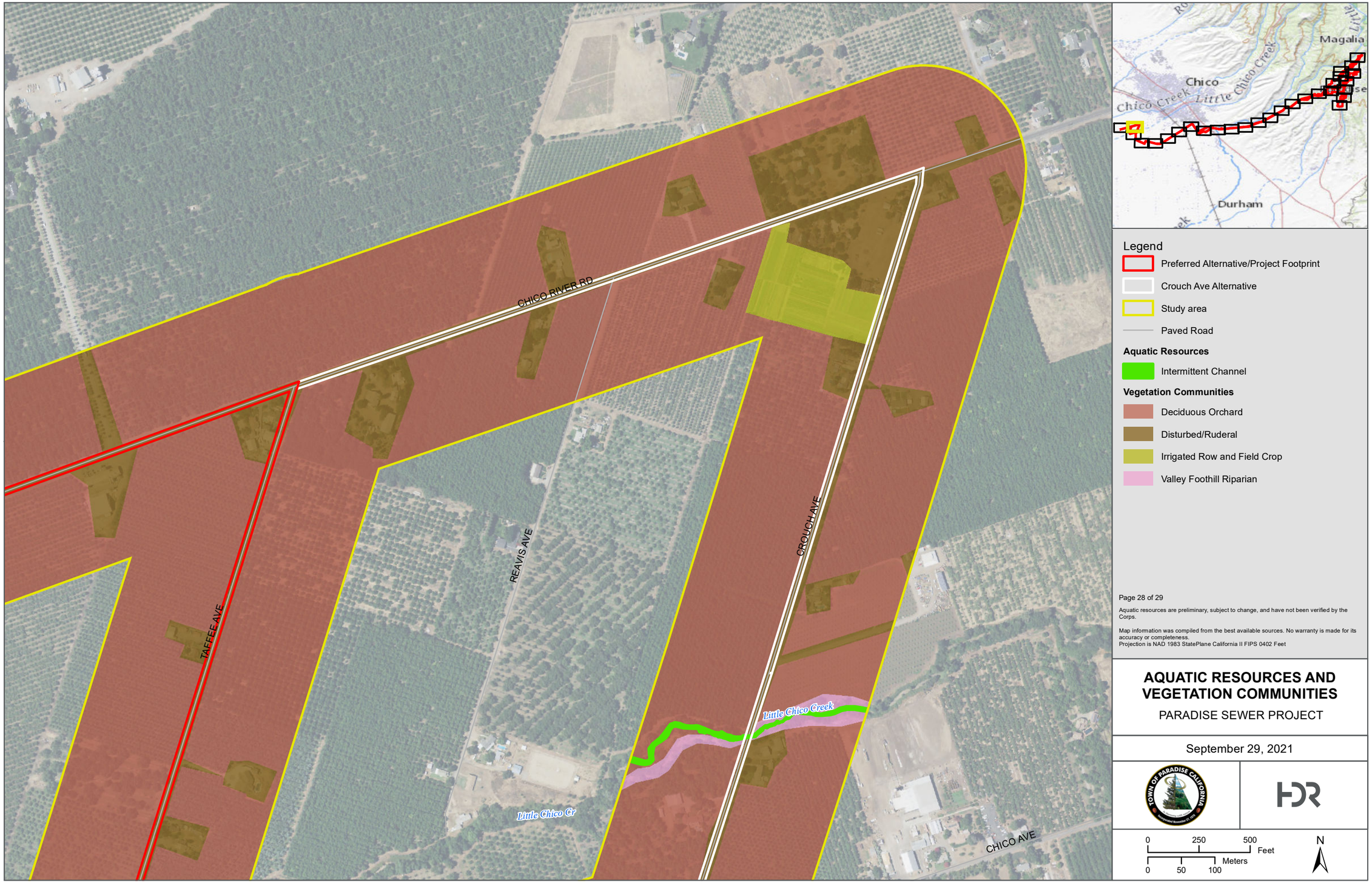
CHICO RIVER RD
TAFFEE AVE
REAVIS AVE
CROUCH AVE
CHICO AVE
Little Chico Creek
Little Chico Cr
Magalia
Chico
Chico Creek
Little Chico Creek
Durham
Legend
Preferred Alternative/Project Footprint
Crouch Ave Alternative
Study area
Paved Road
Aquatic Resources
Intermittent Channel
Vegetation Communities
Deciduous Orchard
Disturbed/Ruderal
Irrigated Row and Field Crop
Valley Foothill Riparian
Page 28 of 29
Aquatic resources are preliminary, subject to change, and have not been verified by the Corps.
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AQUATIC RESOURCES AND VEGETATION COMMUNITIES
PARADISE SEWER PROJECT
September 29, 2021
0 250 500 Feet
0 50 100 Meters
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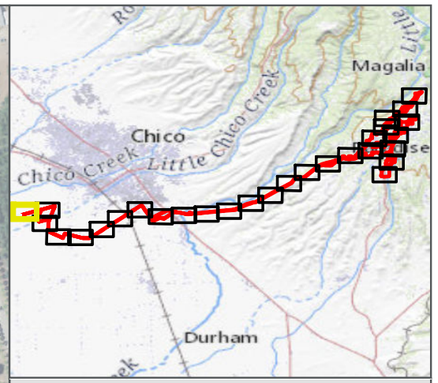

Legend

- Preferred Alternative/Project Footprint
- Study area
- Paved Road
- Proposed Staging Area

Vegetation Communities

- Deciduous Orchard
- Disturbed/Ruderal

Page 29 of 29

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AQUATIC RESOURCES AND VEGETATION COMMUNITIES

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 Meters

N

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Attachment 2

Database Queries

CNDDB 9-Quad Species List 303 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912174	PULGA	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912165	CHEROKEE	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912155	OROVILLE	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912154	OROVILLE DAM	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3912154	OROVILLE DAM	Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912155	OROVILLE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912165	CHEROKEE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos

Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912154	OROVILLE DAM	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912164	BERRY CREEK	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912154	OROVILLE DAM	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912174	PULGA	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912156	SHIPPEE	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Pica nuttalli	yellow-billed magpie	ABPAV09020	None	None	-	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Corvidae - Pica nuttalli
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3912154	OROVILLE DAM	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912154	OROVILLE DAM	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912174	PULGA	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912166	HAMLIN CANYON	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912176	PARADISE WEST	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Gruidae - Antigone canadensis tabida
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912165	CHEROKEE	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912155	OROVILLE	Mapped	Animals - Birds - Icteridae - Agelaius tricolor

Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912164	BERRY CREEK	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912154	OROVILLE DAM	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912174	PULGA	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912155	OROVILLE	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912165	CHEROKEE	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912164	BERRY CREEK	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912174	PULGA	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis

Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912175	PARADISE EAST	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912156	SHIPPEE	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912155	OROVILLE	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912155	OROVILLE	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912165	CHEROKEE	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Cottus gulosus	riffle sculpin	AFC4E02140	None	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Fish - Cottidae - Cottus gulosus
Animals - Fish	Cottus gulosus	riffle sculpin	AFC4E02140	None	None	SSC	-	3912174	PULGA	Unprocessed	Animals - Fish - Cottidae - Cottus gulosus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3912174	PULGA	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Hysterocarpus traskii traskii	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Fish - Embiotocidae - Hysterocarpus traskii traskii
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11

Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912154	OROVILLE DAM	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912176	PARADISE WEST	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 13	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 13
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912174	PULGA	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Mammals	Canis lupus	gray wolf	AMAJA01030	Delisted	Endangered	-	-	3912174	PULGA	Unprocessed	Animals - Mammals - Canidae - Canis lupus
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912155	OROVILLE	Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912174	PULGA	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti

Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912164	BERRY CREEK	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	3912155	OROVILLE	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912155	OROVILLE	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912174	PULGA	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912175	PARADISE EAST	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Myotis thysanodes	fringed myotis	AMACC01090	None	None	-	-	3912174	PULGA	Mapped	Animals - Mammals - Vespertilionidae - Myotis thysanodes
Animals - Mammals	Myotis thysanodes	fringed myotis	AMACC01090	None	None	-	-	3912164	BERRY CREEK	Mapped	Animals - Mammals - Vespertilionidae - Myotis thysanodes
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mollusks	Gonidea angulata	western ridged mussel	IMBIV19010	None	None	-	-	3912155	OROVILLE	Mapped	Animals - Mollusks - Unionidae - Gonidea angulata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912154	OROVILLE DAM	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912174	PULGA	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912154	OROVILLE DAM	Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii

Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912155	OROVILLE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912155	OROVILLE	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912155	OROVILLE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Northern Volcanic Mud Flow Vernal Pool
Plants - Bryophytes	Anomobryum julaceum	slender silver moss	NBMUS80010	None	None	-	4.2	3912174	PULGA	Mapped and Unprocessed	Plants - Bryophytes - Bryaceae - Anomobryum julaceum
Plants - Bryophytes	Bryum chryseum	brassy bryum	NBMUS1A430	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Bryophytes - Bryaceae - Bryum chryseum
Plants - Bryophytes	Mielichhoferia elongata	elongate copper moss	NBMUS4Q022	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Bryophytes - Mielichhoferiaceae - Mielichhoferia elongata
Plants - Lichens	Peltigera gowardii	western waterfan lichen	NLVER00460	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Lichens - Peltigeraceae - Peltigera gowardii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii

Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Perideridia bacigalupii	Bacigalupi's yampah	PDAPI1N020	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Apiaceae - Perideridia bacigalupii
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	PDAST11061	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Asteraceae - Balsamorhiza macrolepis
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912154	OROVILLE DAM	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Erigeron petrophilus var. sierrensis	northern Sierra daisy	PDAST3M351	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Erigeron petrophilus var. sierrensis
Plants - Vascular	Erigeron petrophilus var. sierrensis	northern Sierra daisy	PDAST3M351	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Asteraceae - Erigeron petrophilus var. sierrensis
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens

Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Layia septentrionalis	Colusa layia	PDAST5N0F0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Layia septentrionalis
Plants - Vascular	Microseris sylvatica	sylvan microseris	PDAST6E0E0	None	None	-	4.2	3912154	OROVILLE DAM	Unprocessed	Plants - Vascular - Asteraceae - Microseris sylvatica
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Streptanthus drepanoides	sickle-fruit jewelflower	PDBRA2G200	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus drepanoides
Plants - Vascular	Streptanthus longisiliquus	long-fruit jewelflower	PDBRA2G400	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus longisiliquus

Plants - Vascular	Streptanthus longisiliquus	long-fruit jewelflower	PDBRA2G400	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus longisiliquus
Plants - Vascular	Githopsis pulchella ssp. serpentinicola	serpentine bluecup	PDCAM07053	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Campanulaceae - Githopsis pulchella ssp. serpentinicola
Plants - Vascular	Eremogone cliftonii	Clifton's eremogone	PDCAR17010	None	None	-	1B.3	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Eremogone cliftonii
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912155	OROVILLE	Mapped	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Stellaria obtusa	obtuse starwort	PDCAR0X0U0	None	None	-	4.3	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Stellaria obtusa
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Sedum albomarginatum	Feather River stonecrop	PDCRA0A030	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Crassulaceae - Sedum albomarginatum
Plants - Vascular	Hesperocyparis bakeri	Baker cypress	PGCUP04020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Cupressaceae - Hesperocyparis bakeri
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Carex xerophila	chaparral sedge	PMCYP03M60	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Cyperaceae - Carex xerophila
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912174	PULGA	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei

Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Euphorbia hooveri	Hoover's spurge	PDEUP0D150	Threatened	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia hooveri
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912155	OROVILLE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Trifolium jokerstii	Butte County golden clover	PDFAB40310	None	None	-	1B.2	3912155	OROVILLE	Mapped	Plants - Vascular - Fabaceae - Trifolium jokerstii
Plants - Vascular	Trifolium jokerstii	Butte County golden clover	PDFAB40310	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Fabaceae - Trifolium jokerstii
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912155	OROVILLE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae

Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912155	OROVILLE	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912154	OROVILLE DAM	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912165	CHEROKEE	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912154	OROVILLE DAM	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912155	OROVILLE	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912155	OROVILLE	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis

Plants - Vascular	Sidalcea gigantea	giant checkerbloom	PDMAL110T0	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea gigantea
Plants - Vascular	Sidalcea gigantea	giant checkerbloom	PDMAL110T0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea gigantea
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia parviflora ssp. grandiflora	streambank spring beauty	PDPOR030D1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia parviflora ssp. grandiflora
Plants - Vascular	Claytonia parviflora ssp. grandiflora	streambank spring beauty	PDPOR030D1	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Montiaceae - Claytonia parviflora ssp. grandiflora
Plants - Vascular	Lewisia cantelovii	Cantelow's lewisia	PDPOR04020	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Montiaceae - Lewisia cantelovii
Plants - Vascular	Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	PDONA05053	None	None	-	4.2	3912155	OROVILLE	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia biloba ssp. brandegeeae
Plants - Vascular	Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	PDONA05053	None	None	-	4.2	3912154	OROVILLE DAM	Mapped	Plants - Vascular - Onagraceae - Clarkia biloba ssp. brandegeeae
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens

Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912164	BERRY CREEK	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912154	OROVILLE DAM	Mapped	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Cypripedium californicum	California lady's-slipper	PMORC0Q040	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium californicum
Plants - Vascular	Cypripedium californicum	California lady's-slipper	PMORC0Q040	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium californicum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912155	OROVILLE	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Erythranthe filicifolia	fern-leaved monkeyflower	PDPHR01150	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Phrymaceae - Erythranthe filicifolia
Plants - Vascular	Erythranthe filicifolia	fern-leaved monkeyflower	PDPHR01150	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Phrymaceae - Erythranthe filicifolia
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912155	OROVILLE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens

Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912154	OROVILLE DAM	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe inconspicua	small-flowered monkeyflower	PDSCR1B1F0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe inconspicua
Plants - Vascular	Erythranthe inconspicua	small-flowered monkeyflower	PDSCR1B1F0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe inconspicua
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Agrostis hendersonii	Henderson's bent grass	PMPOA040K0	None	None	-	3.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Poaceae - Agrostis hendersonii
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Poa sierrae	Sierra blue grass	PMPOA4Z310	None	None	-	1B.3	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Poaceae - Poa sierrae
Plants - Vascular	Poa sierrae	Sierra blue grass	PMPOA4Z310	None	None	-	1B.3	3912164	BERRY CREEK	Mapped	Plants - Vascular - Poaceae - Poa sierrae
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii

Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Aspidotis carlotta-halliae	Carlotta Hall's lace fern	PPADI07020	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Pteridaceae - Aspidotis carlotta-halliae
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Ranunculaceae - Delphinium recurvatum
Plants - Vascular	Frangula purshiana ssp. ultramafica	Caribou coffeeberry	PDRHA0H061	None	None	-	1B.2	3912174	PULGA	Unprocessed	Plants - Vascular - Rhamnaceae - Frangula purshiana ssp. ultramafica
Plants - Vascular	Frangula purshiana ssp. ultramafica	Caribou coffeeberry	PDRHA0H061	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Rhamnaceae - Frangula purshiana ssp. ultramafica
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912154	OROVILLE DAM	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae

Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912155	OROVILLE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Viola tomentosa	felt-leaved violet	PDVIO04280	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Violaceae - Viola tomentosa

CNDDB 9-Quad Species List 294 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912168	ORD FERRY	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912167	CHICO	Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912178	NORD	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912178	NORD	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912168	ORD FERRY	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912167	CHICO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912157	NELSON	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912157	NELSON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus

Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912156	SHIPPEE	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Pica nuttalli	yellow-billed magpie	ABPAV09020	None	None	-	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Corvidae - Pica nuttalli
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	-	-	3912168	ORD FERRY	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912176	PARADISE WEST	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912166	HAMLIN CANYON	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Gruidae - Antigone canadensis tabida
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Gruidae - Antigone canadensis tabida
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912178	NORD	Mapped	Animals - Birds - Hirundinidae - Riparia riparia

Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912157	NELSON	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912158	LLANO SECO	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912167	CHICO	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912158	LLANO SECO	Mapped	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912167	CHICO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus

Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912178	NORD	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912167	CHICO	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912167	CHICO	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912157	NELSON	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912156	SHIPPEE	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta conservatio	Conservancy fairy shrimp	ICBRA03010	Endangered	None	-	-	3912178	NORD	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta conservatio
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912178	NORD	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi

Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912158	LLANO SECO	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3912178	NORD	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912178	NORD	Mapped	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912178	NORD	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912158	LLANO SECO	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912167	CHICO	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3912178	NORD	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus

Animals - Fish	Hysterocarpus traskii traskii	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Fish - Embiotocidae - Hysterocarpus traskii traskii
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912158	LLANO SECO	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912157	NELSON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912178	NORD	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912176	PARADISE WEST	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Insects	Anthicus antiochensis	Antioch Dunes anthicid beetle	IICOL49020	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Insects - Anthicidae - Anthicus antiochensis
Animals - Insects	Anthicus sacramento	Sacramento anthicid beetle	IICOL49010	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Insects - Anthicidae - Anthicus sacramento
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912168	ORD FERRY	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus

Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912167	CHICO	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912158	LLANO SECO	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912178	NORD	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912157	NELSON	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912158	LLANO SECO	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912157	NELSON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912178	NORD	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912178	NORD	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus

Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912178	NORD	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3912157	NELSON	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3912158	LLANO SECO	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912158	LLANO SECO	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912158	LLANO SECO	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollusks	Anodonta californiensis	California floater	IMBIV04220	None	None	-	-	3912168	ORD FERRY	Unprocessed	Animals - Mollusks - Unionidae - Anodonta californiensis
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Reptiles - Emydidae - Emys marmorata

Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912158	LLANO SECO	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912157	NELSON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912157	NELSON	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912168	ORD FERRY	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912157	NELSON	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest

Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912157	NELSON	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3912178	NORD	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Northern Volcanic Mud Flow Vernal Pool
Community - Terrestrial	Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Northern Volcanic Mud Flow Vernal Pool
Plants - Bryophytes	Bryum chryseum	brassy bryum	NBMUS1A430	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Bryophytes - Bryaceae - Bryum chryseum
Plants - Bryophytes	Campylopodiella stenocarpa	flagella-like atractylocarpus	NBMUS84010	None	None	-	2B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Bryophytes - Dicranaceae - Campylopodiella stenocarpa
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	PDAST11061	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Asteraceae - Balsamorhiza macrolepis
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	PDAST11061	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Asteraceae - Balsamorhiza macrolepis
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia

Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3912158	LLANO SECO	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912158	LLANO SECO	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912178	NORD	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Lasthenia ferrisiae	Ferris' goldfields	PDAST5L070	None	None	-	4.2	3912157	NELSON	Unprocessed	Plants - Vascular - Asteraceae - Lasthenia ferrisiae
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912158	LLANO SECO	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912157	NELSON	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Cryptantha crinita	silky cryptantha	PDBOR0A0Q0	None	None	-	1B.2	3912168	ORD FERRY	Mapped	Plants - Vascular - Boraginaceae - Cryptantha crinita
Plants - Vascular	Cryptantha rostellata	red-stemmed cryptantha	PDBOR0A2M1	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Boraginaceae - Cryptantha rostellata
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Brasenia schreberi	watershield	PDCAB01010	None	None	-	2B.3	3912158	LLANO SECO	Mapped	Plants - Vascular - Cabombaceae - Brasenia schreberi
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Euphorbia hooveri	Hoover's spurge	PDEUP0D150	Threatened	None	-	1B.2	3912178	NORD	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia hooveri

Plants - Vascular	Euphorbia hooveri	Hoover's spurge	PDEUP0D150	Threatened	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia hooveri
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912178	NORD	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus tener var. ferrisiae	Ferris' milk-vetch	PDFAB0F8R3	None	None	-	1B.1	3912178	NORD	Mapped	Plants - Vascular - Fabaceae - Astragalus tener var. ferrisiae
Plants - Vascular	Astragalus tener var. ferrisiae	Ferris' milk-vetch	PDFAB0F8R3	None	None	-	1B.1	3912158	LLANO SECO	Mapped	Plants - Vascular - Fabaceae - Astragalus tener var. ferrisiae
Plants - Vascular	Trifolium jokerstii	Butte County golden clover	PDFAB40310	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Fabaceae - Trifolium jokerstii
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Wolffia brasiliensis	Brazilian watermeal	PMLEM03020	None	None	-	2B.3	3912158	LLANO SECO	Mapped	Plants - Vascular - Lemnaceae - Wolffia brasiliensis
Plants - Vascular	Wolffia brasiliensis	Brazilian watermeal	PMLEM03020	None	None	-	2B.3	3912168	ORD FERRY	Mapped	Plants - Vascular - Lemnaceae - Wolffia brasiliensis
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria pluriflora

Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912178	NORD	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912178	NORD	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912167	CHICO	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. floccosa
Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	None	-	4.2	3912178	NORD	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. floccosa
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912168	ORD FERRY	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912158	LLANO SECO	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912157	NELSON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta

Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912178	NORD	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912178	NORD	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912168	ORD FERRY	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912178	NORD	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912158	LLANO SECO	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei

Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912178	NORD	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Stuckenia filiformis ssp. alpina	slender-leaved pondweed	PMPOT03091	None	None	-	2B.2	3912167	CHICO	Mapped	Plants - Vascular - Potamogetonaceae - Stuckenia filiformis ssp. alpina
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Ranunculaceae - Delphinium recurvatum
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3912157	NELSON	Mapped	Plants - Vascular - Ranunculaceae - Delphinium recurvatum
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912178	NORD	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola

CNDDB 9-Quad Species List 299 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912167	CHICO	Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912165	CHEROKEE	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912155	OROVILLE	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912155	OROVILLE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912165	CHEROKEE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912157	NELSON	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912167	CHICO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus

Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912157	NELSON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912156	SHIPPEE	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Pica nuttalli	yellow-billed magpie	ABPAV09020	None	None	-	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Corvidae - Pica nuttalli
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912166	HAMLIN CANYON	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912176	PARADISE WEST	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Gruidae - Antigone canadensis tabida
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912167	CHICO	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912165	CHEROKEE	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912157	NELSON	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912155	OROVILLE	Mapped	Animals - Birds - Icteridae - Agelaius tricolor

Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912167	CHICO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912156	SHIPPEE	Mapped	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912165	CHEROKEE	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912155	OROVILLE	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912167	CHICO	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia

Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912156	SHIPPEE	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912175	PARADISE EAST	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912167	CHICO	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912156	SHIPPEE	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912157	NELSON	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912155	OROVILLE	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi

Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912167	CHICO	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912155	OROVILLE	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912165	CHEROKEE	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Cottus gulosus	riffle sculpin	AFC4E02140	None	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Fish - Cottidae - Cottus gulosus
Animals - Fish	Hysterocarpus traskii traskii	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Fish - Embiotocidae - Hysterocarpus traskii traskii
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912157	NELSON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912176	PARADISE WEST	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11

Animals - Fish	Oncorhynchus tshawytscha pop. 13	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3912155	OROVILLE	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 13
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912167	CHICO	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912157	NELSON	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912157	NELSON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912155	OROVILLE	Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3912157	NELSON	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus

Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	3912155	OROVILLE	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912155	OROVILLE	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912175	PARADISE EAST	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollusks	Gonidea angulata	western ridged mussel	IMBIV19010	None	None	-	-	3912155	OROVILLE	Mapped	Animals - Mollusks - Unionidae - Gonidea angulata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912157	NELSON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912157	NELSON	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912156	SHIPPEE	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912155	OROVILLE	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest

Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912155	OROVILLE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912157	NELSON	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912157	NELSON	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912155	OROVILLE	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912155	OROVILLE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	-	-	3912156	SHIPPEE	Mapped	Community - Terrestrial - Northern Volcanic Mud Flow Vernal Pool
Community - Terrestrial	Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Northern Volcanic Mud Flow Vernal Pool
Plants - Bryophytes	Bryum chryseum	brassy bryum	NBMUS1A430	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Bryophytes - Bryaceae - Bryum chryseum
Plants - Bryophytes	Campylopodiella stenocarpa	flagella-like atractylocarpus	NBMUS84010	None	None	-	2B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Bryophytes - Dicranaceae - Campylopodiella stenocarpa

Plants - Bryophytes	Mielichhoferia elongata	elongate copper moss	NBMUS4Q022	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Bryophytes - Mielichhoferiaceae - Mielichhoferia elongata
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	PDAST11061	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Asteraceae - Balsamorhiza macrolepis
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	PDAST11061	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Asteraceae - Balsamorhiza macrolepis
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Erigeron petrophilus var. sierrensis	northern Sierra daisy	PDAST3M351	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Erigeron petrophilus var. sierrensis
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Lasthenia ferrisiae	Ferris' goldfields	PDAST5L070	None	None	-	4.2	3912157	NELSON	Unprocessed	Plants - Vascular - Asteraceae - Lasthenia ferrisiae
Plants - Vascular	Layia septentrionalis	Colusa layia	PDAST5N0F0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Layia septentrionalis

Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912157	NELSON	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Cryptantha rostellata	red-stemmed cryptantha	PDBOR0A2M1	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Boraginaceae - Cryptantha rostellata
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Streptanthus drepanoides	sickle-fruit jewelflower	PDBRA2G200	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus drepanoides
Plants - Vascular	Githopsis pulchella ssp. serpentinicola	serpentine bluecup	PDCAM07053	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Campanulaceae - Githopsis pulchella ssp. serpentinicola
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912155	OROVILLE	Mapped	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Hesperocyparis bakeri	Baker cypress	PGCUP04020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Cupressaceae - Hesperocyparis bakeri
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris

Plants - Vascular	Carex xerophila	chaparral sedge	PMCYP03M60	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Cyperaceae - Carex xerophila
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Euphorbia hooveri	Hoover's spurge	PDEUP0D150	Threatened	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia hooveri
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912155	OROVILLE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Trifolium jokerstii	Butte County golden clover	PDFAB40310	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Fabaceae - Trifolium jokerstii
Plants - Vascular	Trifolium jokerstii	Butte County golden clover	PDFAB40310	None	None	-	1B.2	3912155	OROVILLE	Mapped	Plants - Vascular - Fabaceae - Trifolium jokerstii
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912155	OROVILLE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus

Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912165	CHEROKEE	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912155	OROVILLE	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912155	OROVILLE	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912167	CHICO	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912155	OROVILLE	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. floccosa
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis

Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912155	OROVILLE	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912157	NELSON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia parviflora ssp. grandiflora	streambank spring beauty	PDPOR030D1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia parviflora ssp. grandiflora
Plants - Vascular	Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	PDONA05053	None	None	-	4.2	3912155	OROVILLE	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia biloba ssp. brandegeeae
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens

Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912155	OROVILLE	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912155	OROVILLE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe inconspicua	small-flowered monkeyflower	PDSCR1B1F0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe inconspicua
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912156	SHIPPEE	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus

Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Stuckenia filiformis ssp. alpina	slender-leaved pondweed	PMPOT03091	None	None	-	2B.2	3912167	CHICO	Mapped	Plants - Vascular - Potamogetonaceae - Stuckenia filiformis ssp. alpina
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3912156	SHIPPEE	Mapped	Plants - Vascular - Ranunculaceae - Delphinium recurvatum
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3912157	NELSON	Mapped	Plants - Vascular - Ranunculaceae - Delphinium recurvatum
Plants - Vascular	Frangula purshiana ssp. ultramafica	Caribou coffeeberry	PDRHA0H061	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Rhamnaceae - Frangula purshiana ssp. ultramafica
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912156	SHIPPEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola

Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912155	OROVILLE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae

CNDDB 9-Quad Species List 246 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912168	ORD FERRY	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912167	CHICO	Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912178	NORD	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912178	NORD	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912271	FOSTER ISLAND	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912167	CHICO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912261	HAMILTON CITY	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912168	ORD FERRY	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912251	GLENN	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912157	NELSON	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912157	NELSON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912271	FOSTER ISLAND	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912271	FOSTER ISLAND	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912261	HAMILTON CITY	Unprocessed	Animals - Birds - Ardeidae - Ardea alba

Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912251	GLENN	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912251	GLENN	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912261	HAMILTON CITY	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912271	FOSTER ISLAND	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	-	-	3912271	FOSTER ISLAND	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	-	-	3912168	ORD FERRY	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	-	-	3912251	GLENN	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Gruidae - Antigone canadensis tabida
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912271	FOSTER ISLAND	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912178	NORD	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia

Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912251	GLENN	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912251	GLENN	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912158	LLANO SECO	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912157	NELSON	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912261	HAMILTON CITY	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912167	CHICO	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912251	GLENN	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912251	GLENN	Mapped	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912158	LLANO SECO	Mapped	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912271	FOSTER ISLAND	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912261	HAMILTON CITY	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912167	CHICO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912271	FOSTER ISLAND	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3912158	LLANO SECO	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus

Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912178	NORD	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912167	CHICO	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912251	GLENN	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912168	ORD FERRY	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912167	CHICO	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912157	NELSON	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta conservatio	Conservancy fairy shrimp	ICBRA03010	Endangered	None	-	-	3912178	NORD	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta conservatio
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912178	NORD	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912158	LLANO SECO	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3912178	NORD	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912178	NORD	Mapped	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis

Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912178	NORD	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912158	LLANO SECO	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912167	CHICO	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3912178	NORD	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3912271	FOSTER ISLAND	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3912261	HAMILTON CITY	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912261	HAMILTON CITY	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912271	FOSTER ISLAND	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912178	NORD	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11

Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912251	GLENN	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912158	LLANO SECO	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912157	NELSON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Insects	Anthicus antiochensis	Antioch Dunes anthicid beetle	IICOL49020	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Insects - Anthicidae - Anthicus antiochensis
Animals - Insects	Anthicus sacramento	Sacramento anthicid beetle	IICOL49010	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Insects - Anthicidae - Anthicus sacramento
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912271	FOSTER ISLAND	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912168	ORD FERRY	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912261	HAMILTON CITY	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912158	LLANO SECO	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912251	GLENN	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912167	CHICO	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912251	GLENN	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin

Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912158	LLANO SECO	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912157	NELSON	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912261	HAMILTON CITY	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912178	NORD	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912178	NORD	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912157	NELSON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912251	GLENN	Mapped and Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912178	NORD	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912178	NORD	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912271	FOSTER ISLAND	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3912158	LLANO SECO	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3912157	NELSON	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912168	ORD FERRY	Unprocessed	Animals - Mammals - Vespertilionidae - Antrozous pallidus

Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912158	LLANO SECO	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912158	LLANO SECO	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912168	ORD FERRY	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollusks	Anodonta californiensis	California floater	IMBIV04220	None	None	-	-	3912168	ORD FERRY	Unprocessed	Animals - Mollusks - Unionidae - Anodonta californiensis
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912168	ORD FERRY	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912158	LLANO SECO	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912157	NELSON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912157	NELSON	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912158	LLANO SECO	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912251	GLENN	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912168	ORD FERRY	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3912261	HAMILTON CITY	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh

Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3912271	FOSTER ISLAND	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3912251	GLENN	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912251	GLENN	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912271	FOSTER ISLAND	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912271	FOSTER ISLAND	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912251	GLENN	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912157	NELSON	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912157	NELSON	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912271	FOSTER ISLAND	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest

Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912168	ORD FERRY	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912271	FOSTER ISLAND	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912251	GLENN	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Great Valley Willow Scrub	Great Valley Willow Scrub	CTT63410CA	None	None	-	-	3912158	LLANO SECO	Mapped	Community - Terrestrial - Great Valley Willow Scrub
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3912178	NORD	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Northern Volcanic Mud Flow Vernal Pool
Plants - Bryophytes	Campylopodiella stenocarpa	flagella-like atractylocarpus	NBMUS84010	None	None	-	2B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Bryophytes - Dicranaceae - Campylopodiella stenocarpa
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	PDAST11061	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Asteraceae - Balsamorhiza macrolepis
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3912251	GLENN	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3912158	LLANO SECO	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912158	LLANO SECO	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912178	NORD	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Lasthenia ferrisiae	Ferris' goldfields	PDAST5L070	None	None	-	4.2	3912157	NELSON	Unprocessed	Plants - Vascular - Asteraceae - Lasthenia ferrisiae
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912157	NELSON	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912158	LLANO SECO	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Cryptantha crinita	silky cryptantha	PDBOR0A0Q0	None	None	-	1B.2	3912168	ORD FERRY	Mapped	Plants - Vascular - Boraginaceae - Cryptantha crinita
Plants - Vascular	Cryptantha rostellata	red-stemmed cryptantha	PDBOR0A2M1	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Boraginaceae - Cryptantha rostellata

Plants - Vascular	Brasenia schreberi	watershield	PDCAB01010	None	None	-	2B.3	3912158	LLANO SECO	Mapped	Plants - Vascular - Cabombaceae - Brasenia schreberi
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Euphorbia hooveri	Hoover's spurge	PDEUP0D150	Threatened	None	-	1B.2	3912178	NORD	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia hooveri
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912178	NORD	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus tener var. ferrisiae	Ferris' milk-vetch	PDFAB0F8R3	None	None	-	1B.1	3912158	LLANO SECO	Mapped	Plants - Vascular - Fabaceae - Astragalus tener var. ferrisiae
Plants - Vascular	Astragalus tener var. ferrisiae	Ferris' milk-vetch	PDFAB0F8R3	None	None	-	1B.1	3912178	NORD	Mapped	Plants - Vascular - Fabaceae - Astragalus tener var. ferrisiae
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Wolffia brasiliensis	Brazilian watermeal	PMLEM03020	None	None	-	2B.3	3912261	HAMILTON CITY	Mapped	Plants - Vascular - Lemnaceae - Wolffia brasiliensis
Plants - Vascular	Wolffia brasiliensis	Brazilian watermeal	PMLEM03020	None	None	-	2B.3	3912168	ORD FERRY	Mapped	Plants - Vascular - Lemnaceae - Wolffia brasiliensis
Plants - Vascular	Wolffia brasiliensis	Brazilian watermeal	PMLEM03020	None	None	-	2B.3	3912158	LLANO SECO	Mapped	Plants - Vascular - Lemnaceae - Wolffia brasiliensis
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912178	NORD	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912178	NORD	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912167	CHICO	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica

Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	None	-	4.2	3912178	NORD	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. floccosa
Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. floccosa
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912168	ORD FERRY	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912158	LLANO SECO	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912157	NELSON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912178	NORD	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912261	HAMILTON CITY	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912168	ORD FERRY	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912178	NORD	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912178	NORD	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912158	LLANO SECO	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei

Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912178	NORD	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Stuckenia filiformis ssp. alpina	slender-leaved pondweed	PMPOT03091	None	None	-	2B.2	3912167	CHICO	Mapped	Plants - Vascular - Potamogetonaceae - Stuckenia filiformis ssp. alpina
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3912157	NELSON	Mapped	Plants - Vascular - Ranunculaceae - Delphinium recurvatum
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912178	NORD	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola

CNDDB 9-Quad Species List 281 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912186	COHASSET	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912185	STIRLING CITY	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912184	KIMSHEW POINT	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912174	PULGA	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912165	CHEROKEE	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana cascadae	Cascades frog	AAABH01060	None	Candidate Endangered	SSC	-	3912184	KIMSHEW POINT	Mapped	Animals - Amphibians - Ranidae - Rana cascadae
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana sierrae	Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	WL	-	3912184	KIMSHEW POINT	Unprocessed	Animals - Amphibians - Ranidae - Rana sierrae
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912165	CHEROKEE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Birds	Accipiter gentilis	northern goshawk	ABNKC12060	None	None	SSC	-	3912184	KIMSHEW POINT	Mapped and Unprocessed	Animals - Birds - Accipitridae - Accipiter gentilis
Animals - Birds	Accipiter gentilis	northern goshawk	ABNKC12060	None	None	SSC	-	3912185	STIRLING CITY	Unprocessed	Animals - Birds - Accipitridae - Accipiter gentilis
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos

Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912164	BERRY CREEK	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912174	PULGA	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912174	PULGA	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912176	PARADISE WEST	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912166	HAMLIN CANYON	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Gruidae - Antigone canadensis tabida
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912165	CHEROKEE	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912164	BERRY CREEK	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912185	STIRLING CITY	Mapped	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912174	PULGA	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912165	CHEROKEE	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia

Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912164	BERRY CREEK	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912174	PULGA	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912175	PARADISE EAST	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912184	KIMSHEW POINT	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912185	STIRLING CITY	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912186	COHASSET	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912186	COHASSET	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912165	CHEROKEE	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Cottus gulosus	riffle sculpin	AFC4E02140	None	None	SSC	-	3912174	PULGA	Unprocessed	Animals - Fish - Cottidae - Cottus gulosus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3912174	PULGA	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Hysterocarpus traskii traskii	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Fish - Embiotocidae - Hysterocarpus traskii traskii
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912186	COHASSET	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11

Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912186	COHASSET	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912176	PARADISE WEST	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912185	STIRLING CITY	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912174	PULGA	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912186	COHASSET	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912185	STIRLING CITY	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Mammals	Aplodontia rufa californica	Sierra Nevada mountain beaver	AMAFA01013	None	None	SSC	-	3912184	KIMSHEW POINT	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa californica
Animals - Mammals	Canis lupus	gray wolf	AMAJA01030	Delisted	Endangered	-	-	3912184	KIMSHEW POINT	Unprocessed	Animals - Mammals - Canidae - Canis lupus
Animals - Mammals	Canis lupus	gray wolf	AMAJA01030	Delisted	Endangered	-	-	3912174	PULGA	Unprocessed	Animals - Mammals - Canidae - Canis lupus
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912186	COHASSET	Mapped and Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti

Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912186	COHASSET	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912184	KIMSHEW POINT	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912185	STIRLING CITY	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912174	PULGA	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912164	BERRY CREEK	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912174	PULGA	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912175	PARADISE EAST	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3912185	STIRLING CITY	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Myotis thysanodes	fringed myotis	AMACC01090	None	None	-	-	3912174	PULGA	Mapped	Animals - Mammals - Vespertilionidae - Myotis thysanodes
Animals - Mammals	Myotis thysanodes	fringed myotis	AMACC01090	None	None	-	-	3912164	BERRY CREEK	Mapped	Animals - Mammals - Vespertilionidae - Myotis thysanodes
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912185	STIRLING CITY	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mollusks	Monadenia churchi	Klamath sideband	IMGASC7010	None	None	-	-	3912185	STIRLING CITY	Unprocessed	Animals - Mollusks - Bradybaenidae - Monadenia churchi
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912164	BERRY CREEK	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912174	PULGA	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata

Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Plants - Bryophytes	Anomobryum julaceum	slender silver moss	NBMUS80010	None	None	-	4.2	3912174	PULGA	Mapped and Unprocessed	Plants - Bryophytes - Bryaceae - Anomobryum julaceum
Plants - Bryophytes	Mielichhoferia elongata	elongate copper moss	NBMUS4Q022	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Bryophytes - Mielichhoferiaceae - Mielichhoferia elongata
Plants - Lichens	Peltigera gowardii	western waterfan lichen	NLVER00460	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Lichens - Peltigeraceae - Peltigera gowardii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912186	COHASSET	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Perideridia bacigalupii	Bacigalupi's yampah	PDAPI1N020	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Apiaceae - Perideridia bacigalupii
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia

Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Erigeron petrophilus var. sierrensis	northern Sierra daisy	PDAST3M351	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Erigeron petrophilus var. sierrensis
Plants - Vascular	Erigeron petrophilus var. sierrensis	northern Sierra daisy	PDAST3M351	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Asteraceae - Erigeron petrophilus var. sierrensis
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Layia septentrionalis	Colusa layia	PDAST5N0F0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Layia septentrionalis
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia

Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Streptanthus drepanoides	sickle-fruit jewelflower	PDBRA2G200	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus drepanoides
Plants - Vascular	Streptanthus longisiliquus	long-fruit jewelflower	PDBRA2G400	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus longisiliquus
Plants - Vascular	Streptanthus longisiliquus	long-fruit jewelflower	PDBRA2G400	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus longisiliquus
Plants - Vascular	Githopsis pulchella ssp. serpentinicola	serpentine bluecup	PDCAM07053	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Campanulaceae - Githopsis pulchella ssp. serpentinicola
Plants - Vascular	Eremogone cliftonii	Clifton's eremogone	PDCAR17010	None	None	-	1B.3	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Eremogone cliftonii
Plants - Vascular	Eremogone cliftonii	Clifton's eremogone	PDCAR17010	None	None	-	1B.3	3912184	KIMSHEW POINT	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Eremogone cliftonii
Plants - Vascular	Stellaria obtusa	obtuse starwort	PDCAR0X0U0	None	None	-	4.3	3912184	KIMSHEW POINT	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Stellaria obtusa
Plants - Vascular	Stellaria obtusa	obtuse starwort	PDCAR0X0U0	None	None	-	4.3	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Stellaria obtusa
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912186	COHASSET	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912185	STIRLING CITY	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis

Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Sedum albomarginatum	Feather River stonecrop	PDCRA0A030	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Crassulaceae - Sedum albomarginatum
Plants - Vascular	Hesperocyparis bakeri	Baker cypress	PGCUP04020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Cupressaceae - Hesperocyparis bakeri
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912184	KIMSHEW POINT	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Carex xerophila	chaparral sedge	PMCYP03M60	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Cyperaceae - Carex xerophila
Plants - Vascular	Eriophorum gracile	slender cottongrass	PMCYP0A080	None	None	-	4.3	3912184	KIMSHEW POINT	Unprocessed	Plants - Vascular - Cyperaceae - Eriophorum gracile
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912174	PULGA	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Euphorbia hooveri	Hoover's spurge	PDEUP0D150	Threatened	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia hooveri
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus

Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912186	COHASSET	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Rupertia hallii	Hall's rupertia	PDFAB62010	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Fabaceae - Rupertia hallii
Plants - Vascular	Rupertia hallii	Hall's rupertia	PDFAB62010	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Fabaceae - Rupertia hallii
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Calochortus syntrophus	Callahan's mariposa-lily	PMLIL0D1S0	None	None	-	1B.1	3912186	COHASSET	Unprocessed	Plants - Vascular - Liliaceae - Calochortus syntrophus
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912186	COHASSET	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912185	STIRLING CITY	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912165	CHEROKEE	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii

Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912186	COHASSET	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Sidalcea gigantea	giant checkerbloom	PDMAL110T0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea gigantea
Plants - Vascular	Sidalcea gigantea	giant checkerbloom	PDMAL110T0	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea gigantea
Plants - Vascular	Sidalcea gigantea	giant checkerbloom	PDMAL110T0	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea gigantea
Plants - Vascular	Sidalcea gigantea	giant checkerbloom	PDMAL110T0	None	None	-	4.3	3912184	KIMSHEW POINT	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea gigantea
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912186	COHASSET	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia parviflora ssp. grandiflora	streambank spring beauty	PDPOR030D1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia parviflora ssp. grandiflora

Plants - Vascular	Claytonia parviflora ssp. grandiflora	streambank spring beauty	PDPOR030D1	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Montiaceae - Claytonia parviflora ssp. grandiflora
Plants - Vascular	Lewisia cantelovii	Cantelow's lewisia	PDPOR04020	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Montiaceae - Lewisia cantelovii
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912164	BERRY CREEK	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912186	COHASSET	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912185	STIRLING CITY	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912185	STIRLING CITY	Mapped	Plants - Vascular - Onagraceae - Clarkia mosquinii

Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912164	BERRY CREEK	Mapped and Unprocessed	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Botrychium crenulatum	scalloped moonwort	PPOPH010L0	None	None	-	2B.2	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Ophioglossaceae - Botrychium crenulatum
Plants - Vascular	Botrychium minganense	Mingan moonwort	PPOPH010R0	None	None	-	2B.2	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Ophioglossaceae - Botrychium minganense
Plants - Vascular	Botrychium montanum	western goblin	PPOPH010K0	None	None	-	2B.1	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Ophioglossaceae - Botrychium montanum
Plants - Vascular	Cypripedium californicum	California lady's-slipper	PMORC0Q040	None	None	-	4.2	3912184	KIMSHEW POINT	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium californicum
Plants - Vascular	Cypripedium californicum	California lady's-slipper	PMORC0Q040	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium californicum
Plants - Vascular	Cypripedium californicum	California lady's-slipper	PMORC0Q040	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium californicum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Piperia colemanii	Coleman's rein orchid	PMORC1X080	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Orchidaceae - Piperia colemanii
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Erythranthe filicifolia	fern-leaved monkeyflower	PDPHR01150	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Phrymaceae - Erythranthe filicifolia
Plants - Vascular	Erythranthe filicifolia	fern-leaved monkeyflower	PDPHR01150	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Phrymaceae - Erythranthe filicifolia
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens

Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912186	COHASSET	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe inconspicua	small-flowered monkeyflower	PDSCR1B1F0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe inconspicua
Plants - Vascular	Erythranthe inconspicua	small-flowered monkeyflower	PDSCR1B1F0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe inconspicua
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912174	PULGA	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912184	KIMSHEW POINT	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Agrostis hendersonii	Henderson's bent grass	PMPOA040K0	None	None	-	3.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Poaceae - Agrostis hendersonii
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Poa sierrae	Sierra blue grass	PMPOA4Z310	None	None	-	1B.3	3912164	BERRY CREEK	Mapped	Plants - Vascular - Poaceae - Poa sierrae
Plants - Vascular	Poa sierrae	Sierra blue grass	PMPOA4Z310	None	None	-	1B.3	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Poaceae - Poa sierrae
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra

Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912164	BERRY CREEK	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912174	PULGA	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Aspidotis carlotta-halliae	Carlotta Hall's lace fern	PPADI07020	None	None	-	4.2	3912174	PULGA	Unprocessed	Plants - Vascular - Pteridaceae - Aspidotis carlotta-halliae
Plants - Vascular	Frangula purshiana ssp. ultramafica	Caribou coffeeberry	PDRHA0H061	None	None	-	1B.2	3912174	PULGA	Unprocessed	Plants - Vascular - Rhamnaceae - Frangula purshiana ssp. ultramafica
Plants - Vascular	Frangula purshiana ssp. ultramafica	Caribou coffeeberry	PDRHA0H061	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Rhamnaceae - Frangula purshiana ssp. ultramafica
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae

Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912174	PULGA	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Viola tomentosa	felt-leaved violet	PDVIO04280	None	None	-	4.2	3912164	BERRY CREEK	Unprocessed	Plants - Vascular - Violaceae - Viola tomentosa

CNDDB 9-Quad Species List 265 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912186	COHASSET	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912185	STIRLING CITY	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912167	CHICO	Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	AAABH01050	None	Endangered	SSC	-	3912165	CHEROKEE	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912165	CHEROKEE	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
Animals - Birds	Accipiter gentilis	northern goshawk	ABNKC12060	None	None	SSC	-	3912185	STIRLING CITY	Unprocessed	Animals - Birds - Accipitridae - Accipiter gentilis
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912167	CHICO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912175	PARADISE EAST	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Accipitridae - Haliaeetus leucocephalus

Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Gymnogyps californianus	California condor	ABNKA03010	Endangered	Endangered	FP	-	3912167	CHICO	Unprocessed	Animals - Birds - Cathartidae - Gymnogyps californianus
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912166	HAMLIN CANYON	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	3912176	PARADISE WEST	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Antigone canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Gruidae - Antigone canadensis tabida
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912167	CHICO	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912165	CHEROKEE	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912185	STIRLING CITY	Mapped	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912167	CHICO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912165	CHEROKEE	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912167	CHICO	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus

Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912165	CHEROKEE	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912167	CHICO	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912176	PARADISE WEST	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix nebulosa	great gray owl	ABNSB12040	None	Endangered	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912175	PARADISE EAST	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912185	STIRLING CITY	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Strix occidentalis occidentalis	California Spotted Owl	ABNSB12013	None	None	SSC	-	3912186	COHASSET	Mapped	Animals - Birds - Strigidae - Strix occidentalis occidentalis
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912177	RICHARDSON SPRINGS	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Selasphorus rufus	rufous hummingbird	ABNUC51020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Birds - Trochilidae - Selasphorus rufus
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3912167	CHICO	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912187	CAMPBELL MOUND	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae

Animals - Crustaceans	Stygobromus gallawayae	Gallaway's amphipod	ICMAL05E10	None	None	-	-	3912186	COHASSET	Mapped	Animals - Crustaceans - Crangonyctidae - Stygobromus gallawayae
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912167	CHICO	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3912165	CHEROKEE	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Hysterocarpus traskii traskii	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Fish - Embiotocidae - Hysterocarpus traskii traskii
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912186	COHASSET	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912186	COHASSET	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912185	STIRLING CITY	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912176	PARADISE WEST	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912167	CHICO	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Fish	Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	-	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus crotchii

Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	Candidate Endangered	-	-	3912165	CHEROKEE	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912167	CHICO	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912186	COHASSET	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Insects	Atractelmis wawona	Wawona riffle beetle	IICOL58010	None	None	-	-	3912185	STIRLING CITY	Mapped	Animals - Insects - Elmidae - Atractelmis wawona
Animals - Mammals	Vulpes vulpes patwin	Sacramento Valley red fox	AMAJA03015	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mammals - Canidae - Vulpes vulpes patwin
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912186	COHASSET	Mapped and Unprocessed	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912186	COHASSET	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912187	CAMPBELL MOUND	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	3912185	STIRLING CITY	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus

Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	3912175	PARADISE EAST	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3912185	STIRLING CITY	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3912167	CHICO	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912185	STIRLING CITY	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3912176	PARADISE WEST	Mapped	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mollusks	Monadenia churchi	Klamath sideband	IMGASC7010	None	None	-	-	3912185	STIRLING CITY	Unprocessed	Animals - Mollusks - Bradybaenidae - Monadenia churchi
Animals - Mollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	3912167	CHICO	Unprocessed	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912167	CHICO	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912166	HAMLIN CANYON	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912175	PARADISE EAST	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3912176	PARADISE WEST	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3912166	HAMLIN CANYON	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3912167	CHICO	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Northern Basalt Flow Vernal Pool	Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	-	-	3912165	CHEROKEE	Mapped	Community - Terrestrial - Northern Basalt Flow Vernal Pool

Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3912166	HAMLIN CANYON	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	-	-	3912177	RICHARDSON SPRINGS	Mapped	Community - Terrestrial - Northern Volcanic Mud Flow Vernal Pool
Plants - Bryophytes	Campylopodiella stenocarpa	flagella-like atractylocarpus	NBMUS84010	None	None	-	2B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Bryophytes - Dicranaceae - Campylopodiella stenocarpa
Plants - Bryophytes	Mielichhoferia elongata	elongate copper moss	NBMUS4Q022	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Bryophytes - Mielichhoferiaceae - Mielichhoferia elongata
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium jepsonii	Jepson's onion	PMLIL022V0	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Alliaceae - Allium jepsonii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912186	COHASSET	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Allium sanbornii var. sanbornii	Sanborn's onion	PMLIL02212	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Alliaceae - Allium sanbornii var. sanbornii
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	PDAST11061	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Asteraceae - Balsamorhiza macrolepis
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Calycadenia oppositifolia	Butte County calycadenia	PDAST1P070	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Asteraceae - Calycadenia oppositifolia
Plants - Vascular	Erigeron petrophilus var. sierrensis	northern Sierra daisy	PDAST3M351	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Asteraceae - Erigeron petrophilus var. sierrensis
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens

Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Layia septentrionalis	Colusa layia	PDAST5N0F0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Layia septentrionalis
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	PDAST8H182	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera eurycephala var. lewisrosei
Plants - Vascular	Azolla microphylla	Mexican mosquito fern	PPAZO01030	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Azollaceae - Azolla microphylla
Plants - Vascular	Cryptantha rostellata	red-stemmed cryptantha	PDBOR0A2M1	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Boraginaceae - Cryptantha rostellata
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	PDBRA0K1B1	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Brassicaceae - Cardamine pachystigma var. dissectifolia
Plants - Vascular	Streptanthus drepanoides	sickle-fruit jewelflower	PDBRA2G200	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus drepanoides
Plants - Vascular	Githopsis pulchella ssp. serpentinicola	serpentine bluecup	PDCAM07053	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Campanulaceae - Githopsis pulchella ssp. serpentinicola
Plants - Vascular	Paronychia ahartii	Ahart's paronychia	PDCAR0L0V0	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Paronychia ahartii
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912185	STIRLING CITY	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis

Plants - Vascular	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	PDCON04012	None	None	-	4.2	3912186	COHASSET	Mapped and Unprocessed	Plants - Vascular - Convolvulaceae - Calystegia atriplicifolia ssp. buttensis
Plants - Vascular	Hesperocyparis bakeri	Baker cypress	PGCUP04020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Cupressaceae - Hesperocyparis bakeri
Plants - Vascular	Bulbostylis capillaris	thread-leaved beakseed	PMCYP02020	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Cyperaceae - Bulbostylis capillaris
Plants - Vascular	Carex xerophila	chaparral sedge	PMCYP03M60	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Cyperaceae - Carex xerophila
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora californica	California beaked-rush	PMCYP0N060	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora californica
Plants - Vascular	Rhynchospora capitellata	brownish beaked-rush	PMCYP0N080	None	None	-	2B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Cyperaceae - Rhynchospora capitellata
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Arctostaphylos mewukka ssp. truei	True's manzanita	PDERI040Q2	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos mewukka ssp. truei
Plants - Vascular	Euphorbia hooveri	Hoover's spurge	PDEUP0D150	Threatened	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Euphorbiaceae - Euphorbia hooveri
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912186	COHASSET	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912187	CAMPBELL MOUND	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Astragalus pauperculus	depauperate milk-vetch	PDFAB0F6N0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Fabaceae - Astragalus pauperculus
Plants - Vascular	Rupertia hallii	Hall's rupertia	PDFAB62010	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Fabaceae - Rupertia hallii
Plants - Vascular	Rupertia hallii	Hall's rupertia	PDFAB62010	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Fabaceae - Rupertia hallii
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912187	CAMPBELL MOUND	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus

Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	PMJUN011L2	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. leiospermus
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Monardella venosa	veiny monardella	PDLAM18082	None	None	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Lamiaceae - Monardella venosa
Plants - Vascular	Calochortus syntrophus	Callahan's mariposa-lily	PMLIL0D1S0	None	None	-	1B.1	3912186	COHASSET	Unprocessed	Plants - Vascular - Liliaceae - Calochortus syntrophus
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912186	COHASSET	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912185	STIRLING CITY	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria eastwoodiae	Butte County fritillary	PMLIL0V060	None	None	-	3.2	3912165	CHEROKEE	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria eastwoodiae
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Fritillaria pluriflora	adobe-lily	PMLIL0V0F0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Fritillaria pluriflora
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Lilium humboldtii ssp. humboldtii	Humboldt lily	PMLIL1A071	None	None	-	4.2	3912186	COHASSET	Unprocessed	Plants - Vascular - Liliaceae - Lilium humboldtii ssp. humboldtii
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. californica	Butte County meadowfoam	PDLIM02042	Endangered	Endangered	-	1B.1	3912167	CHICO	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. californica
Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	None	-	4.2	3912177	RICHARDSON SPRINGS	Mapped and Unprocessed	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. floccosa

Plants - Vascular	Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	None	None	-	4.2	3912187	CAMPBELL MOUND	Mapped	Plants - Vascular - Limnanthaceae - Limnanthes floccosa ssp. floccosa
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpos var. occidentalis
Plants - Vascular	Sidalcea gigantea	giant checkerbloom	PDMAL110T0	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Malvaceae - Sidalcea gigantea
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912167	CHICO	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Sidalcea robusta	Butte County checkerbloom	PDMAL110P0	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Malvaceae - Sidalcea robusta
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912186	COHASSET	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia palustris	marsh claytonia	PDPOR030S0	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Montiaceae - Claytonia palustris
Plants - Vascular	Claytonia parviflora ssp. grandiflora	streambank spring beauty	PDPOR030D1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Montiaceae - Claytonia parviflora ssp. grandiflora
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis

Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	PDONA050J1	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia gracilis ssp. albicaulis
Plants - Vascular	Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	PDONA050Q1	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. lutescens
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912175	PARADISE EAST	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912186	COHASSET	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	PDONA050Q2	None	None	-	1B.3	3912185	STIRLING CITY	Mapped	Plants - Vascular - Onagraceae - Clarkia mildrediae ssp. mildrediae
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912185	STIRLING CITY	Mapped	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Clarkia mosquinii	Mosquin's clarkia	PDONA050S0	None	None	-	1B.1	3912165	CHEROKEE	Mapped	Plants - Vascular - Onagraceae - Clarkia mosquinii
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Piperia colemanii	Coleman's rein orchid	PMORC1X080	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Orchidaceae - Piperia colemanii
Plants - Vascular	Castilleja rubicundula var. rubicundula	pink creamsacs	PDSCR0D482	None	None	-	1B.2	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Orobanchaceae - Castilleja rubicundula var. rubicundula
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912167	CHICO	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912185	STIRLING CITY	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912187	CAMPBELL MOUND	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912186	COHASSET	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens

Plants - Vascular	Erythranthe glaucescens	shield-bracted monkeyflower	PDSCR1B1B0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe glaucescens
Plants - Vascular	Erythranthe inconspicua	small-flowered monkeyflower	PDSCR1B1F0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Phrymaceae - Erythranthe inconspicua
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Penstemon personatus	closed-throated beardtongue	PDSCR1L4Y0	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Plantaginaceae - Penstemon personatus
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912187	CAMPBELL MOUND	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912176	PARADISE WEST	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Imperata brevifolia	California satintail	PMPOA3D020	None	None	-	2B.1	3912177	RICHARDSON SPRINGS	Mapped	Plants - Vascular - Poaceae - Imperata brevifolia
Plants - Vascular	Tuctoria greenei	Greene's tuctoria	PMPOA6N010	Endangered	Rare	-	1B.1	3912166	HAMLIN CANYON	Mapped	Plants - Vascular - Poaceae - Tuctoria greenei
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Leptosiphon ambiguus	serpentine leptosiphon	PDPLM09020	None	None	-	4.2	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon ambiguus
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912165	CHEROKEE	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912176	PARADISE WEST	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912175	PARADISE EAST	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912186	COHASSET	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Eriogonum umbellatum var. ahartii	Ahart's buckwheat	PDPGN086UY	None	None	-	1B.2	3912185	STIRLING CITY	Mapped	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. ahartii
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912187	CAMPBELL MOUND	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae

Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912176	PARADISE WEST	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912177	RICHARDSON SPRINGS	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Polygonum bidwelliae	Bidwell's knotweed	PDPGN0L0C0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Polygonaceae - Polygonum bidwelliae
Plants - Vascular	Stuckenia filiformis ssp. alpina	slender-leaved pondweed	PMPOT03091	None	None	-	2B.2	3912167	CHICO	Mapped	Plants - Vascular - Potamogetonaceae - Stuckenia filiformis ssp. alpina
Plants - Vascular	Frangula purshiana ssp. ultramafica	Caribou coffeeberry	PDRHA0H061	None	None	-	1B.2	3912175	PARADISE EAST	Mapped	Plants - Vascular - Rhamnaceae - Frangula purshiana ssp. ultramafica
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912167	CHICO	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912166	HAMLIN CANYON	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea rosea ssp. vallicola	valley brodiaea	PMLIL0C0K2	None	None	-	4.2	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea rosea ssp. vallicola
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912165	CHEROKEE	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae
Plants - Vascular	Brodiaea sierrae	Sierra foothills brodiaea	PMLIL0C0J0	None	None	-	4.3	3912175	PARADISE EAST	Unprocessed	Plants - Vascular - Themidaceae - Brodiaea sierrae

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Inventory of Rare and Endangered Plants

Plant List

84 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3912175, 3912176, 3912177, 3912165, 3912166, 3912167, 3912168, 3912158, 3912157, 3912156, 3912155, 3912174, 3912164, 3912154, 3912184, 3912185, 3912186, 3912178, 3912251, 3912261 3912271 and 3912187;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Agrostis hendersonii	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	3.2	S2	G2Q
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S3S4	G4T3T4
Anomobryum julaceum	slender silver moss	Bryaceae	moss		4.2	S2	G5?
Arctostaphylos mewukka ssp. truei	True's manzanita	Ericaceae	perennial evergreen shrub	Feb-Jul	4.2	S3	G4?T3
Aspidotis carlotta-halliae	Carlotta Hall's lace fern	Pteridaceae	perennial rhizomatous herb	Jan-Dec	4.2	S3	G3
Astragalus pauperculus	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	4.3	S4	G4
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	1B.1	S1	G2T1
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual / perennial herb	Aug	4.2	S4	G5
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Botrychium crenulatum	scalloped moonwort	Ophioglossaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S3	G4
Botrychium minganense	Mingan moonwort	Ophioglossaceae	perennial rhizomatous herb	Jul-Sep	2B.2	S3	G4G5
Botrychium montanum	western goblin	Ophioglossaceae	perennial rhizomatous herb	Jul-Sep	2B.1	S2	G3
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
	valley brodiaea	Themidaceae	perennial bulbiferous	Apr-	4.2	S3	G5T3

Brodiaea rosea ssp. vallicola			herb	May(Jun)			
Brodiaea sierrae	Sierra foothills brodiaea	Themidaceae	perennial bulbiferous herb	May-Aug	4.3	S3	G3
Bryum chryseum	brassy bryum	Bryaceae	moss		4.3	S3	G5
Bulbostylis capillaris	thread-leaved beakseed	Cyperaceae	annual herb	Jun-Aug	4.2	S3	G5
Calycadenia oppositifolia	Butte County calycadenia	Asteraceae	annual herb	Apr-Jul	4.2	S3	G3
Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	Convolvulaceae	perennial rhizomatous herb	May-Jul	4.2	S3	G5T3
Campylopodiella stenocarpa	flagella-like atractylocarpus	Dicranaceae	moss		2B.2	S1?	G5
Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	Brassicaceae	perennial rhizomatous herb	Feb-May	1B.2	S2	G3G5T2Q
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	1B.2	S2	G2
Castilleja rubicundula var. rubicundula	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
Centromadia parryi ssp. rudis	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	4.2	S3	G3T3
Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	4.2	S4	G4G5T4
Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	Onagraceae	annual herb	May-Jul	1B.2	S3	G5T3
Clarkia mildrediae ssp. lutescens	golden-anthered clarkia	Onagraceae	annual herb	Jun-Aug	4.2	S3	G3T3
Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	Onagraceae	annual herb	May-Aug	1B.3	S2S3	G3T2T3
Clarkia mosquinii	Mosquin's clarkia	Onagraceae	annual herb	May-Jul(Sep)	1B.1	S2	G2
Claytonia palustris	marsh claytonia	Montiaceae	perennial herb	May-Oct	4.3	S4	G4
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Cryptantha crinita	silky cryptantha	Boraginaceae	annual herb	Apr-May	1B.2	S2	G2
Cryptantha rostellata	red-stemmed cryptantha	Boraginaceae	annual herb	Apr-Jun	4.2	S3	G4
Cypripedium californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	4.2	S4	G4
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Eremogone cliftonii	Clifton's eremogone	Caryophyllaceae	perennial herb	Apr-Sep	1B.3	S2S3	G2G3
Erigeron petrophilus var. sierrensis	northern Sierra daisy	Asteraceae	perennial rhizomatous herb	Jun-Oct	4.3	S4	G4T4
Eriogonum umbellatum var. ahartii	Ahart's buckwheat	Polygonaceae	perennial herb	Jun-Sep	1B.2	S3	G5T3
Eriophorum gracile	slender cottongrass	Cyperaceae	perennial rhizomatous herb (emergent)	May-Sep	4.3	S4	G5

Erythranthe filicifolia	fern-leaved monkeyflower	Phrymaceae	annual herb	Apr-Jun	1B.2	S2	G2
Erythranthe glaucescens	shield-bracted monkeyflower	Phrymaceae	annual herb	Feb-Aug(Sep)	4.3	S3S4	G3G4
Erythranthe inconspicua	small-flowered monkeyflower	Phrymaceae	annual herb	May-Jun	4.3	S4	G4
Erythranthe laciniata	cut-leaved monkeyflower	Phrymaceae	annual herb	Apr-Jul	4.3	S4	G4
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	1B.2	S1	G1
Frangula purshiana ssp. ultramafica	Caribou coffeeberry	Rhamnaceae	perennial deciduous shrub	May-Jul	1B.2	S2S3	G4T2T3
Fritillaria eastwoodiae	Butte County fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	3.2	S3	G3Q
Fritillaria pluriflora	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2S3	G2G3
Githopsis pulchella ssp. serpentinicola	serpentine bluecup	Campanulaceae	annual herb	May-Jun	4.3	S3	G4T3
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	4.2	S3	G3
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	2B.1	S3	G4
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	1B.1	S2	G2T2
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
Lewisia cantelovii	Cantelow's lewisia	Montiaceae	perennial herb	May-Oct	1B.2	S3	G3
Lilium humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
Limnanthes floccosa ssp. californica	Butte County meadowfoam	Limnanthaceae	annual herb	Mar-May	1B.1	S1	G4T1
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	4.2	S3	G4T4
Microseris sylvatica	sylvan microseris	Asteraceae	perennial herb	Mar-Jun	4.2	S4	G4
Monardella venosa	veiny monardella	Lamiaceae	annual herb	May,Jul	1B.1	S1	G1
Navarretia heterandra	Tehama navarretia	Polemoniaceae	annual herb	Apr-Jun	4.3	S4	G4
Navarretia nigelliformis ssp. nigelliformis	adobe navarretia	Polemoniaceae	annual herb	Apr-Jun	4.2	S3	G4T3
Orcuttia pilosa	hairy Orcutt grass	Poaceae	annual herb	May-Sep	1B.1	S1	G1
Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	Asteraceae	perennial herb	Mar-Jul(Aug-Sep)	1B.2	S2	G4T2
Paronychia ahartii	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	1B.1	S3	G3
Penstemon personatus	closed-throated beardtongue	Plantaginaceae	perennial herb	Jun-Sep(Oct)	1B.2	S2	G2
Perideridia bacigalupii	Bacigalupi's yampah	Apiaceae	perennial herb	Jun-Aug	4.2	S3	G3
Poa sierrae	Sierra blue grass	Poaceae	perennial rhizomatous herb	Apr-Jul	1B.3	S3	G3

Polygonum bidwelliae	Bidwell's knotweed	Polygonaceae	annual herb	Apr-Jul	4.3	S4	G4
Rhynchospora californica	California beaked-rush	Cyperaceae	perennial rhizomatous herb	May-Jul	1B.1	S1	G1
Rhynchospora capitellata	brownish beaked-rush	Cyperaceae	perennial herb	Jul-Aug	2B.2	S1	G5
Rupertia hallii	Hall's rupertia	Fabaceae	perennial herb	Jun-Aug(Sep)	1B.2	S2S3	G2G3
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Sedum albomarginatum	Feather River stonecrop	Crassulaceae	perennial herb	May-Jun	1B.2	S2	G2
Sidalcea gigantea	giant checkerbloom	Malvaceae	perennial rhizomatous herb	(Jan-Jun)Jul-Oct	4.3	S3	G3
Sidalcea robusta	Butte County checkerbloom	Malvaceae	perennial rhizomatous herb	Apr,Jun	1B.2	S2	G2
Stellaria obtusa	obtuse starwort	Caryophyllaceae	perennial rhizomatous herb	May-Sep(Oct)	4.3	S4	G5
Streptanthus drepanoides	sickle-fruit jewelflower	Brassicaceae	annual herb	Apr-Jun	4.3	S4	G4
Streptanthus longisiliquus	long-fruit jewelflower	Brassicaceae	perennial herb	Apr-Sep	4.3	S3	G3
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	2B.2	S2S3	G5T5
Trifolium jokerstii	Butte County golden clover	Fabaceae	annual herb	Mar-May	1B.2	S2	G2
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	1B.1	S1	G1
Wolffia brasiliensis	Brazilian watermeal	Araceae	perennial herb (aquatic)	Apr,Dec	2B.3	S2	G5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 14 May 2021].

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
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2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-2318
Event Code: 08ESMF00-2021-E-06656
Project Name: Paradise Sewer Project

July 14, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

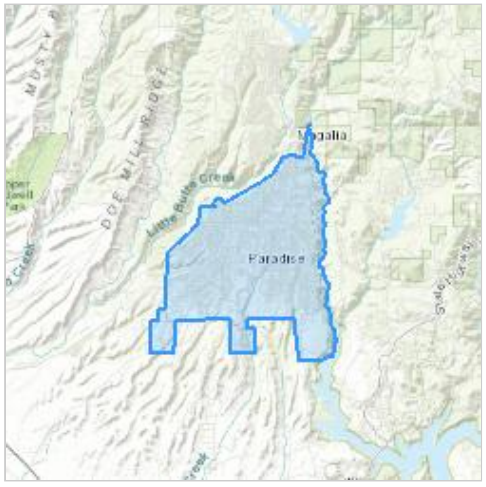
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-2318
Event Code: 08ESMF00-2021-E-06656
Project Name: Paradise Sewer Project
Project Type: WASTEWATER PIPELINE
Project Description: The Town of Paradise (Town) is proposing to construct a new sewer collection system within the Town, a connection pipeline, and connection to the City of Chico Water Pollution Control Plant. The Paradise Sewer Project would replace individualized septic systems within the Town's parcel boundaries which are managed by property owners. This project includes an extension of wastewater services from expansion of the City of Chico's service area to the Town, as approved by the Butte Local Agency Formation Commission.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.76135065,-121.60481243550245,14z



Counties: Butte County, California

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Reptiles

NAME	STATUS
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Greene's Tuctoria *Tuctoria greenei* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
Hairy Orcutt Grass *Orcuttia pilosa* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2262	Endangered
Hoover's Spurge *Chamaesyce hooveri* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3019	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-2317
Event Code: 08ESMF00-2021-E-06654
Project Name: Paradise Sewer Project

July 14, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-2317
Event Code: 08ESMF00-2021-E-06654
Project Name: Paradise Sewer Project
Project Type: WASTEWATER PIPELINE
Project Description: The Town of Paradise (Town) is proposing to construct a new sewer collection system within the Town, a connection pipeline, and connection to the City of Chico Water Pollution Control Plant. The Paradise Sewer Project would replace individualized septic systems within the Town's parcel boundaries which are managed by property owners. This project includes an extension of wastewater services from expansion of the City of Chico's service area to the Town, as approved by the Butte Local Agency Formation Commission.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.71290415,-121.71382087144531,14z

Counties: Butte County, California

Endangered Species Act Species

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Butte County Meadowfoam *Limnanthes floccosa ssp. californica* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4223	Endangered
Greene's Tuctoria *Tuctoria greenei* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
Hairy Orcutt Grass *Orcuttia pilosa* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2262	Endangered
Hoover's Spurge *Chamaesyce hooveri* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3019	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Quad Name **Paradise East**
Quad Number **39121-G5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Paradise West**
Quad Number **39121-G6**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Cherokee**
Quad Number **39121-F5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Hamlin Canyon**
Quad Number **39121-F6**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Chico**
Quad Number **39121-F7**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Ord Ferry**
Quad Number **39121-F8**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat - **X**
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Attachment 3

Sensitive Biological Resources Table

Sensitive Biological Resources and their Potential to Occur in the Study Area

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
Plants							
Allium jepsonii	Jepson's onion	None	None	1B.2	Serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 984–3,707 feet. Blooming period: April–August (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Astragalus tener var. *ferrisiae*	Ferris' milk-vetch	None	None	1B.1	Meadows, seeps, and subalkaline grassland. Elevation: 0–263 feet. Blooming period: March–June (CNPS 2021).	Y	Potential to occur in annual grassland habitats in the western portion of the study area (from the City of Chico west to the Chico WPCP).
Balsamorhiza macrolepis	big-scale balsamroot	None	None	1B.2	Chaparral, cismontane woodland, and grassland. Elevation: 115–4,806 feet. Blooming period: March–June (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, montane hardwood-conifer, and annual grassland habitats in the study area.
Botrychium crenulatum	scalloped moonwort	None	None	2B.2	Bogs, fens, meadows, seeps, marshes, freshwater swamps, montane coniferous forests. Elevation: 4,159–10,758 feet. Sporing period: June–September (CNPS 2021).	N	Study area is below the known elevational range of the species.
Botrychium minganense	Mingan moonwort	None	None	2B.2	Mesic soils in bogs, fens, lower and upper montane coniferous forest. Elevation: 4,773–7,152 feet. Sporing period: July–September (CNPS 2021).	N	Study area is below the known elevational range of the species.
Botrychium montanum	western goblin	None	None	2B.1	Mesic soil in meadows, seeps, and montane coniferous forest. Elevation: 4,805–7,150 feet. Sporing period: July–September (CNPS 2021).	N	Study area is below the known elevational range of the species.
Brasenia schreberi	watershield	None	None	2B.3	Freshwater marshes, ponds, swamps, and streams with low velocity flows. Elevation: 3–7,218 feet. Blooming period: April–	Y	Potential to occur in the study area, in Comanche Creek or Little Chico Creek.

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
					October (CNPS 2021).		
Campylopodiella stenocarpa	flagella-like atractylocarpus	None	None	2B.2	Cismontane woodland, roadsides. Elevation: 935–1,410 feet. (CNPS 2021).	Y	Potential to occur in blue oak-foothill pine, montane hardwood-conifer habitats, and disturbed/ruderal areas adjacent to those habitat types in the study area.
Cardamine pachystigma var. *dissectifolia*	dissected-leaved toothwort	None	None	1B.2	Chaparral, lower montane coniferous forest, serpentine outcrops, and gravelly serpentine talus. Elevation: 984-4,594 feet. (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Carex xerophila	chaparral sedge	None	None	1B.2	Serpentine and gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 902–2,527 feet. Blooming period: March–June (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Castilleja rubicundula var. *rubicundula*	pink creamsacs	None	None	1B.2	Serpentine soils in meadows, seeps, grassland, cismontane woodland, and openings of chaparral. Elevation: 65–3,002 feet. Blooming period: April–June (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, montane hardwood-conifer, and annual grassland habitats in the study area.
Clarkia gracilis ssp. *albicaulis*	white-stemmed clarkia	None	None	1B.2	Chaparral and cismontane woodland. Elevation: 688–3,609 feet. Blooming period: May–July (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Clarkia mildrediae ssp. *mildrediae*	Mildred's clarkia	None	None	1B.3	Sandy, usually granitic, soils in cismontane woodland and lower montane coniferous forest. Elevation: 902–5,676 feet. Blooming period: May–August (CNPS 2021).	Y	Potential to occur in blue oak-foothill pine and montane hardwood-conifer habitats in the study area.
Clarkia mosquinii	Mosquin's clarkia	None	None	1B.1	Rocky soils and roadsides in cismontane woodland and lower montane coniferous	Y	Potential to occur in blue oak-foothill pine, montane

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
					forest. Elevation: 590–4,856 feet. Blooming period: May–July (CNPS 2021).		hardwood-conifer habitats, and disturbed/ruderal areas adjacent to these habitat types in the study area.
Cryptantha crinita	silky cryptantha	None	None	1B.2	Rocky volcanic soils, gravelly streambanks, gravel bars, foothill woodland. Elevation: 295—3,675 feet. Blooming period: March–June (CNPS 2021).	Y	Potential to occur in blue oak woodland, blue oak-foothill pine, valley oak woodland, and valley foothill riparian habitats in the study area.
Delphinium recurvatum	recurved larkspur	None	None	1B.2	Alkaline soils in chenopod scrub, cismontane woodland, and grassland. Elevation: 9–2,592 feet. Blooming period: March–June (CNPS 2021).	Y	Potential to occur in blue oak-foothill pine, montane hardwood-conifer, and annual grassland habitats in the study area.
Eremogone cliftonii	Clifton's eremogone	None	None	1B.3	Usually in granitic soils in openings of chaparral and montane coniferous forests. Elevation: 1,492–6,825 feet. Blooming period: April–September (CNPS 2021).	Y	Potential to occur in mixed chaparral, montane hardwood-conifer, and ponderosa pine habitats in the study area.
Eriogonum umbellatum var. *ahartii*	Ahart's buckwheat	None	None	1B.2	Serpentine soils on slopes in openings of chaparral and cismontane woodland. Elevation: 902–4,856 feet. Blooming period: June–September (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Erythranthe filicifolia	fern-leaved monkeyflower	None	None	1B.2	Usually in slow–draining ephemeral seeps that are among exfoliating granitic slabs in meadows, chaparral, and lower montane coniferous forest. Elevation: 1,148–5,610 feet. Blooming period: April–June (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Euphorbia hooveri	Hoover's spurge	FT	None	1B.2	Vernal pools. Generally, grows in relatively large, deep vernal pools among the rolling hills, remnant alluvial fans and depositional stream terraces at the base of the Sierra Nevada foothills. Elevation: 80–	Y	Potential to occur in vernal pools within annual grassland habitats in the western portion of the study area (from Tuscan Ridge Golf Club west

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
					820 feet. Blooming period: July–October (CNPS 2021, USFWS 2009a).		to the Chico WPCP).
Frangula purshiana ssp. *ultramafica*	Caribou coffeeberry	None	None	1B.2	Serpentine soils in chaparral, montane coniferous forests, meadows, and seeps. Elevation: 2,705–6,330 feet. Blooming period: May–July (CNPS 2021).	N	Study area is below the known elevational range of the species.
Fritillaria pluriflora	adobe-lily	None	None	1B.2	Adobe soils in chaparral, cismontane woodland, and grassland. Elevation: 147–3,100 feet. Blooming period: February–April (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, montane hardwood-conifer, and annual grassland habitats in the study area.
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	None	None	1B.2	Freshwater marshes and swamps, as well as on soaked riverbanks and low peat islands in sloughs. Often occurs in riprap on sides of levees. Elevation: 0–509 feet. Blooming period: June–September (CNPS 2021).	Y	Potential to occur in small freshwater emergent wetland features and in valley foothill riparian habitats in the study area, especially along Butte Creek.
Imperata brevifolia	California satintail	None	None	2B.1	Mesic soils in chaparral, coastal scrub, Mojavean desert scrub, riparian scrub, meadows and seeps (often alkali). Elevation: 0–4,905 feet. Blooming period: September–May (CNPS 2021).	Y	Potential to occur in small freshwater emergent wetland features within mixed chaparral and valley foothill riparian habitats in the study area, especially along Butte Creek.
Juncus leiospermus var. *leiospermus*	Red Bluff dwarf rush	None	None	1B.1	Vernally mesic soils in chaparral, cismontane woodland, meadows, seeps, grassland, and vernal pools. Elevation: 98–4,118 feet. Blooming period: March–June (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, montane hardwood-conifer, and vernal pools within annual grassland habitats in the study area.
Layia septentrionalis	Colusa layia	None	None	1B.2	Sandy serpentine soils in chaparral, cismontane woodland, and grassland. Elevation: 50–3,609 feet. Blooming period: April–May (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, montane hardwood-conifer, and annual grassland habitats in the study area.

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
Lewisia cantelovii	Cantelow's lewisia	None	None	1B.2	Mesic and granitic soils and occasionally serpentine seeps in broadleafed upland and lower montane coniferous forests, chaparral, and cismontane woodland. Elevation: 1,066–4,512 feet. Blooming period: May–October (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Limnanthes floccosa ssp. *californica*	Butte County meadowfoam	FE	SE	1B.1	Vernal swales and mesic grassland. Primarily on the margins of vernal swales and to a lesser extent on the margins of vernal pools located on alluvial terraces in annual grasslands with mima mound topography. Elevation: 115–1,215 feet. Blooming period: March–May (CNPS 2021, USFWS 2008).	Y	Potential to occur on margins of vernal pools within annual grassland habitats in the study area.
Monardella venosa	veiny monardella	None	None	1B.1	Heavy clay soils in cismontane woodland and grassland. Elevation: 98–1,329 feet. Blooming period: June and July (CNPS 2021).	Y	Potential to occur in blue oak-foothill pine, montane hardwood-conifer, and annual grassland habitats in the study area.
Orcuttia pilosa	hairy Orcutt grass	FE	SE	1B.1	Vernal pools on high or low stream terraces and alluvial fans. Occurs in Northern Basalt Flow, Northern Claypan, and Northern Hardpan vernal pools within annual grasslands. Elevation: 85–660 feet. Blooming period: May–September (CNPS 2021, USFWS 2009b).	Y	Potential to occur in vernal pools within annual grassland habitats in the study area.
Packera eurycephala var. *lewisrosei*	Lewis Rose's ragwort	None	None	1B.2	Serpentine soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 328–6,200 feet. Blooming period: March–July (CNPS 2021).	Y	Potential to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Paronychia ahartii	Ahart's paronychia	None	None	1B.1	Cismontane woodland, grassland, and vernal pools. Elevation: 95–1,640 feet. Blooming period: March–June (CNPS 2021).	Y	Potential to occur in blue oak-foothill pine, montane hardwood-conifer, and vernal pools within annual grassland

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
							habitats in the study area.
Penstemon personatus	closed-throated beardtongue	None	None	1B.2	Metavolcanic soils in chaparral and montane coniferous forests. Elevation: 3,490–6,955 feet. Blooming period: June–October (CNPS 2021).	N	Study area is below the known elevational range of the species.
Poa sierrae	Sierra blue grass	None	None	1B.3	Openings in lower montane coniferous forest. Elevation: 1,148–6,282 feet. Blooming period: April–June (CNPS 2021).	Y	Potential to occur in blue oak-foothill pine and montane hardwood-conifer habitats in the study area.
Rhynchospora californica	California beaked-rush	None	None	1B.1	Bogs, fens, meadows, seeps, freshwater marshes and swamps, and lower montane coniferous forest. Elevation: 145–885 feet. Blooming period: May–July (CNPS 2021).	Y	Potential to occur in small freshwater emergent wetland features within montane hardwood-conifer and valley-foothill riparian habitats in the study area.
Rhynchospora capitellata	brownish beaked-rush	None	None	2B.2	Mesic soils in meadows, seeps, marshes, swamps, and montane coniferous forests. Elevation: 145–6,560 feet. Blooming period: July–August (CNPS 2021).	Y	Potential to occur in small freshwater emergent wetland features within montane hardwood-conifer and valley-foothill riparian habitats in the study area.
Rupertia hallii	Hall's rupertia	None	None	1B.2	Roadsides and openings of cismontane woodland and lower montane coniferous forest. Elevation: 1,785–7,380 feet. Blooming period: June–August (CNPS 2021).	Y	Potential to occur in blue oak-foothill pine, montane hardwood-conifer habitats, and disturbed/ruderal areas adjacent to those habitat types in the study area.
Sagittaria sanfordii	Sanford's arrowhead	None	None	1B.2	Standing or slow-moving freshwater marshes, ponds, swamps, and ditches that are typically shallow. Elevation: 0–1,985 feet. Blooming period: May–October (CNPS 2021).	Y	Potential to occur in the study area in Comanche Creek or Little Chico Creek.
Sedum albomarginatum	Feather River stonecrop	None	None	1B.2	Serpentine soils in chaparral and lower montane coniferous forest. Elevation:	Y	Potential to occur in mixed chaparral, blue oak-foothill

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
					984–6,070 feet. Blooming period: May–June (CNPS 2021).		pine, and montane hardwood-conifer habitats in the study area.
Sidalcea robusta	Butte County checkerbloom	None	None	1B.2	Chaparral and cismontane woodland. Elevation: 245–1,313 feet. Blooming period: April–June (CNPS 2021).	Y	Known to occur in mixed chaparral, blue oak-foothill pine, and montane hardwood-conifer habitats in the study area.
Stuckenia filiformis ssp. *alpina*	slender-leaved pondweed	None	None	2B.2	Shallow, clear water of lakes, drainage channels, freshwater marshes and swamps. Elevation: 15–7,628 feet. Blooming period: May–July (CNPS 2021).	Y	Potential to occur in the study area in Comanche Creek or Little Chico Creek.
Trifolium jokerstii	Butte County golden clover	None	None	1B.2	Mesic grassland and vernal pools. Elevation: 145–1,313feet. Blooming period: March–May (CNPS 2021).	Y	Potential to occur in vernal pools within annual grassland habitats in the study area.
Tuctoria greenei	Greene's tuctoria	FE	SR	1B.1	Vernal pools. Often grows in shallower pools or on the shallow margins of deeper pools. Does not tolerate long periods of inundation. Elevation: 82–4,348 feet. Blooming period: May–September (CNPS 2021).	Y	Potential to occur in vernal pools within annual grassland habitats in the study area.
Wolffia brasiliensis	Brazilian watermeal	None	None	2B.3	Shallow freshwater marshes and swamps. Elevation: 65–330 feet. Blooming period: April and December (CNPS 2021).	Y	Potential to occur in small freshwater emergent wetland features in the study area.
Invertebrates							
Bombus crotchii	Crotch bumble bee	None	SCE	---	Open grassland and scrub habitats. Nesting occurs underground. This species is classified as a short-tongued species, whose food plants include those in the following genera: *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia* (CDFW 2019a).	Y	Potential to occur in annual grassland and mixed chaparral habitats in the study area.
Bombus occidentalis	western bumble bee	None	SCE	---	Open grassy areas, urban parks and gardens, chaparral and shrub areas, and	Y	Potential to occur in annual grassland and mixed

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					mountain meadows. Typically nests underground in abandoned rodent burrows, such as old squirrel or other animal nests, and in open west-southwest slopes bordered by trees, although a few nests have been reported from above-ground locations such as in logs among railroad ties. Availability of nest sites may depend on rodent abundance (CDFW 2019a).		chaparral habitats, as well as some developed and disturbed/ruderal parts of the study area.
Branchinecta conservatio	Conservancy fairy shrimp	FE	None	---	Endemic to California vernal pools, almost entirely in the Central Valley, with the exception of one population along the central coast in Ventura County. Majority of sites inhabited by this species are large and turbid pools which remain inundated much longer than typical vernal pools (USFWS 2012).	Y	Potential to occur in vernal pools within annual grassland habitats in the study area.
Branchinecta lynchi	vernal pool fairy shrimp	FT	None	---	Endemic to the grasslands of the Central Valley and the Central and South Coast Range mountains of California, and the Agate Desert of southern Oregon. Found only in cool water vernal pools, requiring water temperatures of 50˚F or lower to hatch. Typically associated with smaller and shallower vernal pools (about 6 inches deep) that have relatively short periods of inundation (USFWS 2007a).	Y	Potential to occur in vernal pools within annual grassland habitats in the study area.
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	FT	None	---	Dependent on host plant, elderberry (*Sambucus* spp.), which most commonly grows in riparian woodlands, but also in some upland habitats such as oak savannas and annual grasslands. Current presumed range in Central Valley extends from Shasta County south to Fresno	Y	Known to occur in valley foothill riparian habitats in the study area, especially along Butte Creek and Little Chico Creek where elderberry shrubs are known to be present.

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					County, including the valley floor and lower foothills up to about 500 feet in elevation (USFWS 2017).		
Lepidurus packardi	vernal pool tadpole shrimp	FE	None	---	Found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands. Patchily distributed across the Central Valley from Shasta County south to Tulare County with isolated occurrences in the East Bay Area (USFWS 2007b).	Y	Potential to occur in vernal pools within annual grassland habitats in the study area.
				Fish			
Acipenser medirostris	green sturgeon (southern DPS)	FT	SSC	---	Spawning occurs primarily in the Sacramento River, but those that spawn in the Feather and Yuba Rivers are also part of the southern DPS. Oceanic waters, bays, and estuaries during non-spawning season. Enters San Francisco Bay late winter through early spring, and spawning occurs from April through early July. Spawn in cool sections of river mainstems in deep pools containing small to medium-sized gravel, cobble, or boulder substrate (NMFS 2015).	N	Study area is outside the known range of the species, which occurs in the Sacramento River but not its tributary creeks.
Cottus gulosus	riffle sculpin	None	SSC	---	Permanent, cool, headwater streams where riffles and rocky substrates predominate. Such streams are clear and shaded, with moderate gradients. Found in many increasingly isolated watersheds in the Central Valley drainage and the central coast. They are mostly present in mid-elevation reaches, although they are present below dams with coldwater releases (Moyle 2002).	Y	Potential to occur in streams in the study area, including Butte Creek, Comanche Creek, and Little Chico Creek.
Hypomesus	delta smelt	FT	SE	---	Endemic to open waters of San Francisco	N	Study area is outside the

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transpacificus					Bay and Sacramento-San Joaquin River Delta. Distribution includes San Pablo Bay up through Suisun Bay, upstream through the delta to the Sacramento River below Isleton, and the San Joaquin River below Mossdale. Spawning has not been observed in the wild but is thought to take place in sloughs and shallow edge-water channels in the upper delta and in Montezuma Slough near Suisun Bay. (USFWS 2010a).		known range of the species.
Mylopharodon conocephalus	hardhead	None	SSC	---	Small to large streams in low to mid-elevation environments. May also inhabit lakes or reservoirs. Preferred stream temperature might easily exceed 68ºF, though these fish do not favor low dissolved oxygen levels. Usually found in clear deep streams with a slow but present flow. Though spawning may occur in pools, runs, or riffles, the bedding area will typically be characterized by gravel and rocky substrate. Occurs from Sacramento-San Joaquin and Russian River drainages from the Pit River, Modoc County in the north, to the Kern River, Kern County in the south (CDFW 2015).	Y	Potential to occur in streams in the study area, especially Butte Creek.
Oncorhynchus mykiss irideus (pop. 11)	steelhead (Central Valley DPS)	FT	None	---	Includes naturally spawned anadromous steelhead originating below natural and manmade impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries; excludes such fish originating from San Francisco and San Pablo Bays and their tributaries. This DPS does include steelhead from two artificial propagation programs: Coleman National Fish Hatchery Program and Feather River	Y	Known to occur in perennial stream features in the study area, especially Butte Creek.

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					Fish Hatchery Program. Spawning habitat includes gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning habitat includes estuarine and marine waters (NMFS 2016a).		
Oncorhynchus tshawytscha (pop. 7)	chinook salmon (Sacramento River winter-run ESU)	FE	SE	---	Currently found in the Sacramento River below Keswick Dam. Spawns in the Sacramento River but not its tributaries. Requires clean, cold water over gravel beds with water temperatures between 42 and 57°F for spawning (NMFS 2016b).	N	Study area is outside the known range of the species, which occurs in the Sacramento River but not its tributaries.
Oncorhynchus tshawytscha (pop. 11)	chinook salmon (Central Valley spring-run ESU)	FT	ST	---	Currently found in the Sacramento-San Joaquin River Delta, the Sacramento River and its tributaries, including the American, Yuba and Feather Rivers, and Mill, Deer, and Butte Creeks. The numbers of adults are dependent on pool depth and volume, amount of cover, and proximity to gravel. Water temperatures greater than 80°F are lethal to adults (NMFS 2016c).	Y	Confirmed present in Butte Creek during field studies.
Oncorhynchus tshawytscha (pop. 13)	chinook salmon (Central Valley fall / late fall-run ESU)	None	SSC	---	Currently found primarily in the Sacramento River, where most spawning and rearing of juveniles takes place in the reach between Red Bluff Diversion Dam and Redding's Keswick Dam. The specific habitat requirements of late fall-run chinook salmon have not been determined but they are presumably similar to other Central Valley chinook salmon runs. It is believed that optimal conditions fall within the range of physical and chemical characteristics of the unimpaired Sacramento River above Shasta Dam (CDFW 2015).	N	Study area is outside the known range of the species, which occurs in the Sacramento River but not its tributaries.
Amphibians							

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Rana boylii	foothill yellow-legged frog	None	ST	---	Shallow flowing streams and rivers with at least cobble sized substrate. Breeding generally occurs at the margins of wide shallow channels with reduced flow variation near tributary confluences. Specifically, egg masses are placed in low flow locations on or under rocks with preferred substrates being boulders, cobbles, or gravel (CDFW 2019b).	Y	Known to occur in perennial stream and valley foothill riparian habitats in the study area, especially Butte Creek and Honey Run.
Rana cascadae	Cascades frog	None	SCE, SSC	---	Found in a wide range of aquatic habitats and wet meadows that do not freeze. Not often seen on land. Breeding habitat generally consists of montane lentic areas with a preference for small shallow spring fed ponds (Thomson et al. 2016).	N	The proposed project area is outside the known range of the species (CDFW 2021b).
Rana draytonii	California red-legged frog	FT	SSC	---	Ponds and streams in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover in lowlands or foothills. Breeding habitat includes permanent or ephemeral water sources: lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. Essential breeding habitat must hold water for a minimum of 20 weeks. Occurs from sea level to 5,000 feet in elevation (USFWS 2010b).	Y	Potential to occur in perennial channel, valley foothill riparian, and annual grasslands with connectivity to those habitats in the study area.
Rana sierrae	Sierra Nevada yellow-legged frog	FE	ST	---	Lakes, ponds, marshes, meadows, and streams at high elevations ranging from about 4,500 to 12,000 feet but can occur as low as about 3,500 feet in the northern portions of their range. Highly aquatic. Adults can be found sitting on rocks along shorelines with little or no vegetation.	N	Study area is below the known elevational range of the species.

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					Rarely found more than 3.3 feet from water (USFWS 2020c).		
Spea hammondii	western spadefoot	None	SSC	---	Grasslands, oak woodlands, coastal sage scrub, and chaparral in washes, floodplains, alluvial fans, playas, and alkali flats. Natural and artificial water bodies are used for breeding (Thomson et al. 2016).	Y	Potential to occur in vernal pools and small freshwater emergent wetland features within annual grassland, blue oak woodland, valley oak woodland, and mixed chaparral habitats in the study area.
Reptiles							
Actinemys marmorata	western pond turtle	None	SSC	---	Various water bodies including permanent and ephemeral systems either natural or artificial. Upland habitat that is at least moderately undisturbed is required for nesting and overwintering, in soils that are loose enough for excavation (Thomson et al. 2016).	Y	Known to occur in perennial streams, and valley foothill riparian habitats in the study area. Confirmed present in Butte Creek during field studies.
Phrynosoma blainvillii	coast horned lizard	None	SSC	---	Sage scrub, dunes, alluvial scrub, annual grassland, chaparral, oak, riparian, and Joshua tree woodland, coniferous forest, and saltbush scrub. Needs loose, fine soils for burrowing, open areas for basking, and dense foliage for cover. Negatively associated with Argentine ants (*Linepithema humi*) (Thomson et al. 2016).	Y	Potential to occur in annual grassland, mixed chaparral, blue oak woodland, blue oak-foothill pine, and valley oak woodland in the study area.
Thamnophis gigas	giant gartersnake	FT	ST	---	Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, rice fields and their associated uplands from sea level to 400 feet in elevation. Upland habitat should have burrows or soil crevices suitable for snakes to reside during their dormancy period from November through mid-March (USFWS 2020a).	Y	Potential to occur in perennial stream and valley foothill riparian habitats from Butte Creek to the western terminus of the study area.

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Birds							
Accipiter gentilis	northern goshawk	None	SSC	---	Nests in mature and old-growth coniferous forests at high elevations in the Sierra Nevada, Cascade, North Coast, and Transverse Ranges. Prefers stands with Pacific Ponderosa pine (*Pinus ponderosa* var. *pacifica*), Jeffrey pine (*Pinus jeffreyi*), Lodgepole pine (*Pinus contorta*), Douglas-fir (*Pseudotsuga menziesii*), and rarely pinyon-juniper (*Pinus monophylla* and *Juniperus* spp.) or quaking aspen (*Populus tremuloides*). Prefers stands with larger trees, denser canopies, and relatively open understories (Shuford and Gardali 2008).	Y	Potential to occur in montane hardwood-conifer and ponderosa pine habitats at the highest elevation portions of the study area. However, this species is much more likely to occur during migration or winter in the study area, and is not likely to nest there due to the lack of old-growth, dense canopy forest.
Agelaius tricolor	tricolored blackbird	None	ST, SSC	---	Preferred nesting habitat includes cattails (*Typha* spp.), bulrushes (*Schoenoplectus* spp.), Himalayan blackberry (*Rubus armeniacus*), and agricultural silage. Dense vegetation is preferred but heavily lodged cattails not burned in recent years may preclude settlement. Need access to open water (CDFW 2021b).	Y	Potential to occur in annual grassland, cropland, irrigated row and field crop, pasture, and valley foothill riparian habitats in the study area, though more likely to occur foraging than nesting.
Aquila chrysaetos	golden eagle	BGEPA	SFP	---	Prefers rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops. (CDFW 2021b).	Y	Potential to occur in annual grassland, blue oak-foothill pine, and mixed chaparral habitats in the study area.
Antigone canadensis tabida	greater sandhill crane	None	ST, SFP	---	Breeds in and near wet meadow, shallow lacustrine, and fresh emergent wetland habitats. Winters in annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open emergent wetlands. Prefers treeless plains. Nests in remote portions of extensive wetlands or	Y	Potential to occur in annual grassland, cropland, irrigated row and field crop, and pasture habitat in the study area. Does not nest in the study area region but does stop through the area on

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					sometimes shortgrass prairies. In California, breeds only in Siskiyou, Modoc, and Lassen Counties, and in Sierra Valley in Plumas and Sierra Counties. Winters primarily in the Sacramento and San Joaquin Valleys from Tehama County south to Kings County (CDFW 2021b).		migration and over winter. Migrant flocks were observed over the study area during field studies in Spring 2021.
Asio otus	long-eared owl	None	SSC	---	Widespread but uncommon and local across California year-round, except in the Central Valley where it is a rarely encountered migrant and winter resident. Nests and roosts in dense stands of live oak (*Quercus* spp.) in riparian thickets with dense canopies near meadow edges. Also nests in dense stands of conifers at higher elevations (CDFW 2021b).	Y	Potential to occur in montane hardwood-conifer, ponderosa pine, blue oak-foothill pine, and valley-foothill riparian habitats in the study area.
Athene cunicularia	burrowing owl	None	SSC	---	Resident in much of the state in open, dry grasslands and various desert habitats. Requires open areas with mammal burrows; especially those of California ground squirrel (*Otospermophilus beecheyi*). Inhabits rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and other open human disturbed lands such as airports and golf courses (CDFW 2021b).	Y	Potential to occur in annual grassland, cropland, irrigated row and field crop, pasture, and disturbed/ruderal habitats in the study area.
Buteo swainsoni	Swainson's hawk	None	ST	---	Nests in oak savanna and cottonwood riparian areas adjacent to foraging habitat of grasslands, agricultural fields, and pastures where they often follow farm equipment to gather killed and maimed rodents. Increasingly also nests in sparse stands of gum trees (*Eucalyptus* spp.) and Australian pines (*Casuarina equisetifolia*) and often forage along roadsides and	Y	Confirmed present in the study area during field studies from the City of Chico west to the Chico WPCP.

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					grassy highway medians (CDFW 2021b).		
Circus hudsonius	northern harrier	None	SSC	---	Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breed and forage in a variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats, and desert sinks (Shuford and Gardali 2008).	Y	Confirmed present in the study area during field studies, though more likely to forage than nest.
Coccyzus americanus occidentalis	yellow-billed cuckoo (western DPS)	FT	SE	---	Requires riparian woodland with dense cover; primarily old-growth cottonwood (*Populus* spp.) forests with willow (*Salix* spp.) understory but will also nest in overgrown orchards adjacent to streams and dense thickets alongside marshes. Persists in small numbers along the Sacramento River between Red Bluff and Colusa, the Feather River between Yuba City and the Bear River, Owens Valley, the Kern River Valley, the Colorado River Valley, the Santa Ana River near Prado Basin, and the San Luis Rey River in northern San Diego County (USFWS 2020b).	N	In Butte County, not known to nest away from the Sacramento River, which is outside the study area (CDFW 2021b).
Elanus leucurus	white-tailed kite	None	SFP	---	Fairly common resident of the Central Valley, coast, and Coast Range Mountains. Nests in oak savanna, oak and willow riparian, and other open areas with scattered trees near foraging habitat. Forages in open grasslands, meadows, farmlands, and emergent wetlands. Often seen hover foraging over roadsides or grassy highway medians (CDFW 2021b).	Y	Potential to occur in annual grassland, blue oak woodland, valley oak woodland, valley foothill riparian, irrigated row and field crop, pasture, and disturbed/ruderal habitats in the study area.
Falco peregrinus anatum	American peregrine falcon	None	SFP	---	Breeds near wetlands, lakes, rivers, or other waters on cliffs, banks, dunes or	Y	Potential to occur in blue oak-foothill pine, ponderosa pine,

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					mounds, mostly in woodland, forest, and coastal habitats. Nest is a scrape on a depression or ledge in an open site. May use man-made structures (such as bridges, skyscrapers, or electrical towers), large snags, or trees for nesting (CDFW 2021b).		and montane hardwood-conifer habitats as well as developed portions of the study area.
Gymnogyps californianus	California condor	FE	SE, SFP	---	From the southern Sierra Nevada Range, across the Tehachapi Range, and through the Transverse Ranges from Los Angeles County to Santa Barbara County, and north up the Coast Range Mountains to Big Sur and Pinnacles National Park. Nests in cavities located on steep rock formations or in the burned-out hollows of old-growth coast redwoods (*Sequoia semervirens*) or giant sequoias (*Sequoiadendron giganteum*). Less commonly uses cliff ledges or large old nests of other bird species. Forages in open terrain of foothill grassland and oak savanna habitats, and at coastal sites in central California (USFWS 2013).	N	The study area is outside the known range of the species (CDFW 2021b).
Haliaeetus leucocephalus	bald eagle	BGEPA	SE	---	Permanent resident in the highest Coast Range mountains, across the Cascade Range, and down the Sierra Nevada to the eastern Transverse Ranges of San Bernardino and Riverside Counties. Uncommon migrant and winter visitor to lowland rivers, lakes, and reservoirs. Nests in large, old-growth, or dominant live trees with open branchwork, especially ponderosa pine (*Pinus ponderosa*). Requires large bodies of water or rivers with abundant fish and adjacent snags	Y	Confirmed present in the study area during field studies.

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					(CDFW 2021b).		
Icteria virens	yellow-breasted chat	None	SSC	---	Nests in early-successional riparian habitats with a well-developed shrub layer and an open canopy. Restricted to narrow borders of streams, creeks, sloughs, and rivers. Often nest in dense thickets of blackberry (*Rubus* spp.) and willow (*Salix* spp.) (Shuford and Gardali 2008).	Y	Potential to occur in valley foothill riparian habitats in the study area.
Lanius ludovicianus	loggerhead shrike	None	SSC	---	Shrublands and open woodlands with a fair amount of grass cover and areas of bare ground. Requires tall shrubs or trees, fences, or power lines for hunting perches and territorial advertisement. Also requires open areas of short grasses, forbs, or bare ground for hunting, large shrubs or trees for nest placement, and thorny vegetation or barbed wire fences for impaling prey (Shuford and Gardali 2008).	Y	Potential to occur in annual grassland, mixed chaparral, blue oak woodland, valley oak woodland, valley foothill riparian, irrigated row and field crop, pasture, and disturbed/ruderal habitats in the study area.
Laterallus jamaicensis coturniculus	California black rail	None	ST, SFP	---	Saline, brackish, and fresh emergent wetlands. Known to nest at scattered locations in the San Francisco Bay Area and Delta region, Point Reyes National Seashore, San Luis Obispo and Orange Counties, as well as the Imperial and Lower Colorado River Valleys. Spottily distributed in the Sacramento Valley (CDFW 2021b).	Y	Potential to occur in small freshwater emergent wetland and vernal pools within annual grassland habitats in the study area.
Progne subis	purple martin	None	SSC	---	Present in California from mid-March through late September. Requires concentrations of nesting cavities, relatively open airspace above accessible nest sites, and relatively abundant aerial insect prey. In the coastal mountains, Cascade Range, and Sierra Nevada foothills, inhabits open forests, woodlands,	Y	Potential to occur in montane hardwood-conifer and valley-foothill riparian habitats in the study area. Could occur as a migrant in the lower elevation portions of the study area, but only likely to nest at higher elevations in and near

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					and riparian areas. Extirpated as a breeder from most of the Central Valley except the Sacramento area where it has taken to nesting in hollow-box bridges (CDFW 2021b).		Paradise.
Riparia riparia	bank swallow	None	ST	---	A colonial nester in riparian and lacustrine bluffs or cliffs with fine-textured or sandy soils into which the nest cavities are dug. Also nests in earthen banks as well as sand and gravel pits. Currently most numerous in the Sacramento Valley along the Sacramento, Feather, and American Rivers, and Cache Creek in western Yolo County. (CDFW 2021b).	N	Could occur in the study area as a passage migrant, but unlikely to colonize anywhere in Butte County away from the Sacramento or Feather Rivers, which are outside the study area (CDFW 2021b).
Setophaga petechia	yellow warbler	None	SSC	---	Usually found in riparian deciduous habitats in summer: cottonwoods (*Populus* ssp.), willows (*Salix* ssp.), alders (*Alnus* ssp.), and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open coniferous forests (CDFW 2021b).	Y	Potential to occur in montane hardwood-conifer and valley foothill riparian habitats in the study area.
Strix nebulosa	great gray owl	None	SE	---	Breeds in red fir (*Abies magnifica*), lodgepole pine (*Pinus contorta* ssp. *murrayana*), and mixed coniferous habitats, always near wet meadows. Nests in large, broken-topped snags usually 25 to 72 feet above the ground. A rarely seen resident at 4,500 to 7,500 feet in elevation in the Sierra Nevada Range, from the vicinity of Quincy south to the Yosemite region. (CDFW 2021b).	N	The study area is outside the known elevation range of the species.
Strix occidentalis occidentalis	California spotted owl	None	SSC	---	Older forests in areas of high canopy cover, with a multi-layered canopy, old decadent trees, a high number of large	Y	Potential to occur in montane hardwood-conifer and ponderosa pine habitats at the

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					trees, and coarse downed woody debris. In California, ranges throughout the west slopes of the Sierra Nevada Mountains, and down the Coast Range Mountains from Carmel south through the Transverse Ranges nearly to Baja California (Shuford and Gardali 2008).		highest elevation portions of the study area. However, this species is much more likely to occur during migration or winter in the study area, and is not likely to nest there due to the lack of old-growth, dense canopy forest.
Vireo bellii pusillus	least Bell's vireo	FE	SE	---	Once occupied much of the Central Valley, but has disappeared from most its former range, and is now restricted to southern California from southern Inyo and Monterey Counties south through the South Coast and Inland Empire regions. Obligate riparian breeder, favoring cottonwood (*Populus* spp.), willow (*Salix* spp.), and oak (*Quercus* spp.) woodlands, and mule fat (*Baccharis salicifolia*) scrub along watercourses (USFWS 2006).	N	The study area is outside the known current range of the species. The species has likely been extirpated from the Sacramento Valley since at least the mid-1980's.
Mammals							
Antrozous pallidus	pallid bat	None	SSC	---	Generally found in a wide variety of habitats but with some preference for drier areas. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings (CDFW 2021b).	Y	Potential to occur in all types of habitats including developed portions of the study area.
Aplodontia rufa californica	Sierra Nevada mountain beaver	None	SSC	---	Ranges across the Sierra Nevada Mountains from Shasta and Lassen Counties south to Tulare County. Generally found in dense riparian forests and open shrubscapes around most forest types. Specifically found in forests with open to moderate canopy cover and a dense understory near water. Requires deep friable soils and a cool moist microclimate (CDFW 2021b).	N	The study area is outside the known range of the species.

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Canis lupis	gray wolf	None	SE	---	Was considered extirpated from California by the early 20th Century, but as of 2012 has begun re-establishing an intermittent presence in the northeastern part of the state, from Siskiyou and Shasta Counties south through Lassen and Plumas Counties (CDFW 2020). Habitat preferences appear to be more prey dependent than cover dependent. Territories have a variety of topographic features. Forests, open meadows, rocky ridges, and lakes or rivers all comprise a pack's territory. In the West, have been known to follow the seasonal elevational movements of ungulate herds (Snyder 1991).	N	The study area is outside the known range of the species.
Corynorhinus townsendii	Townsend's big-eared bat	None	SSC	---	Ranges throughout California except for high elevation portions of the Sierra Nevada Mountains. Generally prefers mesic habitats but known to occur in all non-alpine habitats of California. Roosting occurs in caves, tunnels, mines, buildings, or other structures. This species may use different roosting sites during the day versus during the night (CDFW 2021b).	Y	Potential to occur in all types of habitats including developed portions of the study area.
Eumops perotis californicus	western mastiff bat	None	SSC	---	Ranges throughout southern California, the central coast, and the Sierra Nevada Mountains. Generally occurs in open, arid, or semi-arid habitats. Roosts in rock crevices and buildings (CDFW 2021b).	Y	Potential to occur in all types of habitats including developed portions of the study area.
Lasiurus blossevillii	western red bat	None	SSC	---	Ranges across the Central Valley, as well as the coast and Coast Range mountains from Mendocino County south, and east across the Los Angeles area into the Inland Empire region. Occurs in most	Y	Potential to occur in all types of habitats including developed portions of the study area.

Scientific Name	Common Name	Federal Status	State Status	State Rare Plant Rank	General Habitat Characteristics	Potential to Occur in Study Area	Rationale
					habitats except desert and alpine areas. Roosts in trees, sometimes shrubs, and typically at the margins of habitats (CDFW 2021b).		
Pekania pennanti	fisher (West Coast DPS)	None	SSC	---	Large areas of mature, dense forest stands with snags and greater than 50% canopy closure. Uncommon permanent resident of the Sierra Nevada, Cascades, and Klamath Mountains; also found in a few areas in the North Coast Ranges (USFWS 2014).	N	Not likely to occur in study area due to the lack of mature, dense canopy forest.
Taxidea taxus	American badger	None	SSC	---	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils in which they excavate burrows and forage for their fossorial mammal prey (CDFW 2021b).	Y	Potential to occur in annual grassland, mixed chaparral, and blue oak-foothill pine habitats in the study area.

Status: Federal Endangered (FE); Federal Threatened (FT); State Endangered (SE); State Threatened (ST); State Candidate Endangered (SCE); State Fully Protected (SFP); State Rare (SR); State Species of Special Concern (SSC); Bald and Golden Eagle Protection Act (BGEPA); California Native Plant Society (CNPS) State Rare Plant Rankings: 1B = Rare, Threatened, or Endangered in California and Elsewhere, 2B = Rare, Threatened, or Endangered in California, but More Common Elsewhere, Threat Ranks – 0.1 = Seriously threatened in California, 0.2 = Fairly threatened in California, 0.3 = Not very threatened in California

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Swainson’s Hawk Survey and Elderberry Shrub Mapping Report

Town of Paradise
Paradise Sewer Project
Swainson's Hawk Survey and Elderberry Shrub Mapping Report
September 30, 2021

Technical Memorandum

Date:	Thursday, September 30, 2021
Project:	Paradise Sewer Project
To:	Town of Paradise
From:	Dan Williams, Biologist, HDR
Subject:	Swainson's Hawk Survey and Elderberry Shrub Mapping Report

Introduction

This memorandum provides the results of protocol-level Swainson's hawk (*Buteo swainsoni*) surveys and elderberry (*Sambucus* sp.) shrub mapping (field studies) performed by HDR in support of the Paradise Sewer Project (proposed project) during the spring of 2021. The Biological Study Area (BSA) for these field studies is defined as the proposed project area/footprint and a 0.5-mile buffer as shown in **Attachment 1** along with the locations of protocol Swainson's hawk survey points. Closer views of the Swainson's hawk survey points, as well as the locations of a Swainson's hawk nest and elderberry shrubs that were found during these field studies, are shown in **Attachment 2**. All plant and wildlife species observed during these field studies are included as **Attachment 3**.

Project Background

The Town of Paradise in Butte County, California is proposing to construct a new sewer collection system within Paradise and an 18-mile export pipeline to convey wastewater from Paradise to the City of Chico Water Pollution Control Plant (WPCP). The Paradise Sewer Project would replace individualized septic systems within the parcel boundaries of Paradise which are managed by property owners.

The proposed project area/footprint includes the following components:

- **Collection System** – a wastewater collection system consisting of service connections to individual parcels with a designated sewer service area. The collection system includes construction of buried gravity and pressure lines, manholes, and pump stations, and is located in Paradise.
- **Export Pipeline** - an 18-mile pipeline to convey wastewater from Paradise to the Chico WPCP. The export pipeline includes construction of pipelines, three horizontal directional drilling (HDD) borings under waterways, two microtunnel borings (one under Highway 99 and one under a railroad crossing), a Transition Chamber (near the eastern city limits of Chico where the sewer line would change from gravity downslope to a force main to cross the flat topography of the valley), and a Flow Control and Metering Structure located at or very near the Chico WPCP.
- **Connection to Chico WPCP** - the connection of the export pipeline to the Chico WPCP via the Flow Control and Metering Structure.

Project Location and Environmental Setting

Paradise is located in central Butte County, in the western foothills of the Sierra Nevada Mountains, and is situated approximately 12 miles east of the City of Chico which sits on the Sacramento Valley floor. Elevations in the BSA range from approximately 2,320 feet above sea level at the highest point of the sewer service area to approximately 135 feet above sea level at the Chico WPCP.

The sewer service area is completely within the Town of Paradise, and is composed mostly of montane hardwood-conifer, ponderosa pine, and mixed chaparral habitats. The export pipeline would run from the southwest corner of Paradise, downslope under Skyway (the main arterial road connecting Paradise and Chico) through blue oak-foothill pine and valley oak savanna habitats, to just east of the city limits of Chico. At this point, the pipeline would leave the roadway for a little over a mile, crossing annual grassland habitat with vernal pools, then crossing under Butte Creek and its associated valley foothill riparian habitat via trenchless HDD boring. After crossing under Highway 99, the pipeline would rejoin roadway for the remainder of the route, to be installed under county roads through mostly agricultural land, the majority of which is almond or walnut orchard. West of Highway 99 the pipeline would cross under two more creeks (Comanche Creek and Little Chico Creek) via trenchless HDD boring before reaching its connection to the Chico WPCP.

Methodology

Desktop Review

Prior to performing the field studies, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) QuickView Tool in BIOS 5 (CDFW 2021), and the U.S. Fish and Wildlife Service (USFWS) Information Planning and Conservation (IPaC) System (USFWS 2021) were queried to determine which special-status wildlife species have the potential to occur in the BSA. A query of the CNDDB provided a list of processed and unprocessed occurrences for special-status species in the California USGS 7.5-minute quadrangles (quads) which the Proposed Project intersects (Paradise East, Paradise West, Cherokee, Hamlin Canyon, Chico, and Ord Ferry) and all the quads surrounding these six quads. A shapefile of the proposed project area/footprint was entered into the USFWS IPaC System, and the system was queried to produce an official list of federally protected species that have the potential to occur in the BSA as well as designated critical habitat. The CNDDB query results showed that there were occurrences of the state threatened Swainson's hawk and federal threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) in the vicinity of the BSA. Valley elderberry longhorn beetle was also on the Official Species List returned by the IPaC system.

The CNDDB query showed that there are no Swainson's hawk occurrences from the BSA. However, there are several occurrences in central Butte County, most of them concentrated along the Sacramento River, with the exception of one nesting record from southeast of the Chico State University Farm. Within 5 miles of the BSA, there are no occurrences of Swainson's hawk east of Highway 99. There is one CNDDB occurrence of valley elderberry longhorn beetle from the BSA along Butte Creek, as well as other occurrences within 5 miles of the BSA along Big Chico Creek, and the Feather and Sacramento Rivers. No designated critical habitat for either species was found to exist in the BSA.

Swainson's Hawk Surveys

From February 23-25, 2021, HDR biologists Kelly Bartron and Dan Williams performed habitat assessment surveys of all portions of the BSA that were publicly accessible. Access away from the public roadways was not permitted for this field effort. Areas that were not accessible were scanned with binoculars and a high-powered spotting scope. In accordance with the Swainson's Hawk Technical Advisory Committee's *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (CDFW 2000), all trees within a 0.5-mile radius of the proposed project area/footprint were examined closely for large nest structures which had the potential to be Swainson's hawk nests.

Suitable foraging habitat for Swainson's hawk includes open grasslands, pastures, and agricultural fields planted in row crops (especially irrigated alfalfa or rice fields) with an ample small mammal prey base. It is important to note that orchards are not considered suitable foraging habitat for Swainson's hawk because the dense woody cover makes it difficult for them to stoop on prey. Suitable nesting habitat for Swainson's hawk includes valley foothill riparian woodland adjacent to suitable foraging habitat, or solitary trees surrounded by, or on the margins of, suitable foraging habitat. Fremont cottonwood (*Populus fremontii*), valley oak (*Quercus lobata*), walnut (*Juglans* sp.), and willow (*Salix* sp.) are the most frequently selected nest trees, though non-native trees in suitable habitat such as gum (*Eucalyptus* sp.) or Australian pine (*Casuarina equisetifolia*) are also often utilized (CDFW 2016).

Based on this information, as well as the distribution of mapped occurrences returned by the database queries, 10 survey points were identified from which to perform protocol Swainson's hawk surveys along the proposed project corridor. The locations of these survey points are shown in **Attachments 1 and 2**. Survey points were distributed between the Chico WPCP at the western end of the proposed project area/footprint, to as far east as Tuscan Ridge Golf Club at Skyway and Santa Rosa Road (at approximately 765 feet in elevation). From this point east, the topography steepens quite rapidly (reaching 1,000 feet in elevation just 1 mile east along Skyway) and the habitat transitions from predominately grassland, to blue oak-foothill pine, chaparral, and eventually montane hardwood-conifer dominated landscape. Based on the lack of suitable Swainson's hawk habitat in the BSA east of Tuscan Ridge Golf Club, including throughout the Town of Paradise sewer service area, and the lack of known occurrences of the species in the BSA east of Highway 99 (CDFW 2021), it was determined that protocol surveys would only be performed from Tuscan Ridge Golf Club west to the Chico WPCP. Survey points and the habitat within a 0.5-mile radius around them are described below in **Table 1**.

Table 1. Protocol Swainson's Hawk Survey Points

Survey Point	Location Description	Habitat Description
SWHA-01	Along Chico River Road approximately 0.3 mile west of the pipeline connection to the Chico WPCP	0.5-mile radius is bisected by an irrigation canal running along the west flank of Chico WPCP, then bending northwest toward Sacramento River. Confluence of Big Chico Creek and Sacramento River is approximately 1.5 miles to west. Some open agricultural fields within 0.5 mile, but majority of 0.5-mile radius is almond and walnut orchards.

Survey Point	Location Description	Habitat Description
SWHA-02	Along Chico Avenue between Crouch Avenue and Taffee Avenue	0.5-mile radius is bisected by Little Chico Creek and its associated riparian woodland corridor. Majority of surrounding land is almond and walnut orchards, but there are some open agricultural fields, including an approximately 8-acre area between the survey point and Little Chico Creek.
SWHA-03	Crouch Avenue at Little Chico Creek	0.5-mile radius is bisected by Little Chico Creek and its associated riparian woodland corridor. Majority of surrounding land is almond and walnut orchards, but there are some open agricultural fields, including an approximately 8-acre area near the corner of Crouch Avenue and Chico River Road.
SWHA-04	Crouch Avenue at Comanche Creek	0.5-mile radius is bisected by Comanche Creek and its associated riparian woodland corridor. There are also multiple irrigation canals and an artificial lake within 0.5 mile. Majority of surrounding land is almond and walnut orchards, but there are some open disturbed/ruderal areas.
SWHA-05	Intersection of Hegan Lane and Nicholas C. Shouten Lane	While a slight majority of the 0.5-mile radius around this point is almond and walnut orchard, the most notable feature in this area is the Chico State University Farm, featuring nearly 100 acres of open pasture dotted with a few dozen well-spaced mature fruit trees.
SWHA-06	Glen Oaks Memorial Park	Cemetery at the southern city limits of Chico with well-spaced mature valley oak and some non-native ornamental trees. There are some almond and walnut orchards within 0.5 mile, but majority of 0.5-mile radius is made up of developed and disturbed/ruderal areas.
SWHA-07	McFadden Lane	On the southeastern outskirts of Chico. Within 0.5-mile radius of this point is a mixture of developed areas, disturbed/ruderal areas, and almond and walnut orchards to the north and west, as well as valley oak woodland, annual grassland, and a baseball/softball complex to the south and east.
SWHA-08	Butte Creek Crossing	North end of the Virgin Valley Unit of Butte Creek Canyon Ecological Preserve where the export pipeline for the proposed project is to cross under Butte Creek via HDD boring. Within 0.5-mile radius of the point, there is extensive valley foothill riparian woodland habitat along Butte Creek, and annual grassland with vernal pools which are also used as grazing rangeland to the southeast.
SWHA-09	Skyway at The Bluffs / Spanish Gardens	0.5-mile radius is bisected by Skyway. To the north of Skyway are bluffs with a residential neighborhood, beyond which is the Canyon Unit of Butte Creek Canyon Ecological Reserve with extensive valley foothill riparian woodland. To the south of Skyway are annual grasslands with vernal pool complexes which are also used as grazing rangeland.

Survey Point	Location Description	Habitat Description
SWHA-10	Skyway at Tuscan Ridge Golf Club	0.5-mile radius is bisected by Skyway. To the north of Skyway are bluffs with annual grassland and valley oak transitioning to blue oak-foothill pine. Beyond the bluffs is a steep drop-off into Butte Creek Canyon through mixed chaparral habitat to extensive valley foothill riparian woodland at the canyon bottom. To the south of Skyway is Tuscan Ridge Golf Club with a mixture of valley oak and blue oak savanna interspersed with developed and ruderal/disturbed areas. Extensive annual grasslands with vernal pool complexes are interspersed with the oak savanna habitat beyond the golf community development.

In accordance with the CDFW 2000 methodology, HDR biologist Dan Williams performed protocol Swainson's hawk surveys between sunrise and 10 am on 3 dates between March 20 and April 5, 2021 (Protocol Survey Period II), and on 3 dates between April 5 and April 20, 2021 (Protocol Survey Period III). On successive rounds of surveys, the points were surveyed from east to west, and west to east in order to visit all points both earlier and later in the mornings. At each survey point, the biologist checked all known large nests with a high-powered spotting scope, scanned in all directions with binoculars for perched or flying raptors, recorded all raptors observed, and recorded all Swainson's hawks and their behaviors exhibited in or flying over the BSA. Results of these surveys are detailed below.

Elderberry Shrub Mapping and Assessment

In accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017), all elderberry shrubs found within 165 feet of the proposed project area/footprint during the protocol Swainson's hawk surveys were mapped, and those that were close enough to the public roadway to allow close examination were thoroughly checked for exit holes; small oval-shaped holes in the stems of the shrubs which indicate the past or current presence of valley elderberry longhorn beetles. Since the overwhelming majority of known occurrences of valley elderberry longhorn beetle are from below 500 feet in elevation (USFWS 2017), and the highest elevation point for the protocol Swainson's hawk surveys was situated at 765 feet in elevation, elderberry shrub mapping in the BSA was also not conducted east of (higher than) this point.

Results

Swainson's Hawk Surveys

Results of the protocol-level Swainson's hawk surveys conducted between March 20 and April 5, 2021 are listed below in Table 2.

Table 2. Protocol Swainson's Hawk Survey Results

Survey Point	Swainson's Hawks Observed	Other Notable Observations
SWHA-01	None	The only raptor species observed from this point was a single American kestrel (*Falco sparverius*) on March 30.

Survey Point	Swainson's Hawks Observed	Other Notable Observations
SWHA-02	One Swainson's hawk observed on March 25: an immature bird that was observed flying high over Little Chico Creek from east to west and was then pursued and chased away by resident pairs of red-shouldered (*Buteo lineatus*) and red-tailed hawks (*Buteo jamaicensis*).	An active red-tailed hawk nest was observed during each round of surveys in a California sycamore (*Platanus racemosa*) along Little Chico Creek approximately 900 feet north by northwest of this point. A northern harrier (*Circus hudsonius*) was observed coursing low over the open agricultural field between the point and Little Chico Creek on April 5.
SWHA-03	None	No raptors observed from this point.
SWHA-04	None	A pair of red-tailed hawks was observed well to the south of this point perched along and soaring over Comanche Creek on April 5 and April 9. A red-shouldered hawk was observed soaring high over an orchard approximately 0.3 mile to the northwest on March 25. Multiple large nests in roadside trees in this vicinity were determined to be built by yellow-billed magpies (*Pica nuttalli*).
SWHA-05	A Swainson's hawk pair was observed building a nest in one of the large fruiting orchard trees in the Chico State University Farm on April 9. The nest tree was approximately 0.3 mile southeast of the proposed export pipeline route along Hegan Lane east of Hengst Drive.	On April 14, the Swainson's hawk pair was not observed in the area, and a great horned owl (*Bubo virginianus*) was present in the nest tree which would seem to indicate that the Swainson's hawk pair may have abandoned their nest attempt at this location.
SWHA-06	None	A pair of red-tailed hawks appeared to be residents in the cemetery trees as they were present during every round of surveys.
SWHA-07	None	A pair of red-tailed hawks was observed in a small grove of valley oaks approximately 500 feet southeast of the point on March 25.
SWHA-08	One adult Swainson's hawk was observed briefly soaring high above Butte Creek and continuing well to the north and out of sight on April 14.	A pair of bald eagles (*Haliaeetus leucocephalus*) was seen during multiple rounds of the surveys (March 25, March 30, April 9, and April 14) from this point and from SWHA-09. Sometimes they were observed soaring high overhead and other times they were observed perched in large trees overlooking Butte Creek or patrolling low over the creek, often with recently caught fish. Based on these observations it is possible this pair was nesting in a portion of the Butte Creek Canyon Ecological Reserve which could not be viewed from the public roadway. A ferruginous hawk (*Buteo regalis*) was observed from this point foraging over the annual grasslands to the southeast on March 30.

Survey Point	Swainson's Hawks Observed	Other Notable Observations
SWHA-09	None	A pair of bald eagles was observed from this point and from SWHA-08 during multiple rounds of the surveys. A juvenile red-tailed hawk was observed in a small grove of valley oaks immediately southwest of the point on March 25 and 30. A ferruginous hawk was observed soaring over the annual grasslands well to the south of the point on April 14.
SWHA-10	None	Many turkey vultures (*Cathartes aura*) were observed soaring over this point during every round of surveys. One prairie falcon (*Falco mexicanus*) was observed soaring well to the northeast over the high bluffs above Butte Creek Canyon on April 5.

Elderberry Shrub Mapping and Assessment

Elderberry shrubs were found at three locations in the BSA: along Butte Creek at the location of the proposed HDD crossing, and along Little Chico Creek at both the Crouch Avenue and Taffee Avenue proposed HDD crossings. Due to the lack of access away from the public roadways for these surveys, an accurate count of the total individual elderberry shrubs within 165 feet of the proposed project footprint was not possible, nor could the biologist examine many of the shrubs that could be identified from the public roadway close enough to determine if exit holes were present.

What could be determined from the public roadway was that at least one large elderberry shrub was present on the west bank of Butte Creek in the area of the proposed HDD crossing, while at least 12 elderberry shrubs were present on the north bank of Little Chico Creek near the proposed Crouch Avenue HDD crossing, and at least 15 elderberry shrubs were present on the north bank of Little Chico Creek near the proposed Taffee Avenue HDD crossing. No exit holes were observed in the few elderberry shrubs that were growing near enough to Taffee Avenue and Crouch Avenue to allow close examination, but several shrubs at each of these locations, and the one shrub identified across Butte Creek from SWHA-08 were too far from public access to allow proper examination for exit holes.

Summary and Recommendations

Swainson's Hawk

Multiple rounds of protocol Swainson's hawk surveys in the BSA during Spring 2021 identified one active Swainson's hawk nest, and two incidental sightings of individual Swainson's hawks in high flight which were likely migrating through the BSA. While the BSA east of Tuscan Ridge Golf Club, as well as the extensive almond and walnut orchards in the BSA between Highway 99 and the Chico WPCP are not considered suitable habitat for Swainson's hawk, the valley foothill riparian woodland along Butte Creek, Comanche Creek and Little Chico Creek, and the well-spaced mature fruit trees in the Chico State University Farm do provide suitable nesting habitat for Swainson's hawk.

Given that one pair of Swainson's hawks was confirmed nesting in the BSA, it is recommended that additional Phase II and Phase III protocol-level surveys for Swainson's hawks be conducted in the appropriate survey windows (March 20 through April 20) during the spring prior to the start of

construction activities related to the Proposed Project. A 2081 Incidental Take Permit from CDFW may be warranted for the Proposed Project to minimize the risk of unauthorized take of the species.

Valley Elderberry Longhorn Beetle

Elderberry shrubs were found to be present in the BSA along Butte Creek and Little Chico Creek, and while exit holes were not observed in shrubs that were growing close enough to the public roadway to allow thorough examination, there were several shrubs that could not be examined closely enough to confirm whether or not exit holes were present.

Given that elderberry shrubs were found to be present within riparian habitat in the BSA, valley elderberry longhorn beetle has the potential to occur in the BSA. Therefore, it is recommended that in the year prior to the start of construction, a more thorough mapping and examination of all elderberry shrubs within 165 feet of the proposed project footprint be conducted, including areas away from the public roadway which were not accessible during the Spring 2021 survey effort. If it is determined that all construction activities associated with the proposed project can avoid all mapped elderberry shrubs (i.e., by ensuring that entry and exit pits for HDD operation and all staging areas are sited at least 165 feet from all mapped shrubs), then informal consultation in the form of a Letter of Concurrence seeking a No Effect determination from USFWS shall be carried out. If it is determined that any mapped elderberry shrubs could be impacted by construction activities associated with the proposed project, then Section 7 consultation through USFWS should be initiated.

References

California Department of Fish and Wildlife (CDFW). 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Swainson's Hawk Technical Advisory Committee. Last Updated 2000. CDFW. Sacramento, CA.

_____. 2016. *Status Review: Swainson's Hawk (*Buteo swainsoni*) in California.* Reported to: California Fish and Game Commission. 2016 Five-Year Status Report. CDFW. Sacramento, CA

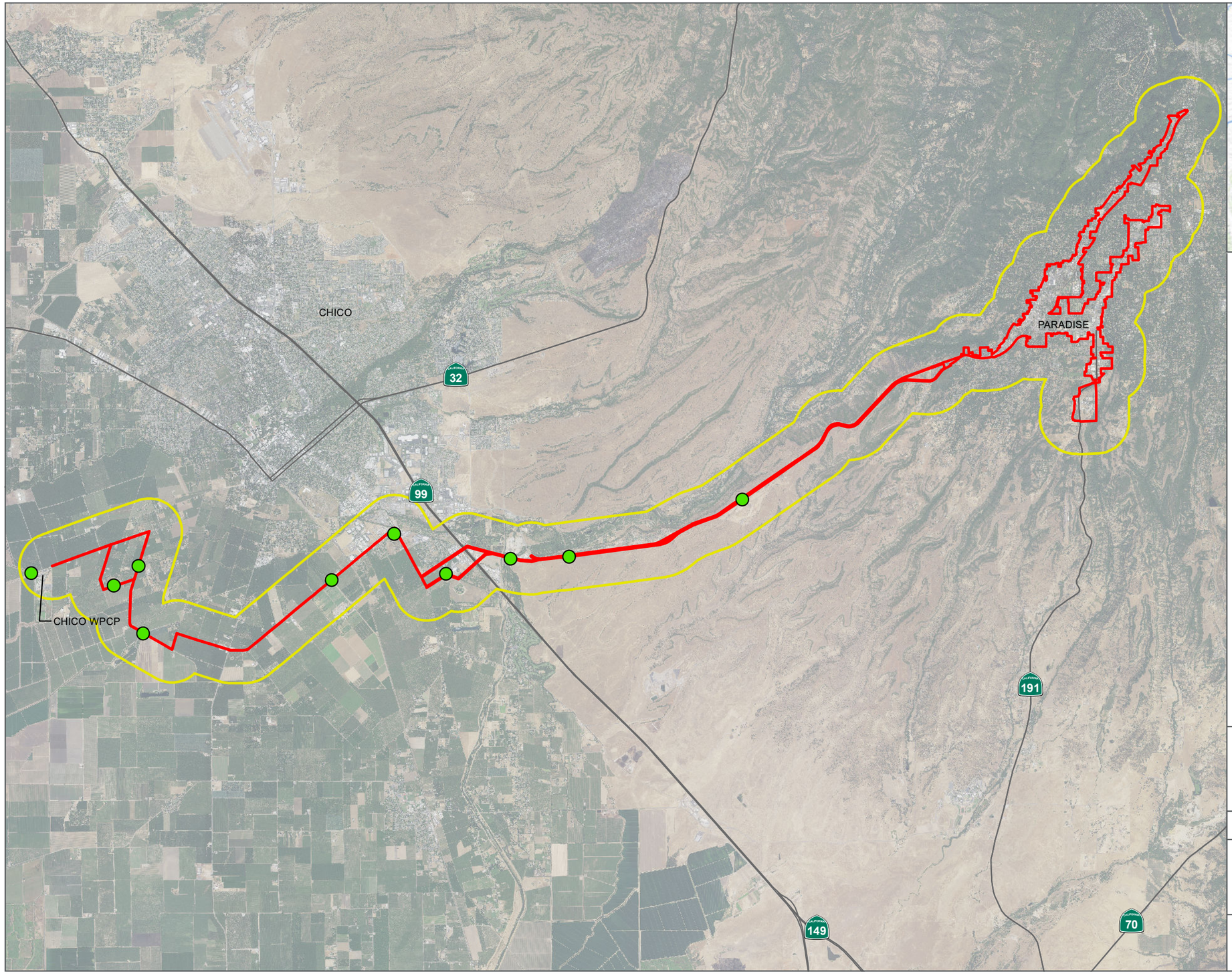
_____. 2021. California Natural Diversity Data Base (CNDDB) Quickviewer. Online Database. California Natural Diversity Database (CNDDB) search for special-status species in the following USGS 7.5-minute quadrangles: Paradise East, Paradise West, Cherokee, Hamlin Canyon, Chico, Ord Ferry, Hamilton City, Glenn, Llano Seco, Nelson, Shippee, Oroville, Oroville Dam, Berry Creek, Pulga, Richardson Springs, Nord, Foster Island, Campbell Mound, Cohasset, Stirling City, and Kimshew Point. Accessed online February 2021 at https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data

United States Fish and Wildlife Service (USFWS). 2017. *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)*. USFWS; Sacramento, CA.

_____. 2021. Information, Planning, and Conservation System (online edition). Accessed online February 2021 at https://ecos.fws.gov/ipac/

Attachment 1

Project Area/Footprint and BSA



Legend

- Project Area/Footprint
- Biological Study Area
- Swainson's Hawk Survey Points

Service Layer USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed May, 2020.
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 UTM Zone 10 North

PROJECT AREA/FOOTPRINT AND BIOLOGICAL STUDY AREA

PARADISE SEWER PROJECT

September 29, 2021

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0 1 2 3 Kilometers

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Attachment 2

Swainson’s Hawk Survey Points and Locations of Key Observations

Legend

- Project Area/Footprint
- Chico WPCP Parcel
- Swainson's Hawk Survey Points

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Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 UTM Zone 10 North

SWAINSON'S HAWK SURVEY POINTS AND LOCATIONS OF KEY OBSERVATIONS

PARADISE SEWER PROJECT

September 29, 2021

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Legend

- Project Area/Footprint
- Elderberry Shrub Locations
- Swainson's Hawk Survey Points

Page 2 of 10

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Projection is NAD 1983 UTM Zone 10 North

SWAINSON'S HAWK SURVEY POINTS AND LOCATIONS OF KEY OBSERVATIONS

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
0 50 100 150 Meters

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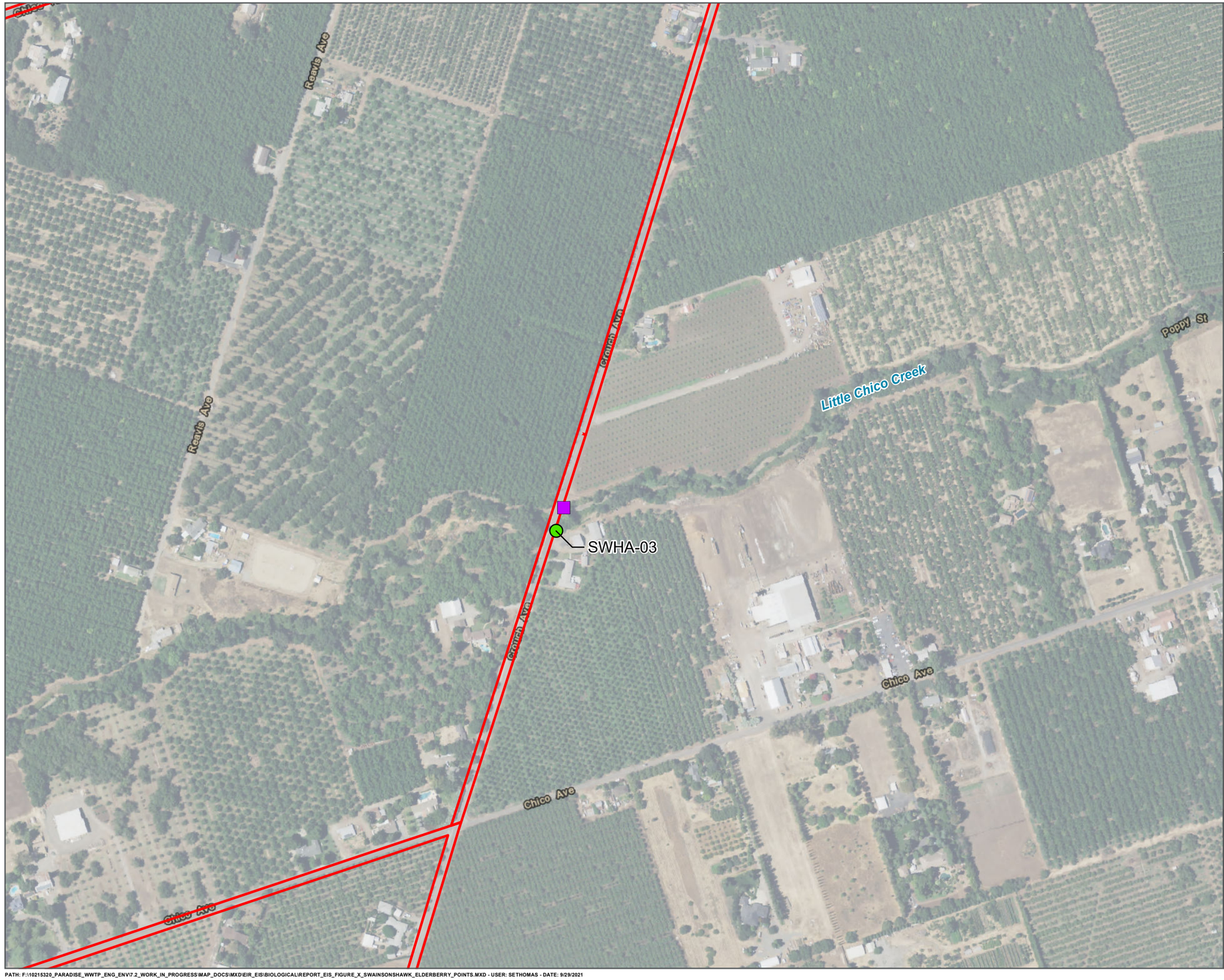

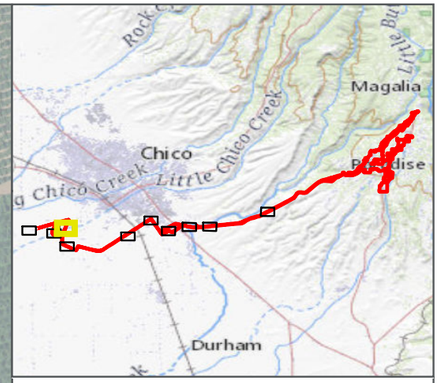

Legend

- Project Area/Footprint
- Elderberry Shrub Locations
- Swainson's Hawk Survey Points

Page 3 of 10

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SWAINSON'S HAWK SURVEY POINTS AND LOCATIONS OF KEY OBSERVATIONS

PARADISE SEWER PROJECT

September 29, 2021

0 250 500 Feet
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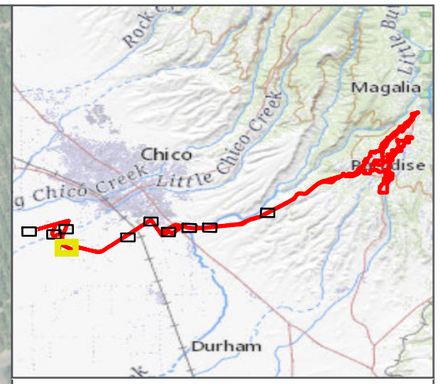

Legend

Project Area/Footprint

Swainson's Hawk Survey Points

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Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 UTM Zone 10 North

SWAINSON'S HAWK SURVEY POINTS AND LOCATIONS OF KEY OBSERVATIONS

PARADISE SEWER PROJECT

September 29, 2021

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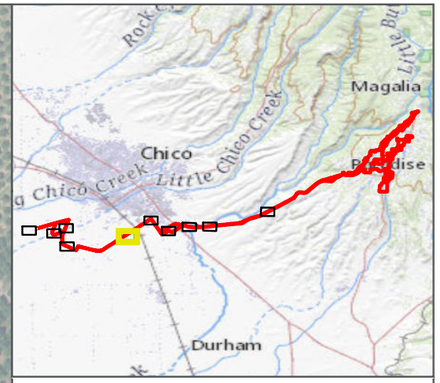

Legend

- Project Area/Footprint
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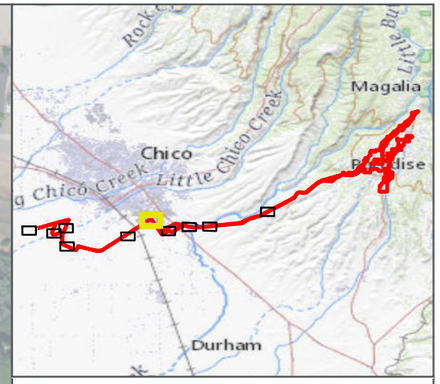

Legend

- Project Area/Footprint
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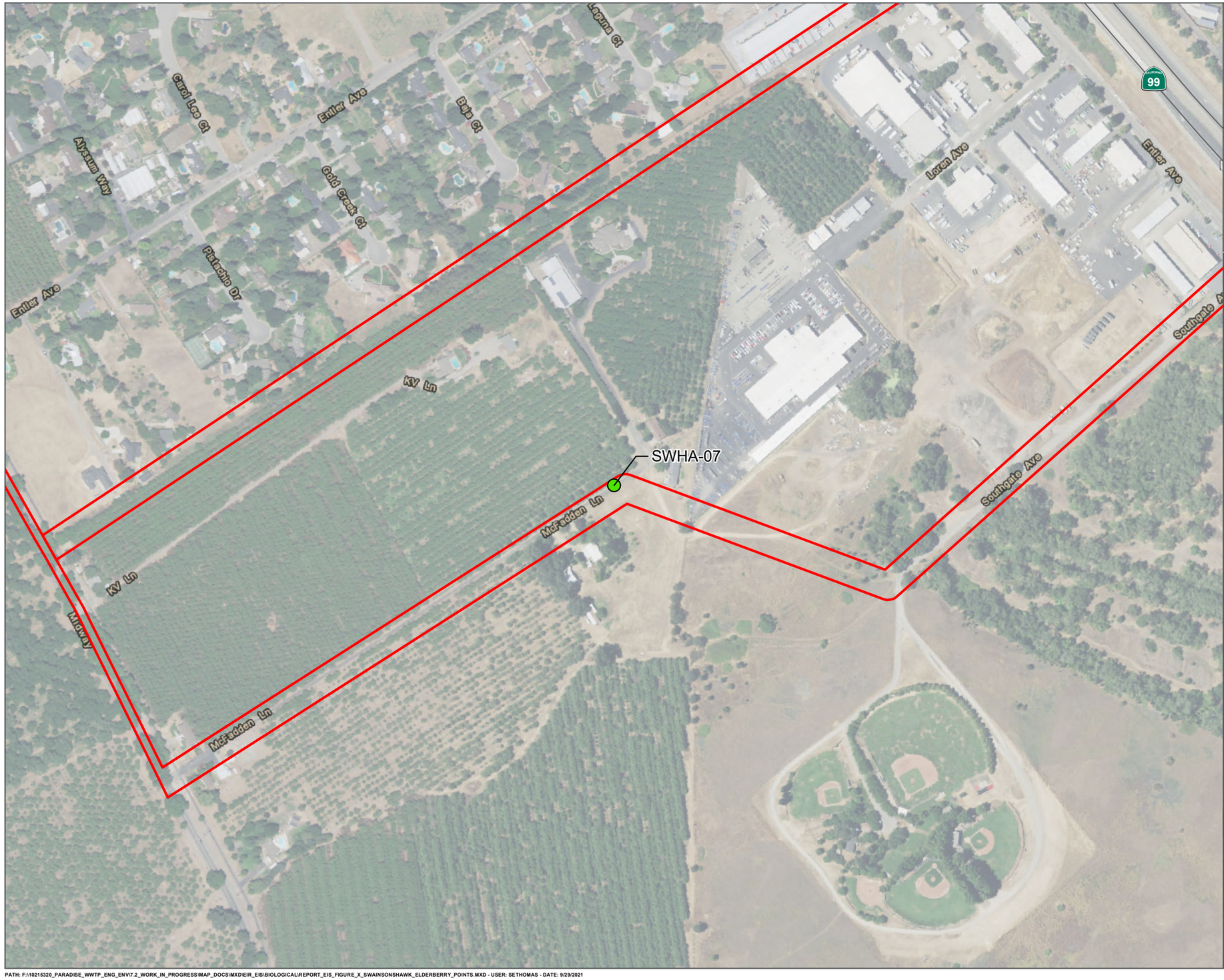

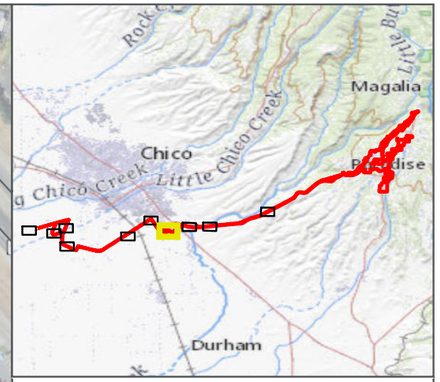

Legend

- Project Area/Footprint
- Swainson's Hawk Survey Points

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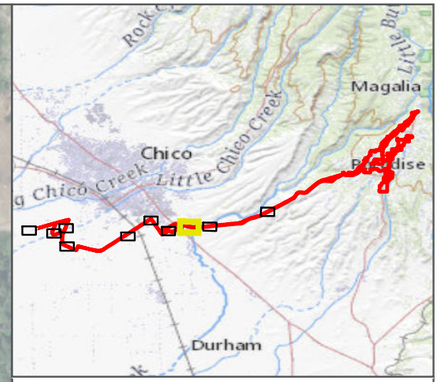

Legend

- Project Area/Footprint
- Elderberry Shrub Locations
- Swainson's Hawk Survey Points

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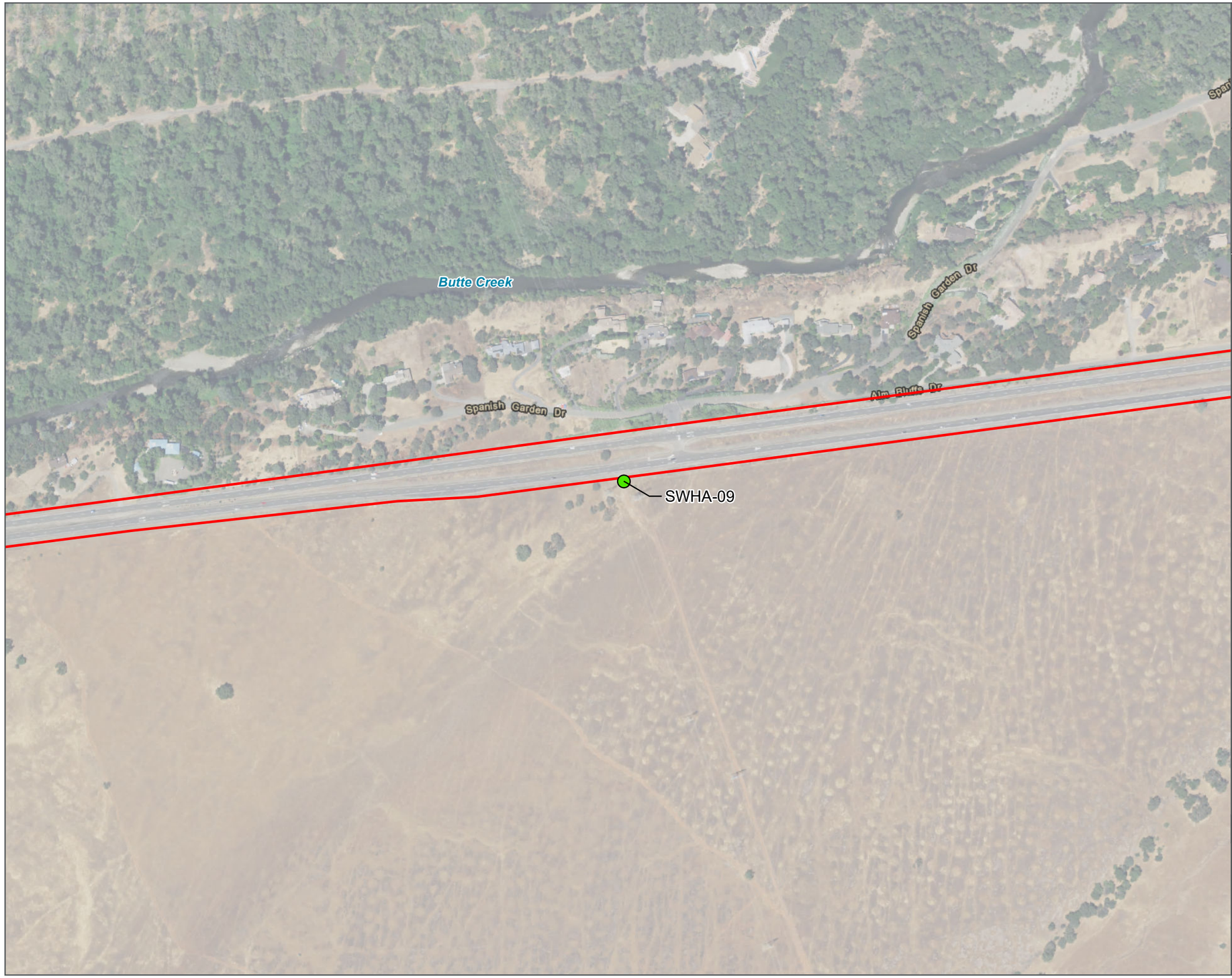

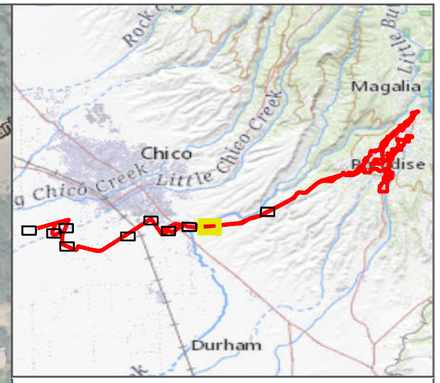

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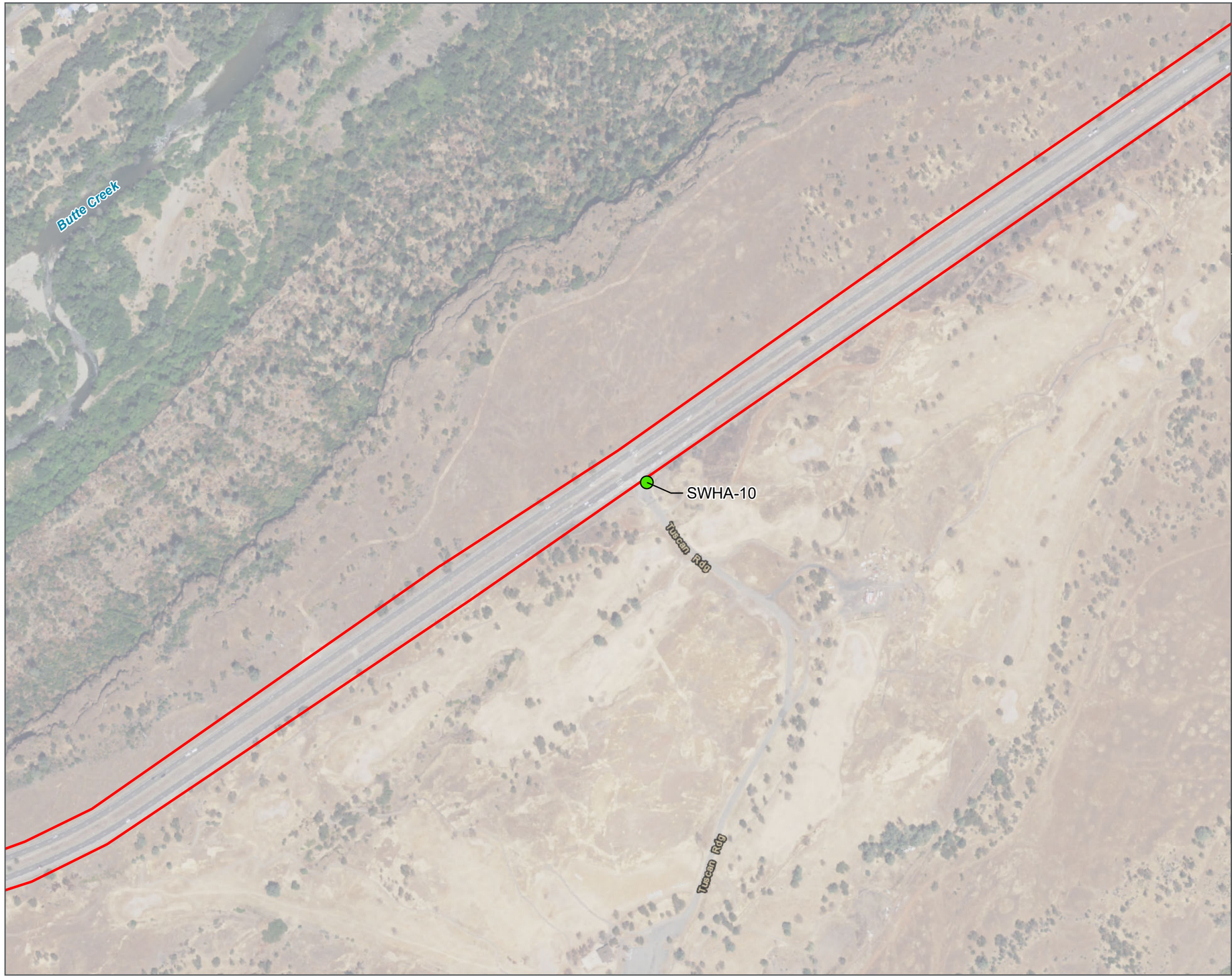

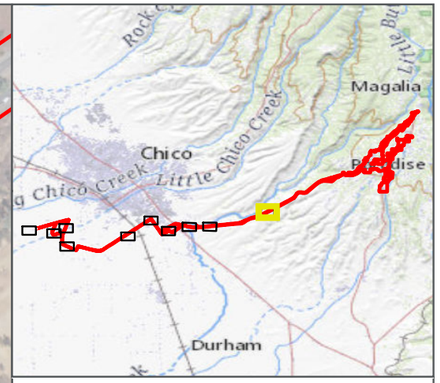

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Attachment 3

List of Species Observed During Surveys

Paradise Sewer Project – Species Observed during Spring 2021 Field Studies

PLANTS

INVASIVE = classified as an invasive species by the California Invasive Plant Council (Cal-IPC)

Abies concolor (white fir)
Acacia dealbata (silver wattle) INVASIVE: moderate
Acer macrophyllum (bigleaf maple)
Acer negundo (boxelder)
Achillea millefolium (common yarrow)
Acmispon americanus (American bird's foot trefoil)
Aesculus californica (California buckeye)
Agrostis exarata (spike bentgrass)
Alisma triviale (northern water plantain)
Alnus rhombifolia (white alder)
Ambrosia psilostachya (ragweed)
Ammannia coccinea (purple ammannia)
Amsinckia sp. (fiddleneck sp.)
Arceuthobium campylopodum (pine mistletoe)
Arctostaphylos manzanita (common manzanita)
Arctostaphylos viscida (whiteleaf manzanita)
Aristolochia californica (California pipevine)
Artemisia douglasiana (California mugwort)
Avena sp. (oat sp.) non-native
Blennosperma nanum (common stickyseed)
Brassica nigra (black mustard) INVASIVE: moderate
Briza maxima (big rattlesnake grass) INVASIVE: limited
Brodiaea elegans (harvest brodiaea)
Bromus diandrus (ripgut brome) INVASIVE: moderate
Bromus hordaceus (soft brome)
Calocedrus deccurens (incense cedar)
Cardamine hirsuta (hairy bittercress) non-native
Carduus pycnocephalus (Italian thistle) INVASIVE: moderate
Carex sp. (sedge sp.)
Ceanothus integerrimus (deerbrush)
Cedrus deodara (deodar cedar) non-native
Cerastium fontanum (common chickweed) non-native
Cercis occidentalis (western redbud)
Cercocarpus betuloides (birch leaf mountain mahogany)
Claytonia sp. (miner's lettuce sp.)
Convulvulus arvensis (field bindweed) non-native
Cortaderia selloana (Uruguayan pampas grass) INVASIVE: HIGH
Cotoneaster pannosus (silverleaf cotoneaster) INVASIVE: moderate
Crassula connata (sand pygmy weed)
Croton setiger (turkey-mullein)
Cynodon dactylon (Bermuda grass) INVASIVE: moderate

Cynoglossum grande (western houndstongue)
Cynosurus echinatus (dogtail grass) INVASIVE: moderate
Cyperus eragrostis (tall flatsedge)
Cytisus scoparius (Scotch broom) INVASIVE: HIGH
Erodium botrys (red-stemmed filaree) non-native
Erodium cicutarium (stork bill filaree) INVASIVE: limited
Erythranthe guttata (seep monkeyflower)
Eschscholzia californica (California poppy)
Eschscholzia lobbii (frying pan poppy)
Eucalyptus camaldulensis (red gum) INVASIVE: limited
Euphorbia maculata (spotted spurge) non-native
Festuca perennis (Italian rye grass) INVASIVE: moderate
Ficus carica (common fig) INVASIVE: moderate
Fraxinus latifolia (Oregon ash)
Genista monspessulana (French broom) INVASIVE: HIGH
Geranium dissectum (cutleaf geranium) INVASIVE: limited
Gilia tricolor (bird's eyes)
Heteromeles arbutifolia (toyon)
Juglans hindsii (northern California black walnut)
Juglans regia (English walnut) non-native
Juniperus californica (California juniper)
Lactuca seriola (prickly lettuce) non-native
Lamium amplexicaule (giraffe head) non-native
Lasthenia sp. (goldfields sp.)
Lepidium nitidum (shining peppergrass)
Lupinus sp. (lupine sp.)
Malva sp. (mallow sp.) non-native
Matricaria discoidea (pineapple weed)
Medicago polymorpha (California burclover) INVASIVE: limited
Medicago sativa (alfalfa) non-native
Mentha canadensis (wild mint)
Minuartia californica (California sandwort)
Narcissus pseudonarcissus (daffodil) non-native
Nerium oleander (oleander) non-native
Phoenix canariensis (Canary Island date palm) INVASIVE: limited
Phoradendron leucarpum (American mistletoe)
Phytolacca americana (pokeberry) INVASIVE: limited
Pinus ponderosa (ponderosa pine)
Pinus sabiniana (California foothill pine)
Plantago lanceolata (English plantain) INVASIVE: limited
Platanus racemosa (California sycamore)
Polypogon monspeliensis (rabbitsfoot grass) INVASIVE: limited
Populus fremontii (Fremont cottonwood)
Prunus dulcis (almond) non-native
Pseudognaphalium beneolens (cudweed)
Pseudotsuga menziesii (Douglas fir)
Quercus berberidifolia (inland scrub oak)
Quercus douglasii (blue oak)

Quercus kelloggii (California black oak)
Quercus lobata (valley oak)
Quercus wislizeni (interior live oak)
Rannunculus sp. (buttercup sp.)
Raphanus sativus (cultivated radish) INVASIVE: limited
Robinia pseudoacacia (black locust) INVASIVE: limited
Rubus armeniacus (Himalayan blackberry) INVASIVE: HIGH
Rumex crispus (curly dock) INVASIVE: limited
Salix sp. (willow sp.)
Sambucus nigra (black elderberry)
Sedella pumila (Sierra mock stonecrop)
Senecio vulgaris (common groundsel) non-native
Torilis arvensis (hedge parsley)
Toxicodendron diversilobum (poison oak)
Trifolium sp. (clover sp.)
Triphysaria eriantha (butter 'n' eggs)
Typha latifolia (broadleaf cattail)
Umbellularia californica (California bay laurel)
Verbascum thapsus (woolly mullein) INVASIVE: limited
Vitis californica (California wild grape)
Washingtonia robusta (Mexican fan palm) INVASIVE: moderate

INVERTEBRATES

Pipevine swallowtail (*Battus philenor*)
Western tiger swallowtail (*Papilio rutulus*)
West Coast lady (*Vanessa annabella*)
Mourning cloak (*Nymphalis antiopa*)

AMPHIBIANS

Pacific chorus frog (*Pseudacris sierrae*)
American bullfrog (*Lithobates catesbeianus*) non-native

REPTILES

Western pond turtle (*Emys marmorata*) California Species of Special Concern
"Northern Pacific" western rattlesnake (*Crotalus oreganus oreganus*)

FISH

Chinook salmon - Central Valley spring-run ESU (*Oncorhynchus tshawytcha* pop. 11) Federal Threatened / State Threatened

BIRDS

Greater white-fronted goose (*Anser albifrons*) flyover
Snow goose (*Chen caerulescens*) flyover

Ross's goose (*Chen rossii*) flyover
Canada goose (*Branta canadensis*)
Wood duck (*Aix sponsa*)
Mallard (*Anas platyrhynchos*)
American wigeon (*Mareca americana*)
Common merganser (*Mergus merganser*)
California quail (*Calipepla californica*)
Wild turkey (*Meleagris gallopavo*)
Double-crested cormorant (*Phalacrocorax auritus*) CDFW Watch List (for colonies only)
White-faced ibis (*Plegadis chihi*) CDFW Watch List (for colonies only) - flyover
Turkey vulture (*Cathertes aura*)
Osprey (*Pandion haliaetus*) CDFW Watch List
Northern harrier (*Circus hudsonius*) California Species of Special Concern
Cooper's hawk (*Accipiter cooperii*) CDFW Watch List
Sharp-shinned hawk (*Accipiter striatus*) CDFW Watch List (nesting only) project not in nesting range
Red-shouldered hawk (*Buteo lineatus*)
Red-tailed hawk (*Buteo jamaicensis*)
Swainson's hawk (*Buteo swainsoni*) State Threatened
Ferruginous hawk (*Buteo regalis*) USFWS Bird of Conservation Concern, CDFW Watch List
Bald eagle (*Haliaeetus leucocephalus*) USFWS Bird of Conservation Concern, State Endangered (pair was likely nesting at Butte Creek Canyon Ecological Preserve)
Greater sandhill crane (*Antigone canadensis tabida*) CA Threatened, CA Fully Protected (flyover)
Killdeer (*Charadrius vociferus*)
Spotted sandpiper (*Actitis macularius*)
Rock pigeon (*Columba livia*) non-native
Eurasian collared-dove (*Streptopelia decaocto*) non-native
Mourning dove (*Zenaida macroura*)
Great horned owl (*Bubo virginianus*)
Belted kingfisher (*Megaceryle alcyon*)
Anna's hummingbird (*Calypte anna*)
Acorn woodpecker (*Melanerpes formicivorus*)
Nuttall's woodpecker (*Dryobates nuttallii*)
Downy woodpecker (*Dryobates pubescens*)
Hairy woodpecker (*Dryobates villosus*)
Northern flicker (*Colaptes auratus*)
American kestrel (*Falco sparverius*)
Prairie falcon (*Falco mexicanus*) USFWS Bird of Conservation Concern, CDFW Watch List
Black phoebe (*Sayornis nigricans*)
Ash-throated flycatcher (*Myiarchus cinerascens*)
Western kingbird (*Tyrannus verticalis*)
California scrub-jay (*Aphelocoma californica*)
Yellow-billed magpie (*Pica nuttalli*) USFWS Bird of Conservation Concern
American crow (*Corvus brachyrhychos*)
Common raven (*Corvus corax*)
Tree swallow (*Tachycineta bicolor*)
Violet-green swallow (*Tachycineta thalassina*)
Northern rough-winged swallow (*Stelgidopteryx serripennis*)
Cliff swallow (*Petrochelidon pyrrhonata*)

Barn swallow (*Hirundo rustica*)
Oak titmouse (*Baeolophus inornatus*)
Bushtit (*Psaltriparus minimus*)
White-breasted nuthatch (*Sitta carolinensis*)
Brown creeper (*Certhia americana*)
Bewick's wren (*Thryomanes bewickii*)
House wren (*Troglodytes aedon*)
Ruby-crowned kinglet (*Regulus calendula*)
Western bluebird (*Sialia mexicana*)
Hermit thrush (*Catharus guttatus*)
American robin (*Turdus migratorius*)
Northern mockingbird (*Mimus polyglottos*)
European starling (*Sturnus vulgaris*) non-native
Cedar waxwing (*Bombycilla cedrorum*)
Phainopepla (*Phainopepla nitens*)
Yellow-rumped warbler (*Setophaga coronata*)
Black-throated gray warbler (*Setophaga nigrescens*)
Spotted towhee (*Pipilo maculatus*)
California towhee (*Melozone crissalis*)
Savannah sparrow (*Passerculus sandwichensis*)
Song sparrow (*Melospiza melodia*)
Lincoln's sparrow (*Melospiza lincolnii*)
"Oregon" junco (*Junco hyemalis*)
White-crowned sparrow (*Zonotrichia leucophrys*)
Golden-crowned sparrow (*Zonotrichia atricapilla*)
Lark sparrow (*Chondestes grammacus*)
Western tanager (*Piranga ludoviciana*)
Black-headed grosbeak (*Pheucticus melanocephalus*)
Brewer's blackbird (*Euphagus cyanocephalus*)
Brown-headed cowbird (*Molothrus ater*)
Western meadowlark (*Sturnella neglecta*)
Bullock's oriole (*Icterus bullockii*)
Cassin's finch (*Haemorhous cassinii*)
Purple finch (*Haemorhous purpureus*)
House finch (*Haemorhous mexicanus*)
Pine siskin (*Spinus pinus*)
Lesser goldfinch (*Spinus psaltria*)
American goldfinch (*Spinus tristis*)
House sparrow (*Passer domesticus*) non-native

MAMMALS

Western gray squirrel (*Sciurus griseus*)
California ground squirrel (*Otospermophilus beecheyi*)
Botta's pocket gopher (*Thomomys bottae*)
Coyote (*Canis latrans*)
Mule deer (*Odocoileus hemionus*)

G

Tribal Consultation

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Paradise Sewer Project

County: Butte

USGS Quadrangle Name: Chico, Ords Ferry, Paradise East, Paradise West

Township	Range	Section(s)
21N	1E	1, 2, 10, 11, 12, 15
21N	2E	1, 2, 3, 4, 5, 6, 7, 8
22N	1E	36
22N	2E	25, 31, 35, 36
22N	3E	1, 2, 10, 11, 12, 13, 14, 15, 20, 21, 22, 23, 24, 26, 27, 29, 30, 31

and parts of Rancho de Farwell

Company/Firm/Agency: Town of Paradise

Street Address: 5555 Skyway

City: Paradise **Zip:** 95969

Phone: 530-872-6291

Fax: n/a

Email: mmattox@townofparadise.com

Project Description:

The Town of Paradise (Town) is implementing the Paradise Sewer Project (Project), which involves identifying and implementing a long-term solution for collection, treatment, and reuse/disposal of its wastewater. The Project area currently includes the Town itself for wastewater treatment service and the length of Skyway Road extending westward, crossing Highway 99 into the southwest area of Chico onto Rancho de Farwell land for the effluent alignment corridor.

Native American Heritage Commission
Native American Contact List
Butte County
4/27/2021

KonKow Valley Band of Maidu
Jessica Lopez, Chairperson
8998 Fruitridge Road KonKow
Sacramento, CA, 95803 Maidu
Phone: (530) 777 - 8094
jessica@konkowmaidu.org

Mechoopda Indian Tribe
Dennis Ramirez, Chairperson
125 Mission Ranch Blvd KonKow
Chico, CA, 95926 Maidu
Phone: (530) 899 - 8922
Fax: (530) 899-8517
dramirez@mechoopda-nsn.gov

Mooretown Rancheria of Maidu Indians
Guy Taylor,
#1 Alverda Drive KonKow
Oroville, CA, 95966 Maidu
Phone: (530) 533 - 3625

Mooretown Rancheria of Maidu Indians
Benjamin Clark, Chairperson
#1 Alverda Drive KonKow
Oroville, CA, 95966 Maidu
Phone: (530) 533 - 3625
Fax: (530) 533-3680
frontdesk@mooretown.org

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Paradise Sewer Project, Butte County.

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[**Vacant**]

COMMISSIONER
[**Vacant**]

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

April 27, 2021

Monica Ruth

Town of Paradise / HDR Inc.

Via Email to:mmattox@townofparadise.com; Monica.Ruth@hdrinc.com

Re: Paradise Sewer Project, Butte County

Dear Ms. Ruth:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez

Cultural Resources Analyst

Attachment

7019 0140 0001 0117 8855

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City, State, ZIP+4®

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MAY 2021

Sent To DENNIS RAMIREZ
Street and Apt. No., or PO Box No.
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

May 10, 2021

Via Certified Mail

Jessica Lopez
Chairperson
KonKow Valley Band of Maidu
8998 Fruitridge Road
Sacramento, CA 95803

Subject: Notice of Opportunity to Consult Under Assembly Bill 52 for the Paradise Sewer Project in Butte County, California

Honorable Chairperson Lopez,

The Town of Paradise (Town), as the Lead Agency for the Paradise Sewer Project (Proposed Project), is providing this notice of opportunity to request notification from the Town for consultation regarding the Proposed Project pursuant to Public Resources Code (PRC) section 21080.3.1 and Chapter 532, Statutes of 2014 (i.e., AB 52).

Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. A new wastewater management solution is needed to improve the local economy (e.g., encourage opening of new businesses) and reduce the potential for public health and environmental concerns caused by failed or failing septic systems.

The objectives of the Proposed Project are as follows:

- Provide a sewer system to serve Paradise in compliance with the Town of Paradise 1994 General Plan policies LUO-10, ESP-6, LUP-16, and LUI-7 (Quad Consultants 2008).
- Provide long-term, efficient, reliable, high quality treatment of wastewater in a cost-effective, environmentally beneficial manner to the people of Paradise.
- Improve the handling of wastewater in Paradise to address the economic and environmental concerns of the current system.
- Connect to the existing Chico Water Pollution Control Plant (WPCP) to provide efficient regional treatment of wastewater with no additional cost to City of Chico rate payers.

Existing Facilities

Wastewater treatment facilities in Paradise consist of individual, privately owned septic tanks and soil absorption disposal systems known as leach fields, together with several engineered subsurface disposal systems serving commercial and institutional facilities. Businesses and residences near the future sewer system continue to rely on septic tanks and leach field systems for wastewater treatment and disposal.

The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico WPCP, and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and rate payers as a result of the Proposed Project.

Sewer Service Area

The sewer service area (SSA) would serve approximately 1,500 parcels (out of the 11,000 total parcels in Paradise) along the Skyway, Clark Road, and Pearson Road corridors. The SSA also would serve most businesses in Paradise and would enable future construction of affordable multi-family housing, which is limited because of multiple septic system constraints such as high groundwater, poor soils, and limited parcel sizes.

At the time of initial operation, an estimated 360 occupied parcels within the SSA would be generating an average wastewater flow of 109,000 gpd. It is estimated that it could take 30 years for the entire SSA to be occupied, at which time the average wastewater flow would be 448,000 gpd. The Town is considering this level of development and wastewater flow in planning its wastewater treatment solutions.

Collection System

The collection system would serve all parcels within the SSA, and would consist of a system of gravity sewers, small pump stations, and force mains. This collection system would enable properties within the SSA to have existing septic tanks and leach line systems abandoned altogether and would remove future onsite wastewater treatment and dispersal requirements. Because of the varied topography within the SSA, a number of pump stations and pressurized force mains would be required to pump flows out of valleys and swales, and back up to an adjacent gravity sewer. The collection system would consist of approximately 157,000 feet of 2- to 4-inch-diameter force mains, 29,000 feet of 8-inch-diameter gravity trunk lines, and 28 pump stations, all within public right-of-way. The gravity sewers would come together at the southwest edge of town, on Skyway, where they would transition to the export pipeline to the Chico WPCP.

Export Pipeline

The proposed export pipeline would start along Skyway at the south end of the Paradise collection system and would continue southwest along Skyway. Near Chico, at the bend where Skyway turns north, the pipeline would continue west, heading cross-country with crossings of Butte Creek and Highway 99 until reaching Midway, and would proceed into Chico and end at the Chico WPCP. The connection to the Chico WPCP is not associated with other ongoing facility upgrades. Figure 1 of Attachment A shows the proposed export pipeline route and connection to the Chico WPCP.

Consultation

At this time, the Town is seeking to consult with California Native American tribes that are traditionally and culturally affiliated with the Proposed Project area, in compliance with CEQA, California Public Resources Code (PRC) section 21080.3.1. The Town has requested the assistance of the Native American Heritage Commission (NAHC), in compliance with PRC 21080.3.1(c) to provide a list of California Native American tribes that are traditionally and culturally affiliated with the Proposed Project area. The NAHC has provided a list of California Native American tribes in support of these efforts, and the Town is reaching out to each of the contacts provided.

The Town would like to take this opportunity to notify the KonKow Valley Band of Maidu of an opportunity to consult with SSWD regarding the potential for this Proposed Project to impact tribal cultural resources, as defined in PRC section 21074. The purposes of tribal consultation under Section 21080.3.1 is to determine, as part of the CEQA review process, whether tribal cultural resources are present within the Proposed Project area, and if so, whether the Proposed Project will significantly impact those resources. If tribal cultural resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

In accordance with Section 21080.3.1(d) of the PRC, please respond within 30 days from the receipt of this letter to either request or decline consultation in writing for this Project. Please send your written response to:

John “Jay” Lloyd, Senior Cultural Resources Specialist
HDR Engineering, Inc.
2379 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833
John.Lloyd@hdrinc.com
916.679.8715

If you have any concerns regarding cultural resources and/or tribal cultural resources within the Project area shown on the enclosed map, or if you have any concerns regarding issues related to the overall Proposed Project, please contact me using the contact information provided below.

Thank you and we look forward to your response.

Sincerely,

Marc Mattox
Town of Paradise Director of Public Works
5555 Skyway
Paradise, CA 95969
530-872-6291
mmattox@townofparadise.com

Attachment: A: Proposed Project Map

Notice of Opportunity to Consult for the Paradise Sewer Project in Butte County, California

Attachment A
Proposed Project Map

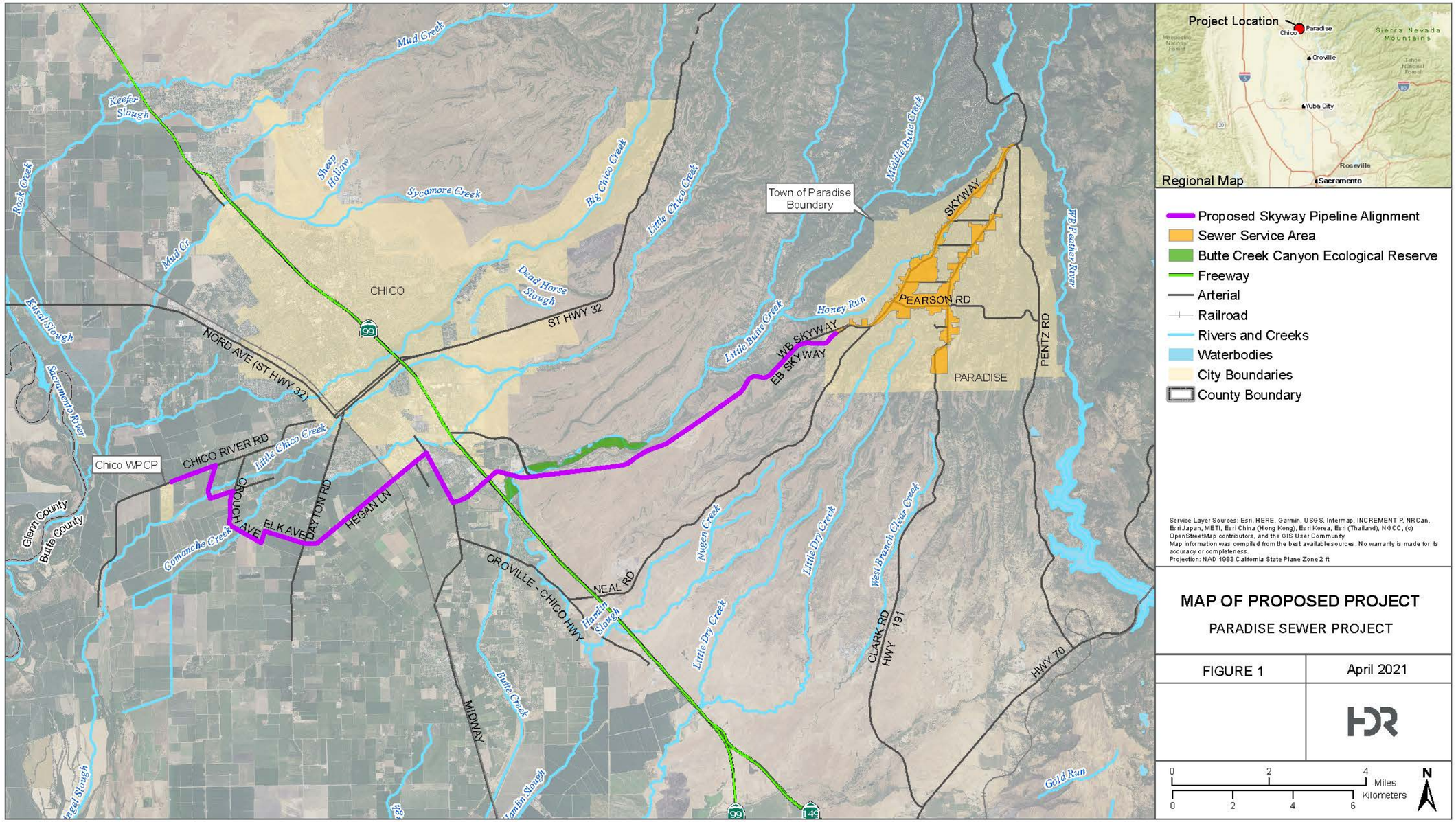

Figure 1. Proposed Project Map

May 10, 2021

Via Certified Mail

Dennis Ramirez
Chairperson
Mechoopda Indian Tribe
125 Mission Ranch Blvd
Chico, CA 95926

Subject: Notice of Opportunity to Consult Under Assembly Bill 52 for the Paradise Sewer Project in Butte County, California

Honorable Chairperson Ramirez,

The Town of Paradise (Town), as the Lead Agency for the Paradise Sewer Project (Proposed Project), is providing this notice of opportunity to request notification from the Town for consultation regarding the Proposed Project pursuant to Public Resources Code (PRC) section 21080.3.1 and Chapter 532, Statutes of 2014 (i.e., AB 52).

Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create the potential for public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. A new wastewater management solution is needed to improve the local economy (e.g., encourage opening of new businesses) and reduce the potential for public health and environmental concerns caused by failed or failing septic systems.

The objectives of the Proposed Project are as follows:

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- Connect to the existing Chico Water Pollution Control Plant (WPCP) to provide efficient regional treatment of wastewater with no additional cost to City of Chico rate payers.

Existing Facilities

Wastewater treatment facilities in Paradise consist of individual, privately owned septic tanks and soil absorption disposal systems known as leach fields, together with several engineered subsurface disposal systems serving commercial and institutional facilities. Businesses and residences near the future sewer system continue to rely on septic tanks and leach field systems for wastewater treatment and disposal.

The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico WPCP, and connection to the WPCP—and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and rate payers as a result of the Proposed Project.

Sewer Service Area

The sewer service area (SSA) would serve approximately 1,500 parcels (out of the 11,000 total parcels in Paradise) along the Skyway, Clark Road, and Pearson Road corridors. The SSA also would serve most businesses in Paradise and would enable future construction of affordable multi-family housing, which is limited because of multiple septic system constraints such as high groundwater, poor soils, and limited parcel sizes.

At the time of initial operation, an estimated 360 occupied parcels within the SSA would be generating an average wastewater flow of 109,000 gpd. It is estimated that it could take 30 years for the entire SSA to be occupied, at which time the average wastewater flow would be 448,000 gpd. The Town is considering this level of development and wastewater flow in planning its wastewater treatment solutions.

Collection System

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Export Pipeline

The proposed export pipeline would start along Skyway at the south end of the Paradise collection system and would continue southwest along Skyway. Near Chico, at the bend where Skyway turns north, the pipeline would continue west, heading cross-country with crossings of Butte Creek and Highway 99 until reaching Midway, and would proceed into Chico and end at the Chico WPCP. The connection to the Chico WPCP is not associated with other ongoing facility upgrades. Figure 1 of Attachment A shows the proposed export pipeline route and connection to the Chico WPCP.

Consultation

At this time, the Town is seeking to consult with California Native American tribes that are traditionally and culturally affiliated with the Proposed Project area, in compliance with CEQA, California Public Resources Code (PRC) section 21080.3.1. The Town has requested the assistance of the Native American Heritage Commission (NAHC), in compliance with PRC 21080.3.1(c) to provide a list of California Native American tribes that are traditionally and culturally affiliated with the Proposed Project area. The NAHC has provided a list of California Native American tribes in support of these efforts, and the Town is reaching out to each of the contacts provided.

The Town would like to take this opportunity to notify the Mechoopda Indian Tribe of an opportunity to consult with SSWD regarding the potential for this Proposed Project to impact tribal cultural resources, as defined in PRC section 21074. The purposes of tribal consultation under Section 21080.3.1 is to determine, as part of the CEQA review process, whether tribal cultural resources are present within the Proposed Project area, and if so, whether the Proposed Project will significantly impact those resources. If tribal cultural resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

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John “Jay” Lloyd, Senior Cultural Resources Specialist
HDR Engineering, Inc.
2379 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833
John.Lloyd@hdrinc.com
916.679.8715

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Thank you and we look forward to your response.

Sincerely,

Marc Mattox
Town of Paradise Director of Public Works
5555 Skyway
Paradise, CA 95969
530-872-6291
mmattox@townofparadise.com

Attachment: A: Proposed Project Map

Notice of Opportunity to Consult for the Paradise Sewer Project in Butte County, California

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Proposed Project Map

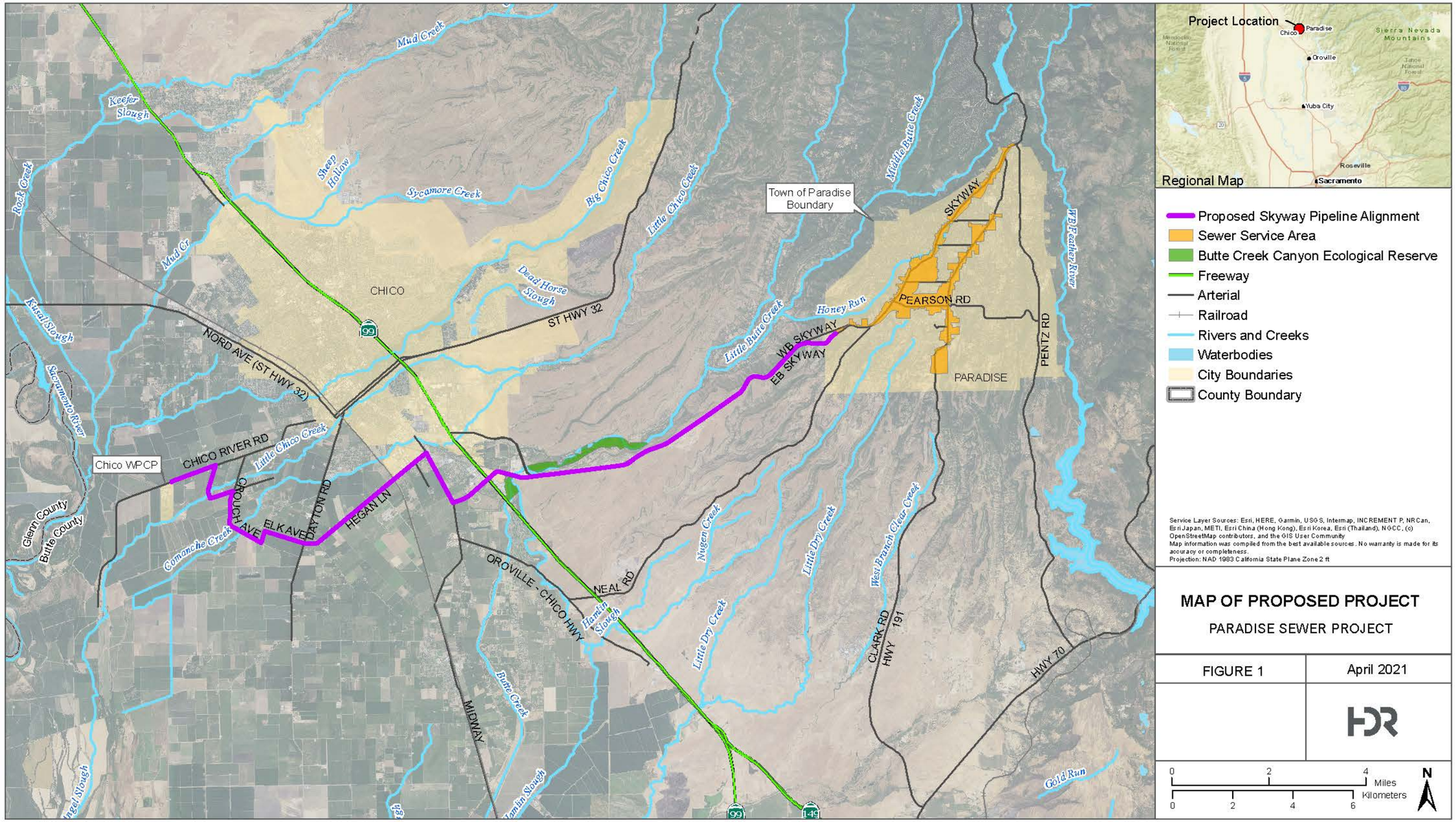

Figure 1. Proposed Project Map

May 10, 2021

Via Certified Mail

Benjamin Clark
Chairperson
Mooretown Rancheria of Maidu Indians
#1 Alverda Drive
Oroville, CA, 95966

Subject: Notice of Opportunity to Consult Under Assembly Bill 52 for the Paradise Sewer Project in Butte County, California

Honorable Chairperson Clark,

The Town of Paradise (Town), as the Lead Agency for the Paradise Sewer Project (Proposed Project), is providing this notice of opportunity to request notification from the Town for consultation regarding the Proposed Project pursuant to Public Resources Code (PRC) section 21080.3.1 and Chapter 532, Statutes of 2014 (i.e., AB 52).

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Thank you and we look forward to your response.

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530-872-6291
mmattox@townofparadise.com

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Notice of Opportunity to Consult for the Paradise Sewer Project in Butte County, California

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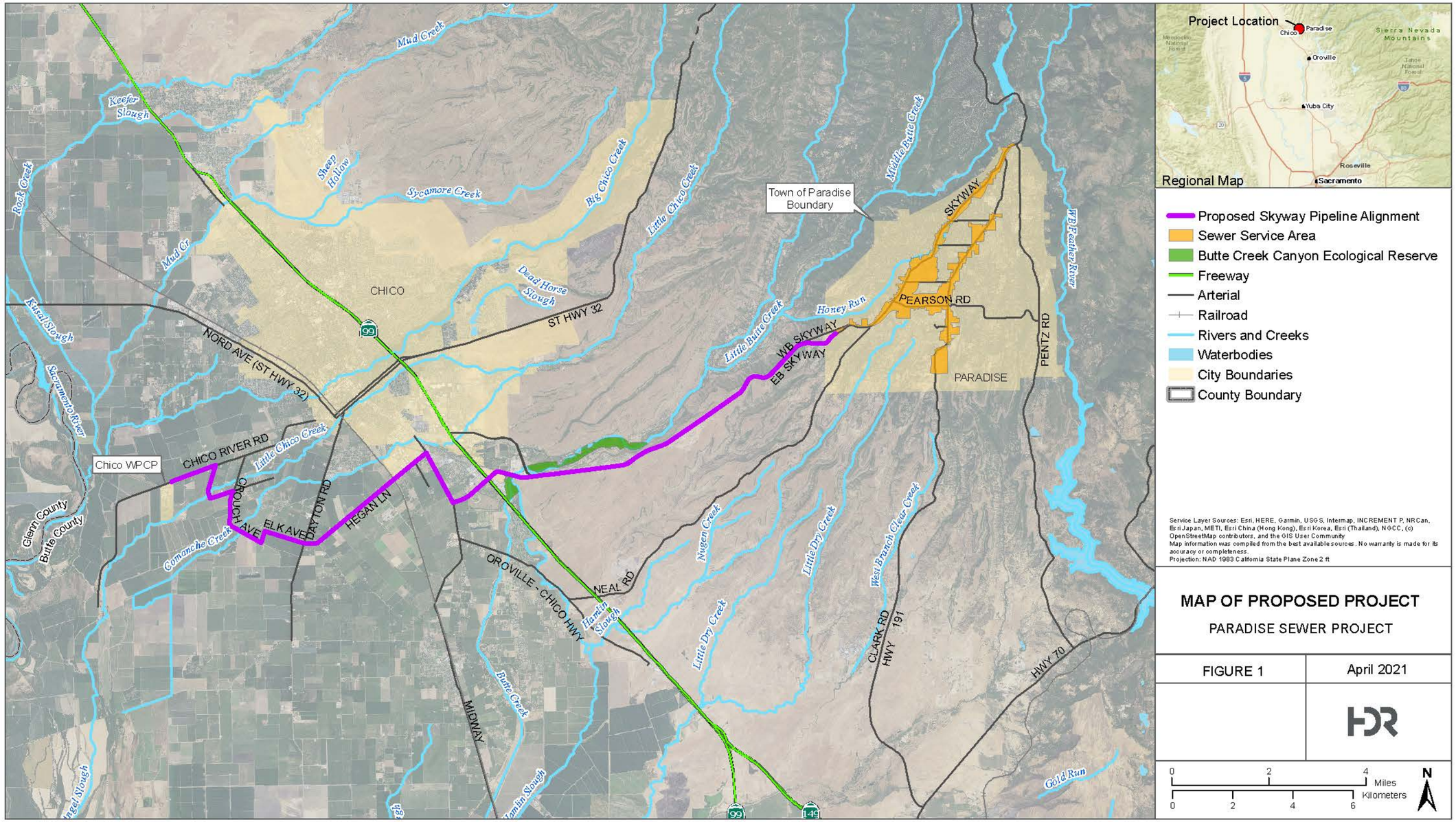

Figure 1. Proposed Project Map

May 10, 2021

Via Certified Mail

Guy Taylor
Director, Environmental Protection Office
Mooretown Rancheria of Maidu Indians
#1 Alverda Drive
Oroville, CA, 95966

Subject: Notice of Opportunity to Consult Under Assembly Bill 52 for the Paradise Sewer Project in Butte County, California

Dear Director Taylor,

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Sewer Service Area

The sewer service area (SSA) would serve approximately 1,500 parcels (out of the 11,000 total parcels in Paradise) along the Skyway, Clark Road, and Pearson Road corridors. The SSA also would serve most businesses in Paradise and would enable future construction of affordable multi-family housing, which is limited because of multiple septic system constraints such as high groundwater, poor soils, and limited parcel sizes.

At the time of initial operation, an estimated 360 occupied parcels within the SSA would be generating an average wastewater flow of 109,000 gpd. It is estimated that it could take 30 years for the entire SSA to be occupied, at which time the average wastewater flow would be 448,000 gpd. The Town is considering this level of development and wastewater flow in planning its wastewater treatment solutions.

Collection System

The collection system would serve all parcels within the SSA, and would consist of a system of gravity sewers, small pump stations, and force mains. This collection system would enable properties within the SSA to have existing septic tanks and leach line systems abandoned altogether and would remove future onsite wastewater treatment and dispersal requirements. Because of the varied topography within the SSA, a number of pump stations and pressurized force mains would be required to pump flows out of valleys and swales, and back up to an adjacent gravity sewer. The collection system would consist of approximately 157,000 feet of 2- to 4-inch-diameter force mains, 29,000 feet of 8-inch-diameter gravity trunk lines, and 28 pump stations, all within public right-of-way. The gravity sewers would come together at the southwest edge of town, on Skyway, where they would transition to the export pipeline to the Chico WPCP.

Export Pipeline

The proposed export pipeline would start along Skyway at the south end of the Paradise collection system and would continue southwest along Skyway. Near Chico, at the bend where Skyway turns north, the pipeline would continue west, heading cross-country with crossings of Butte Creek and Highway 99 until reaching Midway, and would proceed into Chico and end at the Chico WPCP. The connection to the Chico WPCP is not associated with other ongoing facility upgrades. Figure 1 of Attachment A shows the proposed export pipeline route and connection to the Chico WPCP.

Consultation

At this time, the Town is seeking to consult with California Native American tribes that are traditionally and culturally affiliated with the Proposed Project area, in compliance with CEQA, California Public Resources Code (PRC) section 21080.3.1. The Town has requested the assistance of the Native American Heritage Commission (NAHC), in compliance with PRC 21080.3.1(c) to provide a list of California Native American tribes that are traditionally and culturally affiliated with the Proposed Project area. The NAHC has provided a list of California Native American tribes in support of these efforts, and the Town is reaching out to each of the contacts provided.

The Town would like to take this opportunity to notify the Mooretown Rancheria of Maidu Indians of an opportunity to consult with SSWD regarding the potential for this Proposed Project to impact tribal cultural resources, as defined in PRC section 21074. The purposes of tribal consultation under Section 21080.3.1 is to determine, as part of the CEQA review process, whether tribal cultural resources are present within the Proposed Project area, and if so, whether the Proposed Project will significantly impact those resources. If tribal cultural resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

In accordance with Section 21080.3.1(d) of the PRC, please respond within 30 days from the receipt of this letter to either request or decline consultation in writing for this Project. Please send your written response to:

John “Jay” Lloyd, Senior Cultural Resources Specialist
HDR Engineering, Inc.
2379 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833
John.Lloyd@hdrinc.com
916.679.8715

If you have any concerns regarding cultural resources and/or tribal cultural resources within the Project area shown on the enclosed map, or if you have any concerns regarding issues related to the overall Proposed Project, please contact me using the contact information provided below.

Thank you and we look forward to your response.

Sincerely,

Marc Mattox
Town of Paradise Director of Public Works
5555 Skyway
Paradise, CA 95969
530-872-6291
mmattox@townofparadise.com

Attachment: A: Proposed Project Map

Notice of Opportunity to Consult for the Paradise Sewer Project in Butte County, California

Attachment A
Proposed Project Map

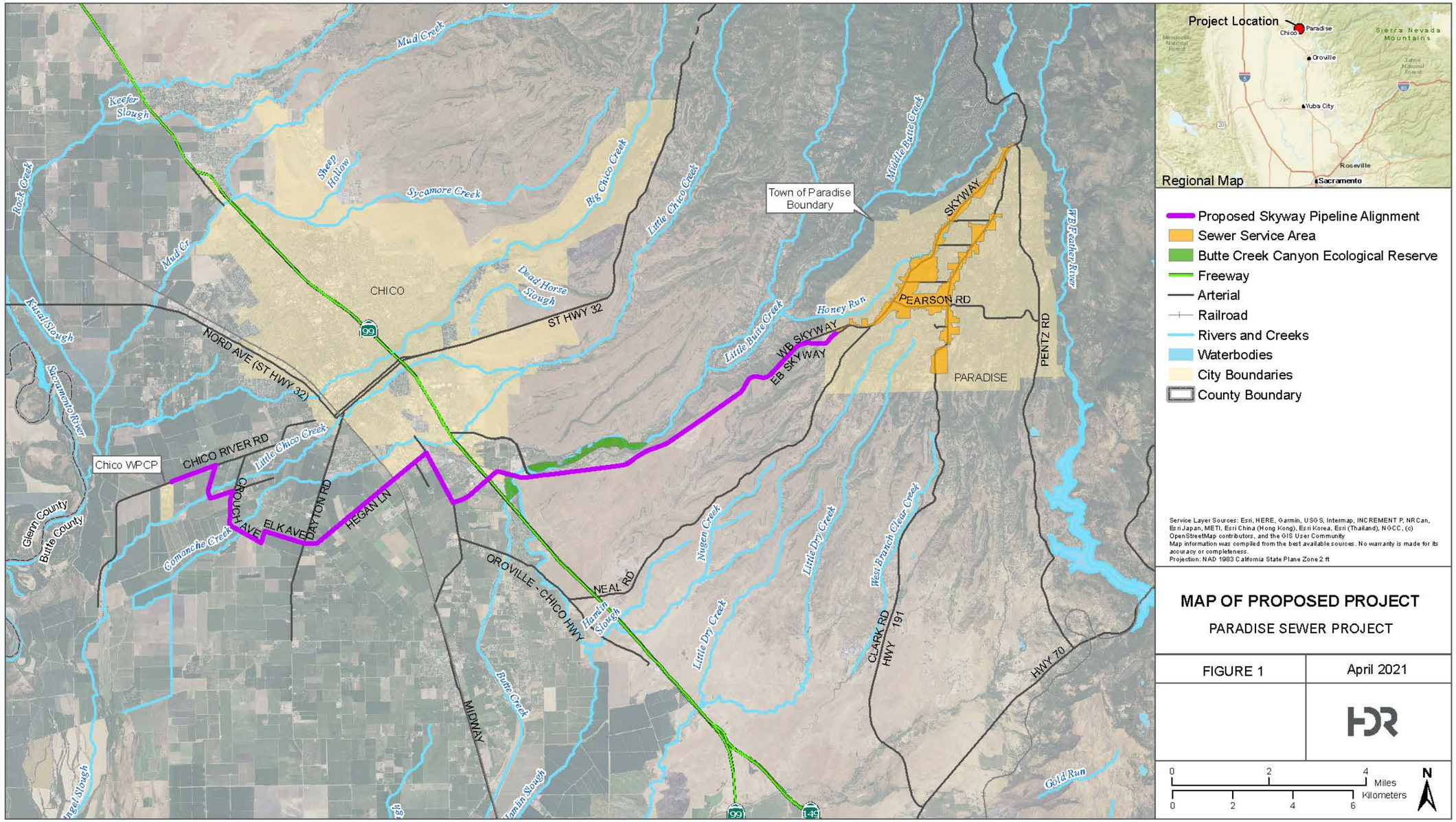

Figure 1. Proposed Project Map

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Dennis Ramirez, Chairperson
Mechoopda Indian Tribe
125 Mission Ranch Blvd
Chico, CA 95926

9590 9402 4991 9063 8056 44

2. Article Number (Transfer from service label)

PS

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Jenna Bartell ☐ Agent ☐ Addressee

B. Received by (Printed Name) Jenna Bartell C. Date of Delivery 5-12-21

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☑ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
nature Confirmation™
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tricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Benjamin Clark, Chairperson
Mooretown Rancheria of Maidu Indians
#1 Alverda Drive
Oroville, CA, 95966

9590 9402 4991 9063 8056 68

2. Article Number (Transfer from service label)
7019 0140 0001 0117 8855

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Kim ☐ Agent ☐ Addressee

B. Received by (Printed Name) CT C9 R3 C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

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SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Guy Taylor, Director
Environmental Protection Office
Mooretown Rancheria of Maidu Indians
#1 Alverda Drive
Oroville, CA, 95966

9590 9402 4991 9063 8056 75

2. Article Number (Transfer from service label)
7019 0140 0001 0117 8848

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Kim ☒ Agent ☐ Addressee

B. Received by (Printed Name) CT R3 C9 5-20 C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

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SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Jessica Lopez, Chairperson
KonKow Valley Band of Maidu
8998 Fruitridge Road
Sacramento, CA 95803

9590 9402 4991 9063 8056 51

2. Article Number (Transfer from service label)
7019 0140 0001 0117 8862

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

Mail
Mail Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

Agenda

Project:	Paradise Sewer Project in Butte County, California
Subject:	AB 52 Consultation Meeting
Date:	Tuesday, August 10, 2021; 1:30 pm
Location:	Meeting held via WebEx
Invitees:	Jessica Lopez, Konkow Valley Band of Maidu, Tribal Chair Kyle McHenry, Mechoopda Indian Tribe, Tribal Historic Preservation Officer Marc Mattox, Town of Paradise, Public Works Director/Town Engineer John Buttz, HDR, Project Manager Leslie Tice, HDR, CEQA Project Lead Jay Lloyd, HDR, Senior Cultural Resources Specialist Monica Ruth, HDR, Cultural Resources Specialist

I. Welcome/Introductions

II. Project Overview
   - A. Sewer Service Area
   - B. Collection System
   - C. Export Pipeline

III. CEQA/AB 52 Consultation Discussion
   - A. The purposes of tribal consultation under Section 21080.3.1 (aka AB 52) is to determine, as part of the CEQA review process, whether tribal cultural resources are present within the Proposed Project area, and if so, whether the Proposed Project will significantly impact those resources. If tribal cultural resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

IV. Review Action Items

V. Conclusion

Agenda

Project:	Paradise Sewer Project in Butte County, California
Subject:	AB 52 Consultation Meeting
Date:	Thursday, September 09, 2021; 11:00 am
Location:	Meeting held via WebEx
Invitees:	Jessica Lopez, Konkow Valley Band of Maidu, Tribal Chair Matthew Gramps-Williford, Konkow Valley Band of Maidu, Tribal Historic Preservation Officer Kyle McHenry, Mechoopda Indian Tribe, Tribal Historic Preservation Officer Marc Mattox, Town of Paradise, Public Works Director/Town Engineer John Buttz, HDR, Project Manager Leslie Tice, HDR, CEQA Project Lead Jay Lloyd, HDR, Senior Cultural Resources Specialist Monica Ruth, HDR, Cultural Resources Specialist

I. Welcome

II. Review of Action Items from 8/10/21 Meeting

- **HDR** to provide GIS data (shapefiles) of the project area (inclusive of service area and export pipeline) to both the Konkow Valley Band of Maidu and Mechoopda Indian Tribe
    - **Minutes and shapefiles were provided via One Drive/email on 8/16/2021**
- The **Town of Paradise/HDR** will reach out again to both the Konkow Valley Band of Maidu and Mechoopda Indian Tribe in three weeks (early September) to set up a time to discuss items of concern following the Tribes' review of their respective internal databases/information against the GIS data; meeting to possibly take place the week following Labor Day.

III. CEQA/AB 52 Consultation Discussion

A. Known Tribal Cultural Resources

B. Areas/resources of concern

C. Proposed Mitigation Measures

IV. Review Action Items, as applicable

V. Conclusion

From: Ruth, Monica
To: "Jessica Lopez"; Om Yepi; K McHenry
Cc: Stanley, Ashley; Mattox, Marc; Buttz, John; Edwards, Dawn
Subject: Paradise Sewer Project update, request for review
Date: Thursday, April 7, 2022 2:34:41 PM
Attachments: [redacted]Alternatives.pdf

Greetings Chairwoman Lopez, Cultural Resource Director Williford, and THPO McHenry –

The Town of Paradise has asked HDR to relay a Sewer Project update to you. We have adjusted the pipeline alignment of the Proposed Project in the south part of Chico, on the west side of Highway 99 (see attached figure). We would like your input regarding potential impacts to Tribal Cultural Resources caused by this change. The attached figure is marked up so you can compare the new proposed pipeline alignment to the previously-proposed alignment.

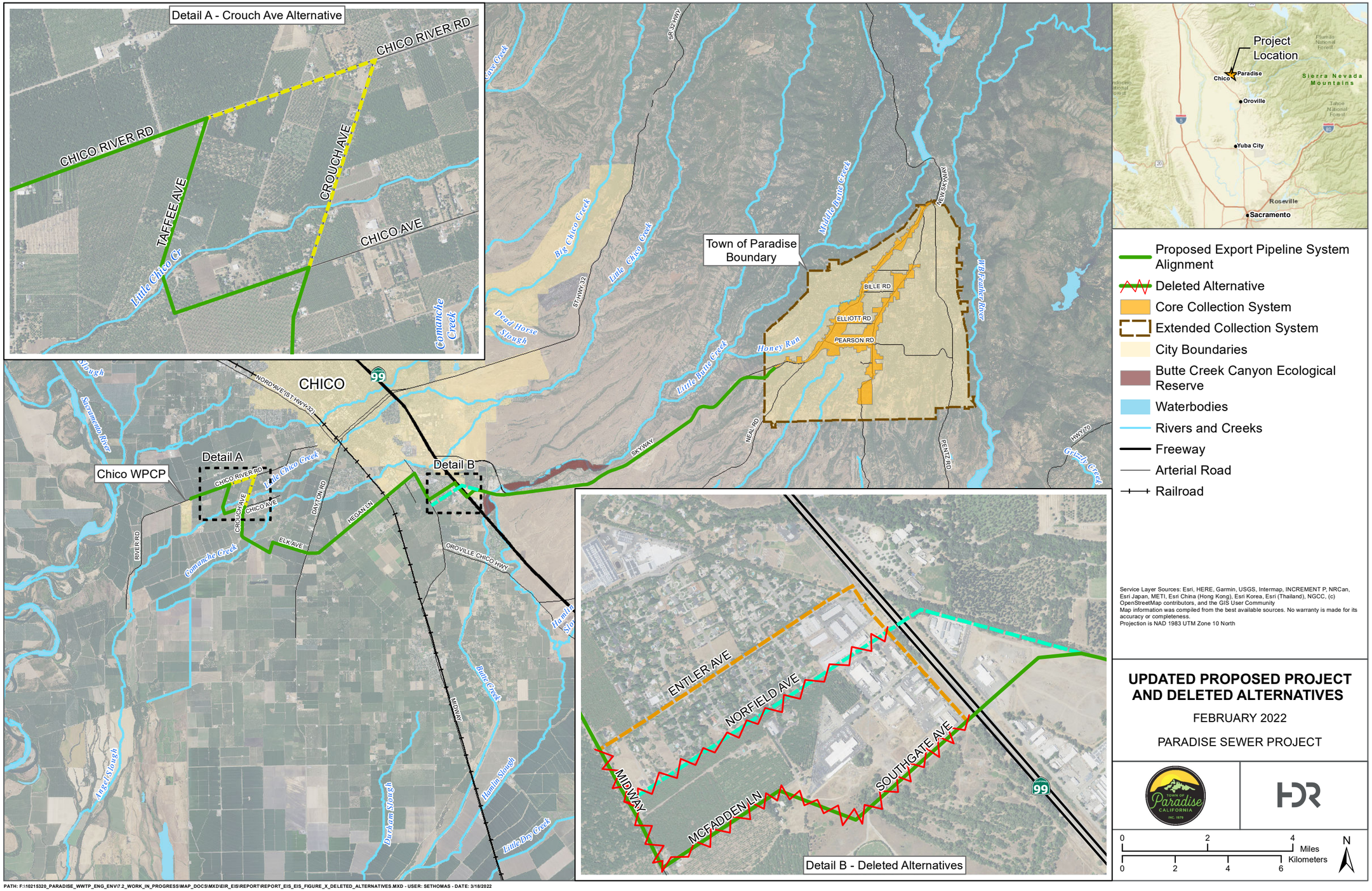
The proposed export pipeline crossing of Hwy 99 has been updated to eliminate two alternatives west of the trenchless crossing of Hwy 99: the Southgate Ave-McFadden Lane-Midway alternative and the Norfield Ave-Midway alternative. The proposed export pipeline will now follow Entler Avenue to Midway with two options for trenchless crossing at Hwy 99: either at the northeast end of Norfield Avenue (the teal dashed line shown in the attached figure) or at the northeast end of Southgate Ave (the orange dotted line in the attached). The change was based in part on feedback we received from you through the AB52 consultation process and the Town anticipates that the potential for impacts from the new Entler Ave-Midway route will be less than the previous Southgate Ave-McFadden Lane-Midway and the Norfield Ave-Midway alternatives.

The Town would like to know if you have any concerns or questions about these changes, and if these changes would result in a change to potential impacts to Tribal Cultural Resources. I'm available to discuss on the phone and can set up calls/meetings with the Town if that is preferred.

Please let me know how you would like to proceed.

Thank you,
Monica

Monica Ruth, M.A. *(she/her)*
Ethnohistorian and Ethnographer
HDR
Mobile: 916-813-3060
Monica.Ruth@hdrinc.com
hdrinc.com/follow-us


Detail A - Crouch Ave Alternative
CHICO RIVER RD
CHICO RIVER RD
TAFFEE AVE
CROUCH AVE
CHICO AVE
Little Chico Cr
Comanche Creek
Town of Paradise Boundary
Big Chico Creek
Little Chico Creek
Middle Butte Creek
Deer Horse Slough
Honey Run
Little Butte Creek
BILLE RD
ELLIOTT RD
PEARSON RD
NEW SKYWAY
W Branch Feather River
SR 32/HWY
ST HWY 32
NORD/WE ST HWY 32
CHICO
99
Sacramento River
Detail A
Detail B
Chico WPCP
CHICO RIVER RD
Little Chico Creek
CROUCH AVE
CHICO AVE
DAYTON RD
HEGAN LN
ELK AVE
RIVER RD
Comanche Creek
OROVILLE CHICO HWY
MIDWAY
Butte Creek
Hamilton Slough
Durham Slough
Huntington Slough
Little Day Creek
Angel Slough
SKYWAY
NEAL RD
PENTZ RD
HWY 70
Grizzly Creek
Project Location
Chico
Paradise
Oroville
Yuba City
Roseville
Sacramento
Sierra Nevada Mountains
Plumas National Forest
Tahoe National Forest
ENTLER AVE
NORFIELD AVE
SOUTHGATE AVE
MIDWAY
MCFADDEN LN
Detail B - Deleted Alternatives
Proposed Export Pipeline System Alignment
Deleted Alternative
Core Collection System
Extended Collection System
City Boundaries
Butte Creek Canyon Ecological Reserve
Waterbodies
Rivers and Creeks
Freeway
Arterial Road
Railroad
Service Layer Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 UTM Zone 10 North
UPDATED PROPOSED PROJECT AND DELETED ALTERNATIVES
FEBRUARY 2022
PARADISE SEWER PROJECT
0 2 4 Miles
0 2 4 6 Kilometers
N
PATH: F:\10215320_PARADISE_WWTP_ENG_ENV\7.2_WORK_IN_PROGRESS\MAP_DOCS\MXD\EIR_EIS\REPORT\REPORT_EIS_EIS_FIGURE_X_DELETED_ALTERNATIVES.MXD - USER: SETHOMAS - DATE: 3/18/2022

H

Pump Station Energy Consumption Calculation

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Pumpstation Energy Consumption Calculation

BEN|EN
TRUSTED ENGINEERING ADVISORS

Town of Paradise
Paradise - Sewer Feasibility Alternative A - Regional Skyway

Location Town of Paradise - Collection System		**QTY. BY** L. Edwards		**ESTIMATE LEVEL** **CONCEPT**
Limits Proposed Paradise Sewer Service Area		**QTY. CHCK** M.Massaro		**PRICED BY** L.Edwards
BEN|EN PROJECT NO. 19-216 TO1		**AGENCY** Town of Paradise		12/12/2021

System	kWH/yr
Collection PS	254761
Trunk PS	241696
Regional PS	104517
Total	**600975**

Pump Station Name	Q gal/day	Q CFS	Q with Peaking Factor gal/min	Jensen Pump Series	kWH/yr
PS-CONNIE	5035.55	0.0078	10.49	248	13065
PS-CENTER	2144.68	0.0033	4.47	248	13065
PS-CAPE COD	11090.90	0.0172	23.11	248	13065
PS-MEMORIAL	2093.14	0.0032	4.36	248	13065
PS-PINE GROVE	18678.59	0.0289	38.91	248	13065
PS-EWALD	900.70	0.0014	1.88	248	13065
PS-BUSCHMANN	12393.50	0.0215	25.82	248	13065
PS-E ELLIOTT	1650.20	0.0026	3.44	248	13065
PS-NUNNLEY	33172.43	0.0513	69.11	360	19597
PS-E NUNNLEY	417.33	0.0006	0.87	248	13065
PS-BLACK OLIVE	17547.14	0.0295	36.56	248	13065
PS-PHEASANT	2070.93	0.0032	4.31	248	13065
PS-WILDWOOD	3829.00	0.0059	7.98	248	13065
PS-STONERIDGE	19891.95	0.0308	41.44	248	13065
PS-BOWLES	1310.39	0.0020	2.73	248	13065
PS-E CLARK	10173.16	0.0157	21.19	248	13065
PS-EASY	3631.87	0.0056	7.57	248	13065
PS-WOODBROOK	8562.44	0.0132	17.84	248	13065
PS-CENTRAL PARK	15969.42	0.0247	33.27	248	13065
				Total	**254761**

Peaking Factor	3.00

Pump Station Name	Q (Gal/Day) into PS	Q CFS into PS	Q with Peaking Factor gal/min into PS	Jensen Pump Series	kWH/yr
S1-PS-1	6336.86	0.01	13.20	248	13065
E1-PS-2	8.00	0.00	0.02	248	13065
C1-PS-1	10694.72	0.02	22.28	248	13065
E1-PS-1	32386.02	0.05	67.47	360	19597
C1-PS-2	181583.41	0.28	378.30	696	45726
P1-PS-2	256581.50	0.40	534.54	696	45726
P1-PS-3	199412.42	0.31	415.44	696	45726
P1-PS-1	273317.12	0.42	569.41	696	45726
				Total	241696

Peaking Factor	3

Pump Station Name	Q CFS into PS	Q gal/day	Q with Peaking Factor gal/min	Jensen Pump Series	kWH/yr
Regional PS-1	1.18	488054.62	1016.78	896	52259
Regional PS-2	1.18	488054.62	1016.78	896	52259
				total	104517

Peaking Factor	3

Flow Range	PS Series	Wet Well ID feet	Hp	kW	Time	Hour/year	kWH/yr
10 to 50 gpm	248	4	10	7.457	20%	1752.00	13064.66
100 to 180 gpm	360	5	15	11.1855	20%	1752.00	19597.00
180 to 300 gpm	472	6	25	18.6425	20%	1752.00	32661.66
350 to 750 gpm	696	8	35	26.0995	20%	1752.00	45726.32
400 to 1250 gpm	896	8	40	29.828	20%	1752.00	52258.66
615 to 1955 gpm	10120	10	45	33.5565	20%	1752.00	58790.99

I

Responses to Comment Letters Received during Public Review of Draft PEIR

I Responses to Comment Letters Received during Public Review of Draft PEIR

I.1 Introduction

This Final Environmental Impact Report (FEIR) was prepared in accordance with the California Environmental Quality Act (CEQA) (Cal. Pub. Res. Code Section 21000, et seq.) and State CEQA Guidelines (Cal. Code Regs. Section 15000, et seq.). The Town of Paradise is the lead agency for the environmental review of the proposed Paradise Sewer Project and has the principal responsibility for approving the project. This Final PEIR assesses the expected environmental impacts resulting from the adoption and implementation of the proposed project and responds to public comments received on the Draft EIR.

The following sections contain

1) a review of CEQA Guidelines pertinent to public comments and responses,
2) a matrix of all letters and corresponding Town responses, and
3) copies of the original comment letters.

In two cases, comments received on the Draft PEIR prompted the addition of text to the final version of the document i.e., the Final PEIR. These changes are shown in **bold** format in the Final EIR. No deletions were made as a result of public comments. Small grammatical or punctuation changes that were made are not specifically called out (e.g., adding a period at end of sentence, fixing misspellings). No changes were made to the Draft PEIR appendices (App. A – H); however this appendix (Appendix I) is a new attachment to the Final PEIR.

The Final EIR also includes informational updates and clarifications. Beyond the requirements set by CEQA and relevant court cases discussed below, every attempt has been made to respond to comments that address the project in general, in an effort to provide the most complete information possible.

I.2 Responsibilities of the Town

CEQA Guidelines Section 15088(b) requires that responses be made to only those comments that are specific to the Draft EIR. In addition, in the court case *Browning-Ferris Industries of California, Inc. v. San Jose 181 Cal. App. 3d 852* (1986), the court stated that the Lead Agency must respond to all significant environmental comments in a level of detail commensurate with that of the comment, citing *Gallegos v. California Board of Forestry 76 Cal. App. 3d 945* (1978), *Twain Harte Homeowners Association v. County of Tuolumne 128 Cal. App. 3d 664* (1982), and *Cleary v. County of Stanislaus 118 Cal. App. 3d 348* (1981). Following are additional Lead Agency responsibilities as described in CEQA Guidelines (Section 15088):

- (a) “The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written response. The Lead Agency

shall respond to comments raising significant environmental issues received during the noticed comment period and any extensions and may respond to late comments" (15088(a))

- (b) "The lead agency shall provide a written proposed response, either in a printed copy or in an electronic format, to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report" (15088 (b)).
- (c) "The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice. The level of detail contained in the response, however, may correspond to the level of detail provided in the comment (i.e., responses to general comments may be general). A general response may be appropriate when a comment does not contain or specifically refer to readily available information, or does not explain the relevance of evidence submitted with the comment" (15088(c)).
- (d) "The response to comments may take the form of a revision to the draft EIR or may be a separate section in the final EIR. Where the response to comments makes important changes in the information contained in the text of the draft EIR, the Lead Agency should either:
    1) Revise the text in the body of the EIR, or
    2) Include marginal notes showing that the information is revised in the response to comments (15088(d)).

Finally, "if any public agency or person who is consulted with regard to an EIR or Negative Declaration fails to comment within a reasonable time as specified by the Lead Agency, it shall be assumed, without a request for a specific extension of time, that such agency or person has no comment to make. Although the Lead Agency need not respond to late comments, the Lead Agency may choose to respond to them" (CEQA Guidelines Section 15207).

The Town's responses to each comment on the Draft PEIR represent a good-faith, reasoned effort to address the environmental issues identified by the comments. Accordingly, Town staff's and its consultants' final analysis provided in the responses to comments are backed by substantial evidence. Likewise, the Town's legal counsel prepared and/or independently reviewed responses to the Draft PEIR comments.

I.3 Responsibilities of the Commenter

CEQA Guidelines Section 15132(d) requires that the Final EIR consist of the responses of the Lead Agency to significant environmental points raised in the review and consultation process. In addition, CEQA Guidelines Sections 15201 and 15204 discuss public participation regarding the review and evaluation of EIRs. Specifically, Section 15204 states the following:

- "(a) In reviewing draft EIRs, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that

would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR" (15204 (a)).

- "(c) Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to [CEQA Guidelines] Section 15064, an effect shall not be considered significant in the absence of substantial evidence" (15204 (c)).
- "(d) Reviewing agencies or organizations should include with their comments the name of a contact person who would be available for later consultation if necessary. Each responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility (15204 (d)).
- (e) This section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section (15204 (e)).
- "(f) Prior to the close of the public review period for an EIR or mitigated negative declaration, a responsible or trustee agency which has identified significant effects on the environment may submit to the lead agency proposed mitigation measures which would address those significant effects. Any such measures shall be limited to impacts affecting those resources that are subject to the statutory authority of that agency. If mitigation measures are submitted, the responsible or trustee agency shall either submit to the lead agency complete and detailed performance objectives for the mitigation measures, or shall refer the lead agency to appropriate, readily available guidelines or reference documents which meet the same purpose" (15204 (f)).

Table I-1 lists those persons, organizations, and public agencies that provided written comments on the Draft PEIR. The assigned comment letter number, letter date, letter author and affiliation with a particular organization, if presented in the comment letter or if representing a public agency, is also listed. Letter numbers beginning with "W" were received on the Paradise website, while letter numbers beginning with "L" were received by email or mail post. Format for reference to specific comments in the matrix is: Letter number-Comment number (e.g., W1-1 is referencing the first letter and the first comment in that letter).

TABLE I-1 Public Agencies, Organizations, and Persons that Commented on Draft PEIR

Letter Number / Number of Comments	Date	Commentor	Affiliation
W1/1	July 17, 2022	Alice Patterson	Citizen
W2/1	July 25, 2022	Linda Barton	Citizen

Letter Number / Number of Comments	Date	Commentor	Affiliation
L1/1	July 27, 2022	Kristen Way, Environmental Scientist	State Water Resources Control Board
W3/1	July 28, 2022	Kat Carlisle	Citizen
W4/1	August 1, 2022	Earl Eckert	Citizen
W5/1	August 2, 2022	Pam Galloway	Citizen
W6/7	August 3, 2022	Brian Anderson	Citizen
W7/1	August 5, 2022	Ivan Garcia	Citizen
W8/1	August 5, 2022	Joe Rees	Citizen
W9/4	August 8, 2022	Rick Hoddinott	Citizen
L2/1	August 8, 2022	Vicki Taylor	Citizen
L3/1	August 8, 2022	Anonymous	Citizen
L4/1	August 8, 2022	Tod Kimmelshue	Citizen
W10/1	August 10, 2022	Ronald Lassonde	Citizen
W11/1	August 10, 2022	Mandi McKay	Citizen
L5/1	August 10, 2022	Richard Smith	Citizen
W12/1	August 11, 2022	Andrew D'Lugos	Citizen
W13/1	August 11, 2022	Kirk Monfort	Citizen
W14/1	August 15, 2022	Richard Stone	Citizen
W15/1	August 16, 2022	Joseph Mount	Citizen
W16/6	August 22, 2022	Brian Anderson	Citizen
W17/8	August 22, 2022	Steven Cismowski	Citizen
W18/1	August 22, 2022	Ryan Duncanwood	Citizen
W19/1	August 22, 2022	Bud Linggi	Citizen
W20/1	August 22, 2022	Diane Pajouh	Citizen
W21/1	August 22, 2022	Mike Petersen	Citizen
W22/1	August 22, 2022	Michael Schwartz	Citizen
W23/4	August 22, 2022	Gary Wolt	Citizen

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W24/1	August 23, 2022	Matthew Carlson	Citizen
W25/1	August 23, 2022	Tony Catalano	Citizen
W26/1	August 23, 2022	Rob Williams	Citizen
W27/1	August 24, 2022	Kevin Baxter	Citizen
W28/1	August 24, 2022	Steve DePue	Citizen
W29/1	August 24, 2022	Andrew Keller	Citizen
W30/1	August 24, 2022	William Llamas	Citizen
W31/1	August 24, 2022	Bruce McLean	Citizen
W32/1	August 24, 2022	Jeri Valdez	Citizen
W33/1	August 25, 2022	Kevin Cook	Citizen
W34/1	August 25, 2022	Kim Hunter	Citizen
W35/1	August 25, 2022	Monica Zukrow	Citizen
W36/2	August 26, 2022	David Copp	Citizen
L6/9	August 26, 2022	Ward Habriel	Citizen
W37/1	August 26, 2022	Maurine Hansen	Citizen
W38/1	August 28, 2022	Roger Cole	Citizen
L7/3	August 29, 2022	Kim Hunter, Project Manager, Land Development Division	Butte County Department of Public Works
L8/4	August 29, 2022	Leigh Ann Sutton, PE; Director Public Works Engineering	City of Chico Public Works Department
L9/11	August 29, 2022	Laurie and Jim Noble	Citizens
L10/25	August 29, 2022	Dana Ripley	Citizen
L11/12	August 30, 2022	Richard L. Harriman	Law Offices of Richard L. Harriman
W39/1	August 30, 2022	Dannette Barefield	Citizen
W40/1	August 30, 2022	Patty Wilson	Citizen

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Alice Patterson	July 17, 2022	W1	1	I am inquiring for my partner, who lost his home in the fire… How do I find out if his property would be affected by an Easement should this sewer project be approved? This could impact how/when he rebuilds. Property address is 5975 N. Libby. Is there a list of locations where the easements would be going?	Thank you for your message. You can go to https://paradisesewer.com/ and scroll down to “Find My Property”. If you input your friend’s address, it will show you whether it is within the proposed sewer area.
Linda Barton	July 25, 2022	W2	1	I am about to choose a builder to finally rebuild in Paradise. At this moment, it appears the sewer project for Paradise will help those businesses on Skyway. Which means 99%+ of the residents won't benefit from this undertaking. Who is going to pay for this very expensive but necessary project? I am not interested in seeing it listed when I get my property tax bill.	The Town has secured grant funding for the development of the preliminary engineering and preparation of the environmental documentation. We are also working to secure grant funding for the design, right-of-way, and construction stages of the project. The connection fees have not yet been determined for property owners connecting to the system.
State Water Resources Control Board	July 27, 2022	L1	1	See attached letter. All information advisory in nature.	Thank you for the information that you provided on federal regulatory requirements that must be met as part of the Town’s proposed Clean Water State Revolving Fund (CWSRF) funding application process. We understand that the list of necessary actions referenced in your comment letter pertain to the Town’s pursuit of CWSRF funding, along with the corresponding CEQA+ process. We understand that this is not a list of actions and materials that are being recommended for inclusion in the Draft PEIR; therefore, no change has been made to the PEIR.
Kat Carlisle	July 28, 2022	W3	1	Can you tell me when the final design and right of way acquisition phases will begin for the Paradise Sewer Project please? I saw on the project schedule that these phases are anticipated to begin in Summer 2022, but I wasn't sure if that meant they have already started or not. Thank you!	Thank you for your comment and question. We have not yet started design or right of way, as we are still seeking funding for this phase of the design. We will update paradisesewer.com as soon as an updated timeline is established. This website will continue to be updated as the project phases are identified. www.Paradisesewer.com
Earl Eckert	Aug 1, 2022	W4	1	Will the agreement with Chico permit all pumped septic loads to be disposed of in paradise rather than continuing to be disposed of at the County land fill lagoon. Own property at 2199 De Mille Rd.	The publlic Sewer Regionalization Project Advisory Committee (SRPAC) drafted the Principals of Agreement, which were the outline of the draft Intermunicipal Agreement (IMA) between the Town of Paradise and the City of Chico. Currently, only residential and commercial sewer connections are identified and accounted for in the Sewer Service Area (SSA) and sewer discharge that will be discharged at the City of Chico Water Pollution Control Plant. Pumped septic systems discharges from residents or businesses are not accommodated in the discharge to the Chico WPCP. Disposal of pumped septic loads will not change as it is outside of the scope of this Project.
Pam Galloway	Aug 2, 2022	W5	1	I think it is a stupid waste of money that could be used for a different project. The cost of the project, the amount of time necessary to complete the sewer project and the number of people who would benefit from it should make it a non starter.	Thank you for your input. The Town appreciates all viewpoints and opinions expressed by our community.
Brian Anderson	Aug 3, 2022	W6	1	Who will handle the collection system and pump stations daily operations?	Thank you for your question. The Town of Paradise staff is in charge of maintainance and operation of the collection system and pump stations.

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Commenter/Agency	**Comment Date**	**Letter No.**	**Comment No.**	**Comment Text**	**Comment Response**
Brian Anderson			2	What type(s) of odor control systems will be used?	The Proposed Project includes the use of odor control canisters, as stated in Section 2.8 of the Draft PEIR. Section 3.3.4.4 explains "Routine operations and maintenance activities will include periodic inspection of the odor control cannisters, which will be provided at the Export Pipeline System's flow control and metering structure." Section 2.8 further elaborates: "Physical on-site inspection and maintenance of the air release valves and odor control canisters would be done according to the maintenance protocols that accompany the devices, and would occur every 6 months to ensure optimal performance of these devices. Air release valves would be inspected to ensure they are operating properly. The odor control canisters would be replaced as needed when the carbon media becomes saturated and loses the ability to absorb odors."
Brian Anderson			3	And projected annual cost?	The current level of design has not yet supported this level of detailed planning; annual costs have not yet been projected.
Brian Anderson			4	Where will biosolids and sewage debris be removed to?	Town of Paradise flows will join with City of Chico flows at the Chico Water Pollution Control Plant (WPCP), from which point they are treated per the Chico WPCP's current processing standards. Section 2.4.2 in the Draft PEIR outlines this process: "The sludge (biosolids) portion of the wastewater is treated by anaerobic digestion, followed by mechanical dewatering. The resulting biosolids are then hauled directly from the Chico WPCP for land application in unincorporated Sacramento County, California."
Brian Anderson			5	How many full time employees will be hired to operate and maintain Paradise Wastewater Collection and Transportation?	As stated in Section 3.3.4.1 of the Draft PEIR : "About 5-10 permanent employees would be required to serve the Proposed Project during operations and maintenance." Section 2.8 provides a further breakdown of that number: "The wastewater operations team would include…: administrative and reception staff, accounting staff, three field crew/utility staff, and one on-site service technician."
Brian Anderson			6	Under what jurisdiction/license will Paradise Wastewater be in compliance with State Water Resources Control Board?	The treatment and discharge of the flow from the Town of Paradise will be handled under the City of Chico's current permits, as outlined in Section 2.4.2 of the Draft PEIR: "The Proposed Project… would not increase nor substantially decrease the availability of sewer service within the City or County (see more details in Section 2.5.1 Core Collection System and assessment of effects in Section 3.18.4, Impact Analysis [Utilities and Service Systems]). Therefore, the Town's connection falls within the requirements of this NPDES permit." Currently, the City's treated wastewater "is regulated in accordance with National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079081", as also stated in Section 2.4.2.
Brian Anderson			7	What city department will oversee Paradise wastewater operations?	The Town's Public Works department would oversee the operations of the Proposed Project. See Section 2.8 of the Draft PEIR: "The existing Public Works director would serve in a management role over sewer functions."
Ivan Garcia	Aug 5, 2022	W7	1	Good luck on the project. Would like to encourage and support the paving of a multi-use path on top of your sewer line with the ability to connect this new path to the intersection of Honey run/Skyway near Skyway golf park on the west and to the Paradise Memorial Trail in Paradise. I would suggest paving so that you can send emergency equipment up the hill to fully utilize the Skyway for emergency evacuations.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the Town's jurisdiction. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.

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Commenter/Agency	Comment Date	Letter No.	Comment No.	Comment Text	Comment Response
Joe Rees	Aug 5, 2022	W8	1	As natural disasters increase in frequency and severity, climate change is becoming harder and harder to ignore. The rise in these disasters along with an overall growing sense of crisis when it comes to the environment is causing an increase in climate anxiety. In fact, a recent Yale survey found that 70 percent of Americans are now “very or somewhat worried about global warming.” I thought this would be an interesting topic to cover in a guest article for your website. I would address the increase in climate anxiety and what your site visitors can do to relieve their stress while also helping the environment. What do you think?	Thank you for your email. I appreciate your offer. Right now we are focused on the Paradise Sewer EIR, but if we see a fit in the future, we will let you know.
Rick Hoddinott	Aug 8, 2022	W9	1	Along the proposed alignment for the export pipeline on Entler Avenue, what is the pipe constructed of and where will it be located along the roadway?	Thank you for your questions. Section 2.5.2 of the Draft PEIR explains that the Export Pipeline System would be located within the Butte County right-of-way on Entler Avenue. As stated in Section 2.5.2.3, "the following materials are anticipated to be used on the Export Pipeline System construction: • PVC pipe and miscellaneous fittings • Concrete maintenance holes • Precast concrete cylinders for the Transition Chamber, the Flow Control and Metering Structure, and associated mechanical and electrical equipment for installation at each of the two structures • Metal carrier pipe at each of the five trenchless crossings • Temporary and permanent paving (asphalt) • Backfill material"
Rick Hoddinott			2	How will the project address nearby wells which may be located near the proposed alignment?	As stated in Section 3.10.1.4: "Historical use of high-density septic systems and leach fields in Paradise have resulted in surface and groundwater contamination". Because it has been shown that septic systems can lead to "effluent in water supply resulting in degradation of water quality" (Section 3.19.1.4), implementing a sewer system would lessen the risk of contaminating nearby well water quality. All pipelines will be subject to inspection and maintenance as outlined in Section 2.8 of the Draft PEIR. Specifically, per Section 2.8 "The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Systems General Order, or SSSGO) was adopted by the SWRCB in May 2006. The purpose of the SSSGO was to provide a consistent statewide approach for reducing sanitary sewer overflows (including leakages). Per the SSSGO, and subject to its terms, the Town will need to develop a sewer system management plan. The sewer system management plan will include policies, procedures and activities covering the planning, management, operation and maintenance of the collection system. As part of this sewer system management plan, the Town must also develop and implement an overflow emergency response plan to identify measures to protect public health and the environment." Additionally, the Proposed Project would not impact the availability of water in nearby wells. Section 3.10.4.2 of the Draft PEIR states that construction of the Proposed Project "would not cause a new deficit in aquifer volume or a lowering of the groundwater table" and that "no impact would occur on groundwater supply and recharge during operations and maintenance." Also see responses to Ripley's comment #L10-7.

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Rick Hoddinott			3	Was the old railroad (Old Sacramento Northern) right of way considered for the pipe alignment in lieu of Entler Avenue?	The specific route you propose would not reduce any environmental impacts of the chosen Entler Avenue Alternative, and therefore, was not analyzed in the Draft PEIR. As stated in Section 5.1.1 of the Draft PEIR, "CEQA Guidelines Section 15126.6(a) states that 'an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project.'"
Rick Hoddinott			4	During construction, how will the project address temporary traffic control along Entler Avenue, considering CHP uses the roadway as direct access.	The Proposed Project includes implementation of mitigation measure MM-HAZ-6: Traffic Management Plan to reduce potential traffic impacts during construction. The traffic management plan will be enforced by the Town and/or contracted construction manager hired by the Town for the project and will include requirements such as: Schedule truck trips outside of the peak traffic hours, Store all equipment and materials in designated staging areas, Install traffic control devices where traffic conditions warrant, Coordinate all construction activities with the emergency service providers in the area, and Post notices and/or appropriate signage to notify the public of upcoming construction activities. Refer to Section 3.9.4.6 of the Draft PEIR for a detailed description of MM-HAZ-6: Traffic Management Plan. As discussed in 3.9.4.6, "per the SSSGO, and subject to its terms, the Town will need to develop a sewer system management plan. The sewer system management plan will include policies, procedures and activities covering the planning, management, operation and maintenance of the collection system. As part of this sewer system management plan, the Town must also develop and implement an overflow emergency response plan to identify measures to protect public health and the environment". Please also see response to Comment L7-1 from the Butte County Public Works Department.
Vicki Taylor	Aug 8, 2022	L2	1	I am so happy to see this project going forward. As a 36 year resident of Paradise I am well aware of all the projects that have fallen thru due to lack of sewers or septic capacity. I look forward to seeing new businesses in Paradise that were made possible because of the sewer project. The entire town population will certainly benefit, even if they are not directly connected.	Thank you for your input. The Town is considering all comments in preparation of the Final PEIR.
Anonymous	Aug 8, 2022	L3	1	Sounds good. Build it.	Thank you for your input. The Town is considering all comments in preparation of the Final PEIR.
Tod Kimmelshue	Aug 8, 2022	L4	1	Could the pipeline go west on the unimproved portion of Edgar Ave instead of Chico Ave. Then north to Taffee. This would save us from having to destroy a paved road (Chico Ave). I understand those are public right of ways.	Thank you for your question. City ownership of the unimproved portion of Edgar Avenue could not be confirmed. Additionally, the specific route you propose would not reduce any environmental impacts of the chosen Entler Avenue Alternative, and therefore, was not analyzed in the Draft PEIR. As stated in Section 5.1.1 of the Draft PEIR, "CEQA Guidelines Section 15126.6(a) states that 'an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project.'" We will keep your suggestion in mind as the project enters the next phase of design.

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Ronald Lassonde	Aug 10, 2022	W10	1	I am very impressed with the due diligence that the Paradise Town Staff has put into the Sewer EIR. The Sewer is absolutely necessary for businesses to rebuild in our Down Town. A rebuilt Down Town is critical to the overall recovery of our town. We need the PEIR approved as soon as possible so we can move forward and rebuild our Town.	Thank you for your input. The Town is considering all comments in preparation of the Final PEIR.
Mandi McKay	Aug 10, 2022	W11	1	Chico Velo supports the Town of Paradise and the Sewer Project and encourages the project or project sponsor to include the paving of a multi-use path for bicycles and pedestrians on top of the proposed project. Currently, Skyway is not a safe route for bicyclists or pedestrians traveling to or from Paradise. This project provides a unique opportunity to solve dual challenges of meeting the need for wastewater infrastructure and also providing a safer, more direct route between Chico and Paradise for bicyclists and pedestrians. If the new multi-use path followed the sewer line all the way to Southgate Lane on the East side of Hwy 99, it would connect users to the existing Midway bike path on the West side of 99. Additionally, a multi-use path could enable emergency equipment to drive up the path and allow Skyway to be fully utilized as an emergency evacuation route. Thank you for the consideration- please let us know if you have questions or if Chico Velo can provide additional support.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Richard Smith	Aug 10, 2022	L5	1	I own a 20 acre walnut orchard at 3662 Hegan Ln. Chico cross from Fimple/Hegan intersection. PG&E installed a new gas line on the north side of Hegan (2-3 ft.) north of edge of pavement. Where is the sewer line going to be placed in my area, under Hegan Lane? north side of Hegan Lane or south side of Hgean Lane? If on the same area as PG&E gas line, what is the minimum distance from gas line? What is the diameter of sewer line? My concern is if this trenching will kill the walnut trees/root system? or if trees will have to be removed for the trenching?	Thank you for your questions. We appreciate your concerns. The Proposed Project would not remove any trees during trenching. As stated in Section 2.5.2.1 of the Draft PEIR, the ridge gravity section (from connection with Core Collection Service to transition chamber located just before pipeline reaches Chico) will consist of two separate gravity sewer pipes: one 8 inches in diameter to handle low flows, and one 10 inches in diameter that would accommodate the build out flows. The pipeline would be placed under Hegan Lane, within the public right-of-way. The Town will be following all requirements of the PG&E Greenbook (https://www.pge.com/en_US/large-business/services/building-and-renovation/greenbook-manual-online/greenbook-manual-online.page)

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Andrew D'Lugos	Aug 11, 2022	W12	1	Currently, Skyway is not a safe route for bicyclists or pedestrians traveling to or from Paradise. This project provides a unique opportunity to solve dual challenges of meeting the need for wastewater infrastructure and also providing a safer, more direct route between Chico and Paradise for bicyclists and pedestrians. I fully support the plan of paving a multi-use path for bicyclists and pedestrians.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Kirk Monfort	Aug 11, 2022	W13	1	This would be a great opportunity to build a bike path to Paradise that would tie into the current Paradise Bike Path that goes from the Paradise Park up through Magalia. We never had a link from Chico to that Bike path although the right of way has been preserved from the Midway by Hagen Lane. It would also provide for service and inspection of the eventual sewer line. A Dual Use facility. There might also be transportation dollars available to do this.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Richard Stone	Aug 15, 2022	W14	1	JUST PAVED ALL OF SKYWAY, IT'S REALLY A NICE ROAD. I HOPE THAT THE NEW ROAD WILL NOT BE DUG UP FOR THE SEWER PIPE AND JUST PATCHED UP TO LOOK LIKE CRAP AS THE UNDERGROUND PGE SUB COMPANYS HAVE DONE IN TOWN. SHOULD HAVE WAITED ON THE PAVING UNTILL THE SEWER WAS PUT IN. THEN PAVE THE SKYWAY.	Thank you for your comment. Consistent with Town policy, paved areas that are impacted by the sewer project will be repaved in full lane widths, to avoid trench patchwork.
Joseph Mount	Aug 16, 2022	W15	1	I was informed that the treatment plant had treated water they wanted move . Would you please send me any test result on the treated water	Thanks for your inquiry. I understand your question is about the discharge/effluent from the Chico Water Pollution control plant. Although the Town of Paradise proposed to connect to the WPCP in the future, we do not yet have a connection (which is being analyzed in the current Draft PEIR). I would suggest you contact the City of Chico Water Pollution Control Plant directly to inquire about the effluent.
Brian Anderson	Aug 22, 2022	W16	1	What agency will have jurisdiction to provide collection services within the Town of Paradise?	Thank you for your comments on the Paradise Sewer Project. The Town of Paradise will own and operate the sewer system. We are currently scheduled to start Design and Right of Way in the near future, as funding becomes available, and the details of implementing the system will be identified at that time. Some specific details, such as the operator name license information, are not yet identified. Information on the current permit structure for the Town can be found in Section 3.10.1.6 of the Draft PEIR: "As required by Phase II of the NPDES, Butte County operates under a Small Municipal Separate Storm Sewer System (MS4) stormwater permit, which authorizes the discharge of stormwater to surface water in the state from small municipal separate storm sewer systems. The Town's MS4 Permit is currently operating under an approved waiver secured in 2021 due to the reduced population associated with the 2018 Camp Fire and other factors. See Section 2.4.2 for information on the Chico WPCP and associated NPDES permit."
Brian Anderson			2	Who holds the license to operate wastewater services within Paradise jurisdiction?	See above response to Comment #W16-1.
Brian Anderson			3	Who will maintain and operate the pump stations ?	The Town of Paradise is in charge of maintenance and operation of the collection system and pump stations.

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Brian Anderson			4	What methods of odor control will be employed at each pump station, wet well and other areas where wastewater may come in contact with atmosphere? Odor mitigation is of critical importance to our community.	The Proposed Project includes the use of odor control canisters, as stated in Section 2.8 of the Draft PEIR. Section 3.3.4.4 explains "Routine operations and maintenance activities will include periodic inspection of the odor control cannisters, which will be provided at the Export Pipeline System's flow control and metering structure." Section 2.8 further elaborates: "Physical on-site inspection and maintenance of the air release valves and odor control canisters would be done according to the maintenance protocols that accompany the devices, and would occur every 6 months to ensure optimal performance of these devices. Air release valves would be inspected to ensure they are operating properly. The odor control canisters would be replaced as needed when the carbon media becomes saturated and loses the ability to absorb odors." Additionally, see Section 3.3.4.4: "Once complete, the Proposed Project would provide an overall odor benefit, because it will replace existing septic tanks within the sewer service area that emit unpleasant odors."
Brian Anderson			5	24 hour response to spills and overflows is critical.	As stated in Section 2.8 of the Draft PEIR, the Town will "develop and implement an overflow emergency response plan… Pursuant to [the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems], the Town will be required to report sanitary system overflows... using an electronic reporting system. Review and approval by the City and County of the Town's proposed sewer system management plan would be required prior to start of operations." See Section 2.8 of the Draft PEIR for a list of minimum requirements of the Town's sewer overflow response plan.
Brian Anderson			6	An 18 mile pipeline with about a 1500 ft elevation loss, gravity flow management is critical and demands highly skilled personnel.	The proposed Export Pipeline System includes segments of both gravity flow and pressurized flow. See Section ES1.5.2 of the Draft PEIR to see the sub-components of the Export Pipeline System. The wastewater operations team will include 5-10 permanent employees, including three field crew/utility staff and one on-site service technician, as outlined in Section 2.8.
Steven Cismowski	Aug 22, 2022	W17	1	I am writing in opposition to the proposed Paradise Sewer Project. Given the increase of ground water concerns in the north state, coupled with the impacts the current and projected drought cycle is having on our groundwater resources, this project is perilously flawed.	Thank you for your input. The Town is considering all comments in the preparation of the Final PEIR. We appreciate all viewpoints and opinions expressed by our community. We discuss groundwater impacts in Section 3.10.4 of the Draft PEIR. (p.268 Butte Co Policy W-P1.8: The County supports conversion from septic systems to public sewer service, where feasible). See also responses to Ripley's comment letter #10.

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Commenter/Agency	**Comment Date**	**Letter No.**	**Comment No.**	**Comment Text**	**Comment Response**
			2	Information is needed regarding the projected increase in size of the current Chico Wastewater Treatment Plant in order to accommodate this increase in treatment. Keeping in mind Chico's current growth-rate and several other LARGE development projects that will also increase demand on this facility - Valley's Edge and Barber Yard, this facility will need to expand, but to what extent?	As stated in Section 3.18.4.1 of the Draft PEIR: "The Regionalization Planning Report for the Paradise Sewer Project determined that the Chico WPCP has adequate capacity to serve the Proposed Project's projected demand and commitments, in addition to serving the City's service area within its jurisdictional boundaries (Carollo Engineers 2022)… Based on these factors, the Proposed Project would not stress the capacity of the current system. The Proposed Project would not require the construction or relocation of wastewater facilities, nor would it require expansion of the existing Chico WPCP facility." This section goes on to outline in further detail: "The Chico WPCP… has an existing capacity of 12 mgd with future expandability of up to 15 mgd. The annual average flow coming into the Chico WPCP currently is 6.3 mgd. The Proposed Project would add an additional 0.109 mgd of wastewater to the Chico WPCP influent at the time of initial connection (estimated for 2026) and a maximum of 0.464 mgd at full build-out (estimated for 2057) and would not increase or decrease the availability of sewer service within the City or County. " Further, as discussed in Section 2.4, "due to estimated future wastewater flow increases to the Chico WPCP based on the City's current and future population, including the estimated Town sewer discharge in 2026, the City would need to implement a project at the WPCP, consisting of the addition of a fourth secondary clarifier. This clarifier would be installed within the footprint of the existing plant, adjacent to three existing secondary clarifiers. The fourth clarifier is required whether Paradise connects to the Chico WPCP or not. Considering the Town's maximum of 0.464 mgd flow anticipated to connect to the City's WPCP in 2026, the fourth clarifier would be needed in 2028. Without the Town's additional flow, the fourth clarifier is needed in 2029. Finally, Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement.
			3	Information and analysis are needed to fully understand the impacts of removing the equivalent of 1/8th of Big Chico Creek's average annual flow out of the current hydrological cycle based on projected peak flow at sewer build out. The long-term impacts of effectively pumping that much water out of the hydrological cycle helping feed local aquifers and creeks (chiefly, Butte Creek, the last viable salmon run off the Delta river system) is unconscionable. Paradise, pre-Camp Fire, was renowned for its forest, largely of Ponderosa pine, growing at lower altitudes than commonly encountered. The additional ground water these trees received from leach lines, not to mention additional nutrients, helped support this rich forest. Taking that life support away will certainly forever change the forest of Paradise's future canopy. Property owners wishing to replicate that forest will need to pump even more ground water to use in their landscapes further exacerbating the drying of downstream aquifers.	The Proposed Project does not include any pumping of groundwater. We understand you are referring to the removal of leach fields and the presumed loss of water to the local system. The Paradise Irrigation District (PID) supplies water to the Town of Paradise, as demonstrated in Section 3.5.1 of the Draft PEIR. From 2022 PID UWMP: "PID overlies an area with fractured rock aquifers as the only potential groundwater supply. These types of aquifers are not expected to provide a significant source of water". At the time of plan preparation, PID is not within a designated basin and not subject to compliance with the Sustainable Groundwater Management Act (SGMA). Big Chico Creek average annual flow is 300 cfs (https://sacriver.org/explore-watersheds/eastside-subregion/big-chico-creek-watershed/#:~:text=Records%20show%20that%20the%20average,during%20winter%20storm%20runoff%20events.), or 139.9 mgd (https://www.convertunits.com/from/cfs/to/million+gallon/day+[US]). At the Project's proposed full buildout, which may not occur until 2057, the projected flow would be 0.464 mgd, which is 0.3% of the Big Chico Creek average annual flow, not 1/8th.

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			4	The proposed path crosses three surface flow creeks (Butte, Comanche and Little Chico) that countless wildlife (and residents) relies on for sustenance and recreation. While the current engineered solution for these crossings may provide sufficient cover, over time, erosion will continue to drop current creek elevations eventually exposing these lines making them vulnerable to damage and leakage.	The proposed pipeline path does not cross surface creeks; it goes underneath them at a minimum depth of 20 feet below the creek bed surface (as stated in Section 2.5.2.2 of the Draft PEIR, and shown in Figure 2-14). Further, it was determined that "Operation and maintenance activities… would not include ground disturbing activities that could expose or disturb soil. Therefore, operation and maintenance of the Proposed Project would not result in substantial soil erosion or the loss of topsoil" (Section 3.7.4.2). The Town's sewer system management plan, outlined in Section 2.8, will contain a sewer overflow response plan to respond to damage or leakage of the pipeline system, including the following minimum requirements: "Proper notification procedures so that the primary responders and the regulatory agencies are informed of all overflows in a timely manner;... Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Town's sewer overflow response plan and are appropriately trained to do so;... A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the US and minimize or correct any adverse impact on the environment; The Town Public Works Department would have on-hand the equipment and spare parts necessary to rapidly implement a repair."
			5	The system will require frequent clean out and regular servicing in order to remain functional. To fail to do so could result in calamitous disaster and contamination of numerous entities (rivers, creeks, farmland, etc.). Encumbering future municipal operations with this laborious task over such a long pipeline will certainly result in failure and/or increased costs to the consumer. There is simply no way to guarantee that funding for this team of pipeline workers and equipment will be sustainable.	Section 2.8 of the Draft PEIR includes inspection, monitoring, and maintenance procedures that will be included in the Town's sewer system management plan, which is required to comply with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. Procedures that relate to clean out and regular servicing include, but are not limited to, the following: "Inspections of the Core Collection System and the Export Pipeline System would occur one to two times per year, depending on deposition observed within the system… As needed, based upon the results of the camera inspections, the pipelines would be flushed to push deposited material farther down the pipelines to the Chico WPCP… Physical inspection and maintenance of instrumentation would occur monthly according to the maintenance protocols that accompany the instruments." Funding for operations is outside the scope of this PEIR. As commenter provides an opinion on future funding availability with no reference, the Town can not respond to the final sentence.
			6	Paradise's septic waste system served to provide a governor to check unbridled growth. Removing that check, will certainly further increase Paradise's growth potential resulting in an escalating list of long-term impacts for future Butte County residents. The increase growth potential will make future fire suppression impossible, trigger roadway expansion, increase sprawl and further tax our limited natural resources, most acutely, our water resources.	We appreciate all viewpoints and opinions expressed by our community; however, since this comment consists of strictly opinion on future growth potential with no supporting evidence, the Town has no response to the commenter's thoughts. However, growth inducing impacts in the Town have been analyzed and are outlined in Section 4.4, and it is concluded that "Any inducement of the population growth that might occur as a result of the Proposed Project in the shorter term would be a return and/or regrowth and repopulation toward pre-fire levels. Any growth beyond pre-fire levels that could occur in the longer term would be consistent with the *Town of Paradise 2022-2030 Housing Element Update* (Town of Paradise 2022a). This growth would be limited by (1) the current boundaries of the Town, (2) the capacity of the Proposed Project infrastructure, and (3) the Chico WPCP operational (disposal permit allowance) and existing plant infrastructure (facilities limitations) capacity." Further, as noted in multiple locations in the Draft PEIR, this CEQA effort is limited to within the Paradise town boundaries and does not allow for sewer connections outside of the Town.
			7	This country has a rich history of failed environmental engineered solutions to current challenges. Measures like this start out seemingly a "good idea at the time" only to create unforeseen impacts for future generations to solve.	We appreciate all viewpoints and opinions expressed by our community.

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			8	I encourage you to reconsider grandfathering in previous property-owner's septic systems to allow our neighbors who have suffered so much to return to their homes and preserve the future of Paradise by ensuring large developers a toehold to urbanize our beloved mountain communities.	The scope of the Proposed Project is intended to cover the Core Collection System, and at a programmatic level, cover the potential for future connections at the request of property owners outside of the Core Collection, yet within the Town limits, which is considered in the Extended Collection System assessment. This includes an opportunity for other Town property owners to apply to connect to the sewer system in the future, following buildout of the export system. Further, Section 1.1.2 of the Draft PEIR states: "The overall purpose of the Proposed Project is not to serve the entire Town; areas will continue to exist that are served by the existing Onsite Wastewater Management Zone. Instead, the Extended Collection System would provide an opportunity for other property owners within Town limits to connect."
Ryan Duncanwood	Aug 22, 2022	W18	1	ITS GOOD	Thank you for your input. We appreciate all viewpoints and opinions expressed by our community.
Bud Linggi	Aug 22, 2022	W19	1	I lived behind the Optimo Lodge from o/a 1948 until I went into the Service, 1960. Of course, along the way of those years, my dad went to Chico, down Neal Road, for the Crocker Bank and I might have accompanied him and used a restroom after he made the deposit. By this time, local dogs wiped out our chickens and after the Crocker Bank, we went to a Chico outfit that gave us the number of cleaned chickens we needed. The following week our destination was some place in Oroville for the steaks we needed for the next week, a long trip down Clark Road was used. So when talk of sewers for Paradise comes up, I remember the leech fields where I got my fishing worms...	Thank you for your input. We appreciate all viewpoints and opinions expressed by our community.
Diane Pajouh	Aug 22, 2022	W20	1	I would like to request that we do not damage our new Skyway Roads that have just been installed/updated. Thank You.	Repaving of roadways would occur consistent with Town policy, such that Town paved areas that are impacted by the Proposed Project will be repaved in full lane widths, to avoid trench patchwork. For those roadways not within the Town, Butte County or the City of Chico would have jurisdiction over any repaving requirements for those sections of road.
Mike Petersen	Aug 22, 2022	W21	1	Has the town looked into putting turbines inside the 18 mile pipeline to generate electricity? I believe this has been done in other cities and might give Paradise a chance to control our own energy independence.	Thank you for your input. This is not currently part of the proposed project, as directed by Town Council.
Michael Schwartz	Aug 22, 2022	W22	1	Not the best idea they have. For too many reasons. I vote no.	Thank you for your input. We appreciate all viewpoints and opinions expressed by our community.
Gary Wolt	Aug 22, 2022	W23	1	What policy is in place to control cost increases in the future?	Thank you for your comments and questions. The City of Chico will be the wastewater operator for the Chico Water Pollution Control Plant, and the treatment portion of the fees will be administred by the City. The Intermunicipal Agreement (IMA) between the Town of Paradise and the City of Chico addresses noticing for costs, which are compliant with all public noticing requirements for future rate increases. The Principles of Agreement, which will inform the IMA are available on the project website at paradisesewerproject.com.
			2	Will the town of Paradise be subsidizing Chico's wastewater system, with no control on whatever increase they want or need. The ability to justify any price increase seems to be a normal phenomena.	The Town of Paradise and the City of Chico performed an assessment of the value of the existing City of Chico Water Pollution Control Plant, which are included in the Technical Memorandum and reports located on Paradisesewer.com. The connection fee identified pays for the value of the plant at the time of connection, and accommodates the Sewer Service. See response to Comment #W23-1 for more information.

Paradise Sewer Project PEIR Comment Matrix					
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			3	Are they incorporating any valving in the design for emergency use in the event that the pipeline or Chico's waste water facility experiences a catastrophic failure?	Yes, appropriate valving is being provided. As part of the discussion under *Flow Control and Metering Structure* in Section 2.5.2, in description of transition chamber, it is stated: "The first below-ground chamber would be dry (the wastewater would remain within the pipe that is exposed within the chamber) and would contain a magnetic flow meter and a pressure gauge on the pipeline, with the chamber being the access point to this flow meter. The second chamber would be wet, with the wastewater discharging into the chamber via a modulating plug valve. A modulating plug valve would keep the Transition Chamber and Gravity Force Main Sections full, to maintain the hydraulic function of the Gravity Force Main Section.
			4	Would valving be in place to allow Paradise to construct there own wastewater facility, or have a load out facility at a future point in time?	No, there is no valving being provided for a future Paradise wastewater facility, nor is any accommodation being provided for a load out facility, as these fall outside the scope of the proposed Project..
Matthew Carlson	Aug 23, 2022	W24	1	I support the sewer project and along with it believe a multi use path would be an invaluable asset to the community. It would encourage community health and growth. Paradise lacks safe routes currently so this is needed.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Tony Catalano	Aug 23, 2022	W25	1	Please include a bike lane!	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Rob Williams	Aug 23, 2022	W26	1	Caltrans funded a bike riding tourism study and our Final Report identified several Signature Bikeway Routes i.e. East Bay Mud Pipeline. The report has an economic analysis of adding bike/walking paths to a local economy. See, BikeValleytoSierra.com	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Kevin Baxter	Aug 24, 2022	W27	1	I would like to mention my support for the addition of a multi use path along the Skyway during construction of the sewer line. This path would be of historic interest as it would continue the "line" used by trains in the past as well as provide a safer route for non motorized travel to and from Paradise via the Skyway. The path would also be a viable option as an alternative route for emergency vehicles or as an additional route of evacuation, should the need arise. Thank you in advance.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Steve DePue	Aug 24, 2022	W28	1	It would be an ideal time to put in a wide paved bike trail up to Paradise on the skyway corridor. You could also put in fiber optical cable for internet use along the same right of way with the sewer project. Take advantage of multiple uses for the construction project on the sewer system. Also, the paved bike path provides superior access to the fiber optical cable and sewer lines when repairs or access is needed. Perhaps power could also be delivered from the Chico area to Paradise in an underground line rather than on poles! Planning makes for a better future!	Thank you for your comment.The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.

Paradise Sewer Project PEIR Comment Matrix					
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Andrew Keller	Aug 24, 2022	W29	1	I support the project and encourage the project to include a multi use paved path for bikes and pedestrians on top of the sewer project. Such a path could be used by emergency equipment to drive up the hill even while Skyway itself is functioning as a one-way downhill evacuation route. This is a great opportunity to also include new regional multi-use non-motorized path to connect Chico and Paradise from the intersection at Honey Run and Skyway to the Paradise Memorial Path	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
William Llamas	Aug 24, 2022	W30	1	Seems the Draft PEIR a done deal? So confusing. We need a more comprehensive review other than a commission and/or Board. A citywide meet up for face to face speaking is necessary. And are there any ideas on building UP in downtown. Apartment buildings may be most suitable for many residents. What about beautification projects with help of citizens? So many ideas and no leadership. Time is a wasting and we should have already planted thousands of trees.	Thank you for your input. The PEIR provides the environmental review for the proposed Paradise Sewer Project. Density (multi-family housing or vertical construction) becomes more feasible with a sewer system, and is one of the benefits of the sewer project. Section 1.3.1 of the Draft PEIR describes the public notices, scoping meetings, and public review meetings that have taken place so far: *"Due to restrictions under State of California Executive Order N-33-20, scoping for the Proposed Project occurred under Coronavirus Disease 2019 (COVID-19) restrictions; therefore, electronic postings, virtual meetings and physical mailings were the appropriate venues for information distribution… The Town hosted two virtual public scoping meetings to seek public and stakeholder input on the environmental scope of the Proposed Project. The first virtual public meeting took place on May 13, 2021, and included 29 public attendees. The second virtual public meeting took place on May 25, 2021, and included 14 public attendees. Public meeting attendees were encouraged to ask questions and provide input on the Proposed Project and process."* Beautification projects and other potential Town projects are not included in the scope of this sewer system assessment, but all comments are being reviewed by the Town for future opportunities.
Bruce McLean	Aug 24, 2022	W31	1	I live along the Little Chico Creek bike path and have cycled to Paradise up the Skyway at least once a month over the last 7 yrs. It was very disappointing not to see a dedicated two-way bike path installed when PG&E put their electrical infrastructure underground. Then it was extremely disappointing when a dedicated bike path was not installed when the Skyway was recently paved. Let's not strike out by not creating a dedicated bike path when the sever line is extended from Paradise to Chico.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Jeri Valdez	Aug 24, 2022	W32	1	I decline the project in it's entirety! If it does not service ALL main roads as well as the WHOLE community. What is the point? Makes no sense at all.	Thank you for your input. We appreciate all viewpoints and opinions expressed by our community and the Town is considering all comments in preparation of the Final PEIR. The Proposed Project includes the opportunity for property owners outside of the initial Core Collection System to connect to the sewer system. See Section 2.5.3 of the Draft PEIR: "The Extended Collection System would be an extension of the Core Collection System that would allow collection of sewage from parcels outside the Core Collection System, within the Town limits."

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Commenter/Agency	**Comment Date**	**Letter No.**	**Comment No.**	**Comment Text**	**Comment Response**
Kevin Cook	Aug 25, 2022	W33	1	I support the project and encourage the project to include a multi use paved path for bikes and pedestrians on top of the sewer project. This path could be used by emergency equipment to drive up the hill even while Skyway itself is functioning as a one-way downhill evacuation route. This is a great opportunity to also include new regional multi-use non-motorized path to connect Chico and Paradise from the intersection at Honey Run and Skyway to the Paradise Memorial Path. I am an avid local cycler and this would only encourage more cyclists to come visit and recreate in our community.	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
Kim Hunter	Aug 25, 2022	W34	1	I am preparing comments on behalf of the Butte County Public Works Department. Is there an email address that can be used to send comments on Monday? Thank you, Kim Hunter, Project Manager Land Development Division Butte County Public Works Department	Kim, I received your email about how to submit comments for Monday. You can send them to this group via email [email addresses included: Stanley, Ashley <astanley@townofparadise.com> , Curtis, Colette <ccurtis@townofparadise.com>, Mattox, Marc <mmattox@townofparadise.com>] or submit a hard copy in the mail. Thank you, Ashley
Monica Zukrow	Aug 25, 2022	W35	1	I support the project and encourage the project to include a multi use paved path for bikes and pedestrians on top of the sewer project. Such a path could be used by emergency equipment to drive up the hill even while Skyway itself is functioning as a one-way downhill evacuation route. This is a great opportunity to also include new regional multi-use non-motorized path to connect Chico and Paradise from the intersection at Honey Run and Skyway to the Paradise Memorial Path. Thanks for your consideration!	Thank you for your comment. The Proposed Project includes a sewer pipeline and wastewater collection system. The design and construction of pedestrian or bicycle facilities are outside of the scope of the Proposed Project. Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town. Your recommendations have been noted and will be referred to the County as a potential feature for coordination with future project opportunities.
David Copp	Aug 26, 2022	W36	1	It seems as though the Draft PEIR has been reasonably well considered. We will never know all of the impacts in advance, but the benefits of the project seem to outweigh the impacts, and it needs to progress.	Thank you for your input. We appreciate all viewpoints and opinions expressed by our community.
			2	We think the sewer coverage area should be expanded. We have a multifamily property at 5830 Greenthumb Lane, which is just outside of the coverage area, even though it covers the area essentially across the street (Elliott Rd). We would like to have our property included, please. Thank you	The Sewer Service Area for the Core Collection System includes the commercial core and most densely populated area of the Town. Properties outside of the Core Collection System coverage area and within Town boundaries are intended to have the option to consider connecting to the sewer system as part of the Extended Service Area.

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Ward Habriel	Aug 26, 2022	L6	1	First, the responsibility of Government is the safety and protection of its citizens; our basic rights of life, liberty and property. When you meet those basic rights; then, and only then, do you look for other benefits to the community that you govern. So, the question is about the Town Govt. meeting the basic needs of the folks in Town. The basic services for public safety are police, fire, and emergency medical services. Then ask yourself if you feel safe with the current facilities and staffing. (Remember, the third fire station was never built, the hospital is gone, and our cops are stretched thin). And there is no plan for change in these vital areas. Having a sewer does not correct or improve the absence of the above. We are no safer by having a sewer!	Thank you for your input. This comment has been considered, and is outside the scope of the PEIR.
			2	Second, there is no good justification to change from a septic system to a sewer system. Septic systems have worked extremely well for many rural communities for many many years. In Paradise, we have had very few failed or questionable septic systems; but let me just highlight a few examples of addressing a 'questionable' system. Cozy Diner: The Town, (based on limited space concerns) wanted to close the restaurant; there was no room to extend the leach field and the volume produced at the diner was exceeding the capacity of the existing septic system. Cozy management found a solution, agreed to spend a lot of money, and made the necessary improvements. Next, the Holiday Market leach field (it is under the asphalt parking lot) (which is not the best location for a leach field); Holiday was willing to spend a lot of money to dig up the old system and replace it with deeper drainage. It works just fine. Next, the MacDonalds Restaurant on Clark Rd. Here was another "questionable" leach field, and there was not enough property to expand it. MacDonalds Corp. increased the parking lot size to accommodate additional leach field space (at a substantial cost). And lastly, the new Safeway Store on Skyway, they wanted to add a gas station and restaurant on the property, but there wasn't enough space for an extended leach field. So, Safeway Corp. bought additional acreage to be able to accommodate a larger leach field. Each of these examples show that whatever the concern is from the Town about a septic system, there was a remedy, if the property owner was willing to spend the dollars and improve the system. Have you ever heard of someone having an 'ailment' of any kind, because the septic system failed? Septic systems are not unsafe or unhealthy. There are other CA communities with similar concerns that have never been forced by the local Govt. to re-do their septic systems.	We appreciate all viewpoints and opinions expressed by our community. Section 2.3.1 *Project Need* includes information from the Centers for Disease Control and Prevention (CDC), including: "Research on septic system failure is limited, but some research indicates that septic systems should be studied more carefully. “In 2013, the Centers for Disease Control and Prevention (CDC) looked at nearly four decades of data on disease outbreaks linked to drinking untreated groundwater. The data was drawn from 248 outbreaks that were reported to the CDC between 1971 and 2008. Of the 172 cases in which a source of contamination was determined, 67 percent were linked to a septic tank or an improperly designed well” (Circle of Blue 2015)." Further, Section 2.3.2 *Project Objectives and Goals* provides references and information from the State Water Resources Control Board and engineering findings that demonstrate the value of changing to a contained sewer system. In addition, examples noted in your comment focus on very large corporate entities that have surplus resources; however, small businesses that would also support diverse economic growth in the Town may not have the capital to fund such property expansions that, as you note, can be quite substantial in cost. Therefore, small businesses may not be able to open new retail stores or restaurants, which can then limit opportunities for regrowth of the downtown retail area.

Paradise Sewer Project PEIR Comment Matrix					
Commenter/Agency	**Comment Date**	**Letter No.**	**Comment No.**	**Comment Text**	**Comment Response**
			3	Looking at the benefits to having a sewer system, is not based on what problems you get rid of (see above); but consider the possible benefits to collection sewerage, treating it, and using the effluent. Many folks thought that if the Town got some benefit from having a sewer system, then maybe it was a good idea. There are samples all over CA where treated wastewater is used for irrigation (especially on large grass areas - schools, playgrounds, golf courses, cemetery districts, etc.) Anywhere that reclaimed water can be used reduces the amount of potable water used. Some communities have plumbed all the fire hydrants with treated wastewater. But that is not the plan for Paradise (there was an original plan to have local treatment), but the current proposal is to run a pipe (nearly 20 miles) from Paradise to Chico. The wastewater from Paradise would end up at the Chico treatment plant. The discharge of treated wastewater goes into the Sacramento River; ergo, neither Paradise nor Chico get a benefit from our wastewater.	We appreciate all viewpoints and opinions expressed by our community. This is a statement of opinion and the subject matter is responded to in depth in the commenter's remaining responses and in responses to Mr. Ripley below.
			4	And, there are costs that go along with having a sewer system: a cost to get hooked up (including, the digging up the street), a cost to discharge, a permit fee (annually or monthly), and, is that cost then passed on to consumers?	The Town is seeking grant funding for the design, right of way and construction phases of the project. The sewer pipe and lateral to the property line will be covered by the project costs. When the septic system switches over to sewer, the cost to connect the commercial facility to the sewer system will be borne by the parcel owner. The parcel owner will also be responsible for monthly sewer service fees once connected to the sewer. However, costs are not detailed in the PEIR, as they will be determined by the Town once the PEIR is approved and funding is identified.
			5	Would all the commercial facilities with new sewers raise thier prices to cover the costs of using a sewer?	The Town is seeking grant funding for the design, right of way and construction phases of the project. The sewer pipe and lateral to the property line will be covered by the project costs. When the septic system switches over to sewer, the cost to connect the commercial facility to the sewer system will be borne by the parcel owner. Commercial facilities would determine pricing for their merchandise/services.
			6	Would Paradise folks go to Magalia (with no sewer) and shop to avoid the price increases in Paradise?	We appreciate your thoughts and opinions, but can not forecast customer behavior, nor what commercial owners will charge for services.
			7	Wouldn't it be nice if there was a plan to use treated wastewater here in Paradise to irrigate our new golf course?	This comment has been considered, and is outside the scope of the PEIR.
			8	Other comments: there are septic systems in CA, where there is no requirement for an inspection every ten years.	This comment has been considered, and is outside the scope of the PEIR.
			9	There is a summary of numerous comments/complaints I received since the question of a sewer for Paradise came up seven plus years ago. But, remember, this happened before and the Town Council was 'recalled'!	This comment has been considered, and is outside the scope of the PEIR.

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Commenter/Agency	Comment Date	Letter No.	Comment No.	Comment Text	Comment Response
Maurine Hansen	Aug 26, 2022	W37	1	I just finished paying off a $22,000.00 hookup bill in another address. We were not in the zone to be on the first to hook up from septic, to sewer, so were required to wait. We were not able to hook up, but years later we were required to and the price hugely increased. We were told the cost would be even more if we didnt do it "now". I now live in a zone that is not part of the first hook ups. Does that mean another huge financial cost to me, in the future?	The Town is seeking grant funding for the design, right of way and construction phases of the project. The sewer pipe and lateral to the property line will be covered by the project costs. When the septic system switches over to sewer, the cost to connect the commercial facility to the sewer system will be borne by the parcel owner. The parcel owner will also be responsible for monthly sewer service fees once connected to the sewer. Costs for connections within the Core Collection System area or at the Expanded Collection System area are not evaluated in the PEIR, as they will be determined by the Town once the PEIR is approved and funding is identified.
Roger Cole	Aug 28, 2022	W38	1	The proposal to hook Paradises new sewer system to an expanded Chico sewer water treatment system at the Sacramento River sounds good at first. It saves money and utilizes efficiently excess capacity of said water treatment facility. It also simplifies Paradise's process into a pipeline construction project. However, as we all have noted from the years of the long ongoing drought, the foothills need every drop of water they can get and /or save or reuse. This plan will export millions of gallons of water from Paradise, and therefore is not good. Instead the wastewater should be treated and returned as close as possible and feasible to the water area it comes from. The single best feature of the existing septic tank/reach line system has been retention of treated wastewater in the ecosystem. A similar goal can be accomplished by constructing a primary sewage treatment plant in Paradise followed by a final treatment in a constructed wetland polishing system. This will produce many local benefits. After the wetland the water can flow to another reservoir location or allowed to be absorbed into the ground or flow through a stream, other kind of recharge. The benefits of retaining water cannot be overestimated. Streams with added wastewater-effluent can improve water quality and support water re-use, while creating habitat and providing urban amenities The Cost–benefit analyses of stream-flow augmentation projects many times fail to account for the full value of ecosystem services provided, including renewed habitats and enhanced urban amenities. *(References provided in original attached letter)*	Thank you for your input. We appreciate all viewpoints and opinions expressed by our community. As required by CEQA (CEQA Guidelines Section 15126.6), the City has reviewed alternatives and examined thoe which meet the goals of the project and reduce the potential for environmental impacts. One of the goals of the Proposed Project (Section 2.3.2) is to address the public health threat by removing individual septic systems. Other goals discussed in the same section noted above, was to allow return of population, and to provide for affordable housing. The local treatment option has been reviewed a number of times (Section 2.2) and each time it has been determined that the regional connection ws recommended as the best long-term solution for the Town (Section 2.2.1). Therefore, in 2020, the Regional Board stated that "it is the Board's strong recommendation for the Town to conserve limited resources and focus its feasibility analysis on the regionalization option" (RWQCB 2020, as referenced in Section 2.2.2). Further, Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement.

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Butte County Department of Public Works	Aug 29, 2022	L7	1	1. Permitting Authority: The PEIR acknowledges that the details of the required permitting and agreements that will be needed for the construction and ongoing operations of the Export Pipeline System within the County right-of-way have yet to be determined. Table ES-1 summarizes the anticipated required project permits and approvals for agencies and jurisdictions (p. xxiv). However, the table does not specify permitting authority for Butte County. The need for obtaining encroachment permits for work within the County rights-of-way is discussed several times in the PEIR, including Section 1.5 *Issues to be Resolved* (p.10). Butte County is a Responsible Agency based on its discretionary approval power over certain aspects of the project including permitting authority which should be specifically recognized in Table ES-1.	As discussed in the Draft PEIR in Sections ES1 and 1.1, which indicate "Butte County… [is] considered [a] Responsible Agenc[y] under CEQA based on their discretionary approval over aspects of the Proposed Project and their utilization of this PEIR for their CEQA compliance. Specifically... The County will rely on this CEQA analysis to make its decision on project elements impacting County-owned and maintained rights of way". More specific language (see new bolded text below) clarifying Butte County's permitting authority has been added to the "Permit, Approval, or Clearance" column in Table ES-1 and Table 1-1 in the Final PEIR, to read: Approval for installation and operations and maintenance of the export pipeline and any appurtenant facilities located within County rights of way; specifically for encroachment permits within County rights of way.
			2	2. Impact HAZ-6 Impact and Analysis: Section 3.9 Hazards and Hazardous Materials does not appear to provide adequate discussion and analysis on how the proposed mitigation measures will reduce Impacts HAZ-6 and HAZ-7 to a less than significant level. Impact HAZ-6: Impair implementation of or physically intefere with an adopted emergency response plan or emergency evacuation plan Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires The Department requests that additional discussion and analysis should be provided in the PEIR to demonstrate how the proposed Mitigation Measures, specifically MM-HAZ-3, MM-HAZ-4, and MM-HAZ-5, will reduce the identified significant impacts to a less than significant level. For example, further discussion providing information on the importance of a Rapid Demobilization Plan and how rapid demobilization will be critical during an emergency would support the proposed mitigation measures.	In response to the comment, the following text has been added or updated to Section 3.9.4.6, Mitigation. **Per Section 3.9.2.3, any contractor on the project, whether in the Town, City or County, will be required to implement procedures defined in the Butte County Local Hazard Mitigation Plan Update, as adopted and annexed by the Town of Paradise. As stated in Section 3.9.2.3, The Butte County Local Hazard Mitigation Plan Update (Butte County 2019b) includes an assessment of the county's risk and vulnerability related to natural and other identified hazards and a comprehensive mitigation strategy which includes actions and projects designed to mitigate or reduce the impacts of those hazards and to increase community resiliency. The Proposed Project will be held to the strategies in the Butte County Local Hazard Mitigation Plan Update. In addition, the same section also refers to the Butte County General Plan 2030 (Butte County 2012), noting that the Town would be held accountable to multiple goals and associated policies related to hazards and hazardous material, such as: "Policy HS-P15.3: Emergency access routes shall be kept free of traffic impediments." Finally, Section 3.9.2.3 also states that the Town will be held to their own policies presented in drafts of the "Town of Paradise General Plan, Safety Element (2022) and Hazardous Waste Management Element (2022)". Policies within these elements include: Policy SP-1: New and unmitigated land use development shall not cause the police and fire protection services emergency response times to fall below the service levels established by this plan, and Policy SP-2: Through the development review process, adequate roads shall be required to be constructed and/or improved for emergency vehicle access, particularly in high wildland fire hazard areas. Proposed Project mitigation measures, discussed below support implementation of the County and Town policies by ensuring evacuation routes would not be blocked during an emergency, that emergency response services have access to major routes, which is critical during an emergency, and that there is a plan for rapid demobilization in a situation requiring evacuation.** Further, for each of the three noted mitigation measures, the following has been added to restate existing requirements prior to describing mitigation measure: **The Proposed Project will be held accountable to the Butte County Local Hazard Mitigation Plan Update and policies included in the Butte County General Plan and the Town's draft Safety Element (2022) and Hazardous Waste Management Element (2022).**

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			3	Both the Rapid Demobilization Plan and Evacuation Warning Procedures should be provided to Butte County Public Works for review as part of the encroachment permit application process.	In addition to the Town's commitment to the Butte County Local Hazard Mitigation Plan Update, per commenter's request, materials developed during implementation of MM-HAZ-4 (Rapid Demobilization Plan) and MM-HAZ-5 (Evacuation Warning Procedures) will be provided to Butte County Public Works during the encroachment permit application process.
City of Chico Public Works Department	Aug 29, 2022	L8	1	The City understands that the Paradise Sewer Project (Project) is a critical component to the Town of Paradise's (Paradise) overall Camp Fire recovery effort and that the design of the project is in an early phase. Given the scope of the Project, the alignment of certain segments of the proposed pipeline, the location of associated equipment located within or adjacent to the City limits and Sphere of Influence, and the pipeline's ultimate connection to the City's Water Pollution Control Plant (WPCP), we look forward to coordinating closely with Paradise during the design, construction, and implementation phases of the Project. Close coordination will be particularly important for numerous reasons, including, but not limited to: 1) Avoiding potential conflicts between the Paradise Sewer Project and the City's proposed infrastructure projects that are located along or adjacent to the Project's proposed alignment (e.g., the P-18 sewer trunkline segments located within the railroad grade in South Chico and within the Entler Avenue and Midway rights-of-way, the intersection improvements at Hegan Lane and Midway, etc.). 2) Ensuring collaboration regarding the design of those project components (e.g., the Transition Chamber located off lower Skyway, the Flow Control and Metering Structure proposed near the WPCP, and all connections to the City's existing and proposed facilities) that are located within or adjacent to the City to avoid and minimize the potential environmental impacts (soil contamination, water pollution, odors, etc.) that could result from system failures.	Thank you for your comments. The Town also looks forward to closely coordinating with the City during the design, construction, and implementation phases of the Project. The Town agrees that close coordination will avoid and minimize the potential environmental impacts that could result from conflicts during construction or system failures at new infrastructure. Further, as discussed in Section 2.8 Proposed Operations and Maintenance, "The... Sanitary Sewer Systems General Order... (SSSGO) applies to all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe... and would be overseen by the RWQCB during permitting the proposed project under the (SSSGO). Since the Town's collection system will have more than one mile of sewer pipe, and the Town will own and operate the collection system, the Town will comply with the SSSGO. Per the SSSGO, and subject to its terms, the Town will need to develop a sewer system management plan. The sewer system management plan will include policies, procedures and activities covering the planning, management, operation and maintenance of the collection system." It is anticipated that the Town, County and City will be coordinating as this plan is being developed. Further, Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement.
			2	The City appreciates Paradise's inclusion of the permitting requirements in the PEI R, including the Sanitary Sewer Systems General Order and associated conditions requiring the preparation of a Sewer System Management Plan and an Overflow Emergency Response Plan that will be both reviewed and approved by the City of Chico. These documents will provide the policies, procedures and activities covering the planning, management, operation, and maintenance of the collection system. In addition, these efforts will result in emergency response planning to identify measures to protect public health and the environment, particularly as they relate to an inadvertent release of sewage.	The Town agrees with the City's statements, and again, will be coordinating with the City during development of the Sewer System Management Plan. Further, the Town will abide by Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , which requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement.

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			3	According to the PEIR, wastewater studies prepared for the Town determined the Project export pipeline system design should be based on an estimated average wastewater conveyance and treatment need for the Paradise sewer service area to be 0.464 million gallons per day (mgd). Due to the conceptual nature of the inclusion of the entire Extended Collection System outside of the Core Collection System, as identified in Figure ES-1, it is unclear at this time if serving the greater area would have the potential to exceed the maximum design of 0.464 mgd. Any future expansions should be analyzed and agreed to by the City to prevent any unforeseen wastewater exceedances that could negatively affect pipeline and plant capacities.	The 0.464 million gallon per day estimated discharge from the Town of Paradise to the City of Chico Water Pollution Control Plant is the agreed upon discharge, and an effective capacity limit. The Principles of Agreement developed between the Town of Paradise and City of Chico, which are currently being drafted into an Inter-Municipal Agreement to be adopted by the Town Council and City Council, include the maximum discharge amount and methods in which this amount would be monitored and controlled by both the Town and City. In addition, the Principles of Agreement state "The Town and the City agree to prohibit future connections to the export pipeline in the portion of the pipeline that sits outside of the Town limits or City limit." (www.paradisesewer.com, 1st Draft Principles of Agreement version 7, 21-March-2022). Finally, the extent of area and associated flow that could be served by the sewer system within the Town (ie., the core collection system area alone, or expanded to include the extended collection system area) would be forecasted in advance to determine when and if the 0.464 million gallon per day allotment could be reached. At such a time, the Town of Paradise would approach the City of Chico in a similar fashion to determine if a mutual desire existed to accept additional flows from the Town based upon the City's treatment plant capacity, needed connection payments and other factors – similarly as the original 0.464 million gallon per day agreement is currently being negotiated.
			4	The City looks forward to collaborating with the Town of Paradise and its professional sewer design team in the development of the project and looking for partnership opportunities that will benefit both communities.	Thank you for your comments.
Laurie and Jim Noble	Aug 29, 2022	L9	1	*(handwritten letter - transcribed)* Public Information - There needs to be a very accessible public forum of information regarding the Town of Paradise Sewer Project. Very few people have participated and know of plans to date regarding this immense project. Blue Flamingo could be a group to widely disseminate information. There are numerous and very complex issues to deal with as this project moves forward. Residents should have opportunity for input.	Thank you for your comments and reference to Blue Flamingo. The Town has made information available on multiple platforms, to provide information to the community and as required by CEQA statute: 1) the Town has put up a website to include all information related to the Proposed Project (https://paradisesewer.com); virtual public scoping meetings were held in May 2021. 3) In support of the scoping meetings and corresponding comment period, social media and email blasts went out before and after the virtual meetings, postings were made in newspapers (Paradise Post and Enterprise-Record) and project information regarding the meetings and solicitation of public comments were posted at multiple public locations. Similarly, public meetings were held in August 2022 during public review of Draft PEIR. Many of the same outlets were used in this draft release outreach, but "live" public meetings, rather than virtual, were held in Paradise and Chico.
			2	*(handwritten letter - transcribed)* Water Retention: We are hearing from individuals a very strong concern regarding grey water and stormwater retention. Both have been a significant part of Paradise's groundwater for many decades. The installation of signal lights and reconfiguring the intersection at the top of Clarke Road directed stormwater runoff to be diverted from the triangle of land between Skyway Rd and Clark. Trees on that property died over the course of a couple of years. They were cut off from their supply of water. As streets throughout town are repaired and upgraded, will the storm drains immediately run off the ridge or be directed to catchment basins? What are the details of all the plans?	Thank you for your input. The Town is considering all comments in the development of detailed design.

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			3	*(handwritten letter - transcribed)* Future Economic Development/Commercial Development: is on hold until a sewer system is in place. What is the time line for installation of the system includiing connection to west of Chico Sewage treatment Plant? How does it fit in with rebuilds and repaving of roadways?	As included in Section 2.6 Proposed Schedule of the Draft PEIR, construction of the Core Collection System is proposed to be constructed between August 2024 and May 2026. The Export Pipeline System is proposed for construction between August 2024 and July 2026. The Extended Collection System would be constructed case-by-case and could occur 2026 through 2056. In terms of roadways, repaving would occur consistent with Town policy, such that Town paved areas that are impacted by the Proposed Project will be repaved in full lane widths, to avoid trench patchwork. For those roadways not within the Town, the County or Chico would have jurisdiction over any repaving requirements for those sections of road.
			4	*(handwritten letter - transcribed)* Cal Poly: water/design ideas presented by students in Spring of 2019 should be revisited. The(y) had some good ideas - how to deal with terrain elevations, as an example.	Thank you for your input. The Town is considering all comments in the development of detailed design.
			5	*(handwritten letter - transcribed)* Santa Cruz: converting from septic tanks to sewer system - abandoned tank --> sink holes - legal disclosures for property sales - Town of Paradise policy - need to deal with.	The Town is considering all comments in the preparation of the Final PEIR and development of detailed design.
			6	*(handwritten letter - transcribed)* Davis: Sewer Issues having to clean to keep system moving.	We appreciate all viewpoints and opinions expressed by our community.
			7	*(handwritten letter - transcribed)* Drought: Issues need to be considered. This is not just in Paradise, in Butte County, in the wester states, in North America, it is a global worldwide issue and needs to be dealt with now.	We appreciate all viewpoints and opinions expressed by our community.
			8	*(handwritten letter - transcribed)* Water Added: to make the sewer system flow clear to the Sacramento River area treatment plant is possilby inappropriate be it fresh potable water added or grey water.	We appreciate all viewpoints and opinions expressed by our community.
			9	*(handwritten letter - transcribed)* Pump up Sewage: from low lying areas of the community to the main lines may be restrictive and financially prohibitive.	Section 2.5.1 of the Draft PEIR provides the preliminary design for the Core Collection System: "The Core Collection System would consist of approximately 157,000 feet of 6- to 8-inch-diameter gravity sewers, 29,000 feet of 2- to 4-inch-diameter force mains, and up to 28 pump stations. The pipelines would be buried approximately 3 to 15 feet below the ground surface, depending on local topography and sewer system design features and constraints." These 28 pump stations would provide the necessary pressure to transition the sewage to the Export Pipeline System. There are no pumps included in design of Export Pipeline System, which depends on gravity flow.
			10	*(handwritten letter - transcribed)* Land installations: Another drought issue the Town of Paradise could and should deal with immediately is lawn development/ installation. Curtail or limit it immediately there is no water, Mount Shasta is bare of snow except for a few glacial remains.	This comment has been considered, and is outside the scope of the PEIR.

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			11	*(handwritten letter - transcribed)* Draft Program Environmental Impact Report, pg 429 Hydrology and Water Quality HYD-2: is in need of more evaluation. The removal of all waters from households and businesses could have a very long lasting impact. Details of well level is swayle when opened to install solar water pump was about 6" from ground level during drought year when wells were failing in the Valley.	The Town believes it conducted sufficient analysis in Section 3.10 to meet the requirements of CEQA. All findings were disclosed and discussed in Section 3.10.4. To clarify one point, the project is limited to sewer effluent, not any potable water, which is managed by Paradise Irrigation District; therefore, there would be no removal of "all waters from households and businesses". At the time of plan preparation, Paradise Irrigation District (which services much of the Town) is not within a designated basin and not subject to compliance with the Sustainable Groundwater Management Act (SGMA). The nearest adjacent basin is the Vina Groundwater Subbasin, of which the Paradise contribution is negligible. Groundwater existing conditions are described in Section 3.10.1.3 Groundwater.
Dana Ripley	August 29, 2022	L10	1	The opportunity to provide this public comment on the Paradise Sewer Project Draft ProgramEnvironmental Impact Report (PEIR) is appreciated. As you are aware, I have been advocating for nearly two years a local water reuse project in Paradise as an alternative to the 18-mile wastewater export identified as the superior project in the draft PEIR. On November 30, 2021 I submitted to your office a white paper entitled Town of Paradise, Butte County CA, Sewer, Water Reuse and Wildfire Defense Integrated Plan (SWRWD Plan). That white paper is included in this public comment as Exhibit A. *(Exhibit A attached with comment letter following spreadsheet)*	Thank you for your input. We appreciate all viewpoints and opinions expressed by our community. The document you label a "white paper" has been referred to here as "Mr. Ripley's Sewer, Water Reuse and Wildfire Defense Integrated Plan (SWRWD Plan)" and was submitted along with proposal to the project team for review. In the document, engineering and other services are offered by you for the project that is advocated for in the SWRWD Plan, which implies a vested business interest in selection of the SWRWD option, which should be recognized. Throughout our responses to comments below, we will address the points brought up in comments that related to the SWRWD Plan. As explained, the DEIR discusses those alternatives which are reasonable and can adequately achieve the basic objectives and goals of the project, while reducing the proposed project's potential for impacts to the physical environment. Comments and information collected in Mr. Ripley's SWRWD option do not show that the chosen alternatives manifestly are unreasonable. Further, the Town's determination to eliminate the local options was discussed and reasons identified are tabled in Section 5.2 of the PEIR; it is not required by CEQA for the Town to re-defend its findings as discussed in the PEIR. Per *Laurel Heights, supra, 47 Cal.3d at p.393* as referenced in S*ave Our Access-San Gabriel Mountains vs Watershed Conservation Authority, supra, 68 Cal.App.5th 8* , CEQA Guidelines define "substantial evidence as enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." Further, the Laurel Heights court "cautions that a court may not set aside an agency's approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable. CEQA's purpose is to compel government to make decisions with environmental consequences in mind" (*Laurel Heights, supra, 47 Cal.3d at p.393* as referenced in *Save Our Access-San Gabriel Mountains vs Watershed Conservation Authority, supra, 68 Cal.App.5th 8*). The Town's proposed project was not found to cause any environmental consequences after applying appropriate mitigation measures (Section 3.20 of the PEIR). Having said that, the Town has decided to respond to Mr. Ripley's comments, to the extent the comments are supported by fact and documented calculations.
			2	In light of the broad implications of the export versus local reuse options for Paradise, it may be instructive to consider the California Environmental Quality Act (CEQA) Guidelines which includes as an advantage of the “Program” EIR the following: Allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Agreed, the Town has and will continue to adhere to CEQA Guidelines Section 15168 (b)(4). In addition, Section 15126.6 (a) states: "An EIR need not consider every conceivable alternative to a project..." and "an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project..." (15126.6(a)). In findings of *Save our Access-San Gabriel Mountains vs Water Conservation Authority 68 Cal.App.5th 8* , in discussion of the number of alternatives evaluated, the court found: "The rule of reason (in deciding which alternatives to include) 'requires the EIR to set forth only those alternatives necessary to permit a reasoned choice' and to 'examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project.'" (Bay-Delta, supra43 Cal.4that p 1163 was used as reference in court findings).

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			3	Area of Known Controversy #1: Growth Inducing Impacts: **The draft PEIR, Section 1.4, recognizes that there may exist growth inducing impacts specifically in the City of Chico and rural Butte County outside of Town and City limits.** In a November 4, 2020 letter from the Central Valley Regional Water Quality Control Board, Region #5 (R5) addressing the local facility versus regional alternatives for Paradise, the statement is made that the "Pipeline to Chico can be cost-effectively sized to accommodate a large range of flows." In a tabulation of pipe carrying capacities of the 10.5 mile 12" diameter export pipe force main along the valley floor (from Skyway at Butte Creek to the Chico WPCP) utilizing reasonable flow velocities ranging from 3 feet per second (fps) to 7 fps, the available capacity could potentially be as high as 1.758 million gallons per day (mgd) average daily flow (ADF). This capacity is approximately 3.8 times the 0.464 mgd ADF capacity allocated to Paradise in the inter-municipality agreement between Chico and Paradise considered as part of the draft PEIR. The tabulation indicates that up to approximately 1.3 mgd ADF of wastewater export pipe force main capacity could be available to undeveloped properties in southeast Chico as well as rural Butte County along the pipeline alignment. *(All references used in text can be found as part of original letter and exhibits [attached]).*	In reference to the first sentence (bolded in comment), the reference to Section 1.4 and extracted text is misrepresented. The Draft PEIR and the Town do NOT "recognize(s) that there may exist growth inducing impacts specifically in the City of Chico and rural Butte County outside of Town and City limits". Section 1.4 Areas of Known Controversy in the Draft PEIR (which is the section referenced in the comment) does state that these potential impacts "have been raised by other agencies, the public, or other stakeholders" and that the issue has been previously communicated to the Town or identified in the PEIR scoping process - there is no statement in which it could be inferred that the Town recognizes this issue may, in fact, be valid and Section 4.4 Growth Inducing Impacts speaks specifically to the Town's rebuttal of the potential for inducement in the City or Butte County, stating: "There would be no precedent-setting action that might trigger expansion of the Town as the proposed sewer system would not change Town boundaries and does not allow for service beyond those boundaries. As such, there would be no resulting development or encroachment to isolated or adjacent areas of open space. Further, the Proposed Project would not trigger unplanned expansion of the existing Chico WPCP. The proposed sewer service is within the current capacity, facility function, and purpose of the Chico WPCP." In addition, the engineering work completed by HDR did not include provision for any such additional connections to the Gravity Force Main. Finally, the Principles of Agreement developed between the Town of Paradise and City of Chico, which are currently being drafted into an Inter-Municipal Agreement to be adopted by the Town Council and City Council, states "The Town and the City agree to prohibit future connections to the export pipeline in the portion of the pipeline that sits outside of the Town limits or City limit." (www.paradisesewer.com, 1st Draft Principles of Agreement version 7, 21-March-2022). In conclusion, as noted multiple times in the Draft PEIR and demonstrated above, the scope of the Draft PEIR and any CEQA clearance that it would provide would be limited to infrastructure to support sewer connections within the Town of Paradise boundaries. In regard to the export pipeline, the section of the export pipeline referred to in the comment is the Gravity Force Main. Again, the comment appears to relate to a concern about additional connections happening along the export pipeline, between the Town of Paradise and the Chico Water Pollution Control Plant. As stated in Section 2.5.2: , "A single 12-inch diameter pipe is needed for the Gravity Force Main for pipe to flow full, creating a beneficial force main based on the hydraulic behavior of the sewer (eliminating the need for a pump station, which is not a part of this system), so the effluent can reach the Chico WPCP. No pump stations would be required" and "A modulating plug valve would keep the Transition Chamber and Gravity Force Main sections full, to maintain the hydraulic function of the Gravity Force Main Section. The Gravity Force Main was sized based on a differential head criteria, not based on a velocity criteria, such as the 3 to 7 feet per second figures stated in the comment.

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			4	Area of Known Controversy #2: Reconsideration of Local Treatment Option: **The draft PEIR, Section 1.4, recognizes potential reconsideration of local treatment plant construction instead of the proposed connection to the Chico WPCP, which was evaluated in 2017 and 2020.** In both Bennett 2017 and HDR 2020, the local treatment alternatives described did not consider distributing recycled water to all parcels served by the sewer system. Conversely, the SWRWD Plan considers extensive urban reuse serving all collected parcels thereby adding a water supply component to PID's portfolio enhancing its drought preparedness and supply resiliency. As described in the white paper, the dual distribution included in the SWRWD Plan has multiple benefits including 1) delivery of non-potable recycled water for residential, park, sports, commercial, and buffer area irrigation, 2) seasonal shallow aquifer recharge in winter months, 3) automated community-scale wildfire defense for essential facilities, public/private buildings and evacuation routes, 4) high pressure supplemental water supply for fire suppression, 5) protection of Paradise Irrigation District's (PID) potable distribution from depressurization in the event of another extreme wildfire event, and 6) beneficial use of nutrients inherent in municipal wastewater. The draft PEIR, Section 5.2.1, Table 5.2-1 Local Alternatives and Reasons for Elimination from Consideration, lists as Local Alternative #3: Local WWTP with Water Recycling with the Town for Local Reuse and Wildfire Defense. In response to the 12 bullet points asserting infeasibility, included in this public comment is Exhibit 2 providing a rebuttal to each point individually in table format. *(Exhibit 2 rebuttals are considered separately beginning with Comment #9 below; all references used in text can be found as part of original letter and exhibits [attached]).*	Similar to the response in Mr. Ripley's Comment #3, the bolded text in this comment has been misrepresented and it is not true that the Draft PEIR or the Town recognizes this statement as accurate; in fact, the Town rebukes reconsideration of the local option and provides reasoning for the elimination in Section 5.2.1, Table 5.2-1. Thank you for sharing your document (referred to in the responses as "SWRWD Plan" - see response to L10-1) that provides your personal viewpoint regarding one of multiple local project options that have, in different forms, been considered by the Town. As noted in the comment, the "Local Treatment Option", which in various forms has been assessed multiple times over the past 10-15 years, was eliminated from consideration and was not carried through the Draft PEIR as an alternative, for those reasons identified in Section 5.2.1, Table 5.2-1. CEQA Guidelines state that an EIR: "must describe a range of reasonable alternatives to the project... which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project..." (CEQA Guidelines Section 15126.6 (d)(a); italics added). *Save Our Access-San Gabriel Mountains vs. Watershed conservation Authority (2021) 68 Cal.App5th 8 at p.18* (Save Our Access) found that "... plaintiff (hadn't) explained how any of the alternatives would 'avoid or lessen one or more of (the project's) significant impacts...". "As the WCA (Watershed Conservation Authority) board found, no significant impacts were identified that could not be avoided or reduced to a less than significant level." (*Save Our Access, proceedings at p.18*). This same condition applies to the Paradise Proposed Project, which realized no significant impacts during analysis that could not be mitigated to a less-than-significant level. Mr. Ripley's letter and all other public comment letters received and responded to in this spreadsheet do not, in fact, present any opposition to specific Draft PEIR significance findings with or without mitigation incorporated, as appropriate. Further, with reference to *South of Market Community Action Network vs. City and County of San Francisco (2019) 33 Cal.App.5th pp. 321, 345* (South of Market) findings, *Save Our Access* ' elaborates; courts found that "CEQA 'does not require that an agency consider specific alternatives that are proposed by members of the public or other outside agencies' " (Save Our Access, supra, 68 Cal.App5th 8 at p.17 with reference to South of Market proceedings pp. 321, 345). Additional discussion on the feasibility and reasoning for elimination of this specific option is included in response to Mr. Ripley's comment #1 above and #9 below.

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			5	Lost Opportunity for Recycled Water: Assuming the export pipe force main has an ADF capacity of about 1.8 mgd, the potential lost opportunity for urban water reuse in Paradise and southeast Chico could be as much as 2,000 acre-feet per year (afy). On August 11, 2022, Governor Newsom announced California's Water Supply Strategy, Adapting to a Hotter, Drier Future. Part of the Strategy is to increase urban water recycling in coastal and inland communities to about 0.8 million acre-feet per year (MAF) by 2030 and to about 1.8 MAF by 2040. Urban water reuse in Paradise and southeast Chico would clearly be consistent with the Strategy and likely would be eligible for significant grant funding included in the 2021-2022 $5.2 billion state appropriations for California water systems including water recycling. In its 2020 Urban Water Management Plan (UWMP), PID indicated that the community will continue to work to examine the viability of a centralized sewer system and any associated opportunities to develop a recycled water supply as it continues to recover from the Camp Fire and look to the future of rebuilding and redevelopment of Butte County. The 18-mile export plan would foreclose on any opportunity in the foreseeable future to develop a recycled water supply in Paradise. In similar fashion, Cal Water-Chico District indicated in its 2020 UWMP that Cal Water continues to actively investigate recycled water opportunities, such as satellite, or decentralized, recycled water generation at select areas within the Chico area, for use in that area. The 10.5-mile export force main pipeline would likely also foreclose on Cal Water's ability to a develop recycled water supply in southeast Chico in the foreseeable future. In both Paradise and southeast Chico, the export pipeline would represent a lost opportunity to develop local recycled water resources that might otherwise be available. This would be inconsistent with the Governor's Water Supply Strategy to maximize alternative urban water supplies, including recycled water for non-potable urban demands, for a more secure and resilient water supply future. *(All references used in text can be found as part of original letter and exhibits [attached]).*	In order to best understand calculations and comparisons presented in this comment and others, it may be easier to use consistent measures. Therefore, if you convert 0.464 million gallons per day (0.464 MGD) of Paradise effluent (that is, the maximum proposed to be conveyed to the Chico WPCP in the Draft PEIR) to acre-feet per year, you have 520.09138 acre-feet per year of wastewater (www.convertunits.com/from/million+gallon/day+[US]/to/(acre+feet)+per+year). Once you then convert acre-feet per year to MILLION acre-feet per year, which is referenced in the Governor's strategy and other municipal and agency goals, the maximum wastewater to be conveyed for treatment to the Chico WPCP from Paradise is **0.00052 million acre-feet (MAF) per year.** (https://citizenmaths.com/flow/520.0913772803632-acre-feet-per-year-to-million-acre--feet-per-year). This amount equates to **0.065%** of the 0.8 MAF annual increase goals mentioned in comment that the Governor's strategic plan introduces, which would likely not be considered a significant input in isolation. It is agreed that this .00052 MAF would be conveyed to Chico and, as commenter states, would not be available for Paradise as recycled water. However, Paradise has no authority over how the Chico WPCP treats wastewater, and in the future, recycling of Chico WPCP effluent for secondary use in and around the Chico area could be considered by the WPCP. As stated in the Regional Water Board's letter of November 4, 2020 which is referenced in the Draft PEIR, "The City of Chico already provides recycled water for waterfowl habitat uses, and City staff have stated that expanded recycled water use would be desirable and may be pursued in the future. Revenue generated through regionalization with Paradise could make recycled water projects more feasible for Chico."Therefore, since the Governor's California Water Supply Strategy includes increasing urban water recycling generally "in coastal and inland communities", as you have noted, and given the Regional Water Board's findings noted above, implementation of this project does not represent a "lost opportunity", as the opportunity remains to develop recycled water treatment at the Chico WPCP where there are more available resources, if doing so becomes a viable option for them in the future.

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			6	Issue to be Resolved: Butte LAFCo service extension approval: The draft PEIR, Section 1.5 indicates that Butte LAFCo's approval of the 18-mile extension of sewer service by Chico to Paradise is an issue to be resolved. However, the required LAFCo approval may be in conflict with state Government Code as indicated by the Executive Officer's letter of May 20, 2021 which states: Provisions for extension of service requests are found in Government Code §56133 and in Section 4.5 of the Commission Policies and Procedures. Service extensions outside of an agency's Sphere of Influence may only be approved by LAFCo if there is "an existing or impending threat to the health or safety of the public or the residents of the affected territory. (§56133(c)) . . . . . The City/Town will need to provide documentation/justification of the existing or impending public health and safety threat the extension of services would address. This is a critical prerequisite to the project as it is the *only legally permissible justification available* [emphasis added] to the LAFCo to approve a service extension request outside of an agency's (Chico) Sphere of Influence. Since an existing or impending threat to the health or safety of the public or the residents does not exist, it appears that Butte LAFCo cannot approve the sewer extension request even if it wanted to. The only path forward on this may in fact be a waiver by the state legislature and Governor similar procedurally to Assembly Bill 36 (Gallagher, 2021). Recognizing that the 18-mile extension request is contrary to the Governor's Water Supply Strategy because it could potentially foreclose on up to 2,000 afy of urban water recycling, the Governor would likely not support the waiver legislation even if approved by the State assembly and senate. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Govt. Code Section 56133 applies to the request to Butte County LAFCO for Chico to provide sewer services to the Town through the pipeline; the Town is outside the City's boundary and its sphere of influence: (a) A city or district may provide new or extended services by contract or agreement outside its jurisdictional boundary only if it first requests and receives written approval from the commission of the county in which the affected territory is located. (b) The commission may authorize a city or district to provide new or extended services outside its jurisdictional boundary but within its sphere of influence in anticipation of a later change of organization. (NOTE: Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement. (c) The commission may authorize a city or district to provide new or extended services outside its jurisdictional boundary and outside its sphere of influence to respond to an existing or impending threat to the health or safety of the public or the residents of the affected territory, if both of the following requirements are met: (1) The entity applying for approval has provided the commission with documentation of a threat to the health and safety of the public or the affected residents. (2) The commission has notified any alternate service provider, including any water corporation as defined in Section 241 of the Public Utilities Code, that has filed a map and a statement of its service capabilities with the commission. In Section 2.2, the EIR discusses the existing threat to the health and safety of the public and Town residents from the existing septic systems as follows: "Failed septic systems can release untreated wastewater into groundwater at the ground surface or cause pipe failures in buildings, resulting in environmental degradation and public health risk due to water contamination or exposure to untreated wastewater." Section 2.2 cites multiple studies which assess the public health concerns related to failing septic systems, concluding: "Concurrent to and since the Town's numerous wastewater management studies, public health […] impacts associated with septic system usage continue to persist." In regards to comment on the Governor's Water Supply Strategy, it is important to note that it is a strategy and policy document, rather than a law. Further, the Water Board currently has water reuse policy and regulations in place (https://www.waterboards.ca.gov/water_issues/programs/recycled_water/), and still issued its 2020 Evaluation of Wastewater Treatment Plant Options letter to Paradise with those requirements in place and full awareness of the reuse issue, as can be seen from the letter's reference to recycled water and Chico (https://paradisesewer.com/wp-content/uploads/2021/04/2020-Central-Valley-Regional-Water-Quality-Control-Board-Alternatives-Analysis.pdf).

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			7	Scalable to Sewer Entire Town: The export project as proposed in the draft PEIR limits the Paradise wastewater contribution to the Chico WPCP to 0.464 mgd. This limits sewer service to about 1,500 residential and commercial parcels within the sewer service area (SSA). The SWRWD Plan, conversely, is scalable to whatever service area Paradise chooses long term, including service to all 10,600 parcels served by PID pre-fire. This would be consistent with a local Paradise Post press report stating: ***(Congressman Doug) LaMalfa pointed to the sewer as an essential infrastructure need for Paradise. "You know, a portion of this is going to help with that longtime need for a sewer system to this town, which unlocks a lot of possibilities for (Paradise)," he said. He also pointed out that as Paradise rebuilds, it can be part of an important part of California's need to build more housing, pointing out that California is 2.5 million units short of what it needs.*** For context on the limitations with sewer service only to within the SSA, the draft PEIR states: Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. This metric would likely remain unchanged with the 18-mile export plan serving only the SSA – Paradise would still be the largest unsewered community in California since the SSA includes only about 14% of the permitted parcels within the Town. *(All references used in text can be found as part of original letter and exhibits [attached]).*	- As described in Section 5.2.1, Table 5.2-1 regarding the specific reasons for not carrying the local option forward as an alternative in the Draft PEIR, the Town did not find proposed infrastructure corresponding to the local option to be "scalable". As discussed in the draft PEIR and further elaborated on in the Regional Water Board's analysis included in a letter dated November 4, 2022 and referenced in the Draft PEIR, (https://paradisesewer.com/wp-content/uploads/2021/04/2020-Central-Valley-Regional-Water-Quality-Control-Board-Alternatives-Analysis.pdf), the options would be to either (1) build small at a lower current cost to accommodate estimated levels of effluent over next 5-10 years and require an upgrade and/or demolish/rebuild of infrastructure at some future cost as the treatment needs increase with population growth in the future, or (2) build facilities to some estimated maximum capacity now at much higher short term costs and only use a small portion of the facilities for the next 10-40 years, depending on realized future population growth. Per the Regional Water Board's findings in their November 4, 2022 letter, the local option would be: "Not easily scalable. (A Paradise) WWTP would be sized for currently-proposed collection system. Adding additional service area in the future would necessitate expansion of the WWTP and conveyance infrastructure. Depending on available Rights of Way and treatment/disposal areas, suitable additional areas may not be available. Further, treatment processes may not be easily scalable without substantial redesign and reconstruction of WWTP elements. Expansion of the WWTP to accommodate larger, future flows would be costly." (https://paradisesewer.com/wp-content/uploads/2021/04/2020-Central-Valley-Regional-Water-Quality-Control-Board-Alternatives-Analysis.pdf) - Depending on the final buildout within the Core Collection System area plus the number of future sewer expansions that may be requested during the Extended Collection System implementation, as well as changes that would be expected to occur in other California communities, the Town would not remain "the largest unsewered community in California" with implementation of the Proposed Project, but could become "the largest community in California with unsewered areas". As a note, this sentence was used to introduce the Town's post-fire history and was referenced from Butte County Association of Governments documentation (BCAG 2019a); it was not intended to provide "context on the limitations with sewer service only to within the SSA" as stated in the comment. - The information presented in Mr. Ripley's SWRWD Plan and in his comment letter do not manifestly show the alternatives that were assessed in the draft PEIR are unreasonable or that they do not contribute to a range of alternatives which are capable of attaining most of the basic objectives of the project.
			8	State-of-the-Art Infrastructure: The same local Paradise Post press report indicated that: [Paradise Mayor Steve] Crowder pointed out that the undergrounding project by Pacific Gas and Electric is also a critical project that will make Paradise "a state-of-the-art community with a brand new infrastructure." Beyond underground electrical power distribution, "state-of-the-art" infrastructure should also include sewer collection, potable water distribution, non-potable water distribution, independent high pressure supplemental fire supply, fiber optic distribution, and community-scale wildfire defense integrated with the recently authorized wildfire early warning system. Clearly, all underground utility construction should be coordinated and should precede construction of any new public roads where the utilities are installed. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Thank you for your input. The Town also considers financing options when pursuing a project. The Town is seeking grant funding for Design, Right of Way and Construction of the sewer project, which is available for septic to sewer conversions, but is not currently available for the alternative utility systems described. Analysis of timing and funding for utility construction and new roadways is not included in the Draft PEIR for Town sewer service; CEQA documentation requirements for utilities construction and/or new public roads would be determined and carried out when corresponding projects are defined.

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			9	(Appendix B) 1.0 State and Regional Water Board Policies supporting regionalization: Any State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB) policy supporting "regionalization" is an out-of-date policy predicated on "disposal" of wastewater and not beneficial reuse. RWQCB Central Valley Region #5 (R5) Resolution R5-2009-0028 indicating support for "Regionalization" in the same resolution supports "Reclamation, Recycling, and Conservation." In the context of the Town of Paradise proposed 18-mile export pipe, the increased discharge of secondary effluent to the Sacramento River runs against California's long-standing strategy to minimize potable water demand and increase water recycling. The SWRCB encourages water recycling with more recent statewide policies and orders including the 2018 Water Quality Control Plan for Recycled Water and the 2016 General Order for Water Reclamation Requirements for Recycled Water Use. Further, Governor Newsom this month released California's Water Supply Strategy which establishes a plan for significant increases in urban water recycling by both coastal and inland communities. The plan targets an increase of 0.8 million acre-feet (MAF) by 2030 and 1.8 MAF by 2040 (see Figure 1 [in App B]). Based on the state's overwhelming need to reduce potable water demand and beneficially recycle water wherever feasible, it is the 18-mile export plan that would likely not be supported Governor's office and would likely not be supported by state and federal funding agencies. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Please see response to Mr. Ripley's comment #5 to statements regarding the Governor's California's Water Supply Strategy and comment response #6 for discussion of the Regional Water Board's understanding of water recycling and reuse value. In regards to regionalization policies, in a letter dated November 4, 2020 from the Regional Water Board to the Paradise Town Manager cited above and in the Draft PEIR multiple times (https://paradisesewer.com/wp-content/uploads/2021/04/2020-Central-Valley-Regional-Water-Quality-Control-Board-Alternatives-Analysis.pdf), preliminary findings of the Regional Water Board are as follows: "... it is the opinion of the (Regional Water) Board's technical staff that the regionalization option presents an objectively more sustainable long-term solution to the Town's wastewater infrastructure needs. Due to the apparent overwhelming advantages of the regionalization option, it is the (Regional Water) Board's strong recommendation for the Town to conserve limited financial resources and focus its feasibility analysis on the regionalization option." Further, the Regional Water Board states: "Informing this evaluation is the (Regional Water) Board's decades of experience that local wastewater treatment plants of the type being considered by the Town consistently struggle to comply with applicable regulatory requirements to protect groundwater and surface water." In the Regional Water Board's qualitative analysis attached to their Nov 2020 letter, the Board finds that: "... it is not clear if a sufficient number of users are available, or that a recycled water delivery system (within the Town) would be feasible" and "The City of Chico already provides recycled water for waterfowl habitat uses, and City staff have stated that expanded recycled water use would be desirable and may be pursued in the future. Revenue generated through regionalization with Paradise could make recycled water projects more feasible for Chico." Finally, the Regional Water Board's analysis regarding viability of financial assistance finds that a local alternative is: "Likely to receive less favorable consideration, or outright denial, especially if regionalization has similar or better overall feasibility. May not comply with State and Regional Water Board policies supporting regionalization of wastewater services." (https://paradisesewer.com/wp-content/uploads/2021/04/2020-Central-Valley-Regional-Water-Quality-Control-Board-Alternatives-Analysis.pdf). Given the Regional Water Board's negative findings regarding local project feasibility, funding access, and potential for further groundwater and surface water impacts, as well as other reasons captured in Section 5.2.1, Table 5.2-1, the Town eliminated local alternatives from consideration in the Draft PEIR.
			10	(Appendix B) In the Town's case, "regionalization" assumes connection to Chico's water pollution control plant (WPCP) which discharges secondary effluent to the Sacramento River. In light of R5's intent to require Chico to remove nitrogen from its discharge, the draft PEIR should not overlook the cost and energy intensity required to nitrify and denitrify prior to discharge. As a related example, R5 required Sacramento Regional Sanitation District's WPCP in Elk Grove to remove nitrogen prior to discharge to the Sacramento River at a capital cost exceeding $2 billion. Local reuse, conversely, would beneficially utilize nitrogen and other nutrients for agricultural, landscape, and turf fertilization. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Regarding the "R5 intent to require" the City to nitrify and denitrify (treated water) prior to discharge, the comment has been considered, and is outside the scope of the PEIR, which is about construction, operation and maintenance of the pipeline; rules for use of it are separate. For response to comments regarding local reuse being considered in the future at the Chico WPCP, please refer to the response to Mr. Ripley's comments #5 and #9. Finally, the intent of an agency cannot be confirmed or disputed by the Town as there is no backup information supporting the statement.

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			11	(Appendix B) 2. Regional Board November 2020 letter supporting regionalization: The November 2020 R5 letter fails to compare local urban water reuse with river discharge and "recycled water for waterfowl habitat uses". Nor does the letter consider the multi-benefits of a dual distribution system within the Town that would include 1) non-potable recycled water for landscape, park, turf and agricultural irrigation, 2) seasonal aquifer recharge dispersed throughout the service area, 3) state-of-the-art community-scale wildfire defense, 4) high pressure supplemental water supply for fire suppression, 5) protection against any future depressurization of PID's potable distribution system and 6) beneficial use of nutrients inherent in wastewater. Upgrades to the Chico water WPCP for river discharge and/or agricultural reuse could easily exceed $300 million for nutrient removal and other treatment process improvements over the next decade. The Town would be responsible for it's proportionate share of costs and its contribution would offer zero benefit to Paradise Irrigation District's (PID)water supply portfolio and zero benefit for the Town's fire suppression capability. *(All references used in text can be found as part of original letter and exhibits [attached]).*	This comment has been considered, and is outside the scope of the PEIR. It is not within the Town's jurisdiction to question or explain the Regional Water Board's findings as stated in the November 2020 letter, nor has data resulting from any level of planning/design been publicly released by the Chico WPCP that could be accurately used to estimate costs for upgrades at the Chico WPCP for recycled water or to estimate the financial contribution that the Town could be required to make. The scope of the PEIR is limited to construction of a sewer system and does not include an assessment of the potential for future water recycling at the Chico WPCP. Although the comment is not relevant to the project, some explanation may be of assistance. Regarding reference to the dual distribution system acting as protection against any future depressurization of PID's potable distribution system, PID's 2020 Urban Water Management Plan (2020 UWMP; pidwater.com) described what occurred during the Camp Fire: "Several hours into the duration of the Camp Fire, PID's pipe network experienced a significant depressurization in a majority of its water mains. A significant number of the 10,480 individual service laterals and/or meters melted and the system partially drained. Though the WTP continued to produce water during the fire, demands from fire sprinklers, firefighting activities, and free-flowing service connections where structures once stood drained significant portions of the system. This depressurization event resulted in negative pressure in many areas throughout the main network..". Since the same or less costly pipe materials, meters and valves are generally used in constructing purple pipe lines (recycled water) as is used in potable water lines, what occurred in the Camp Fire wouldn't be stopped by increasing the number of lines, but by upgrades to pipeline materials or other safeguards, as would be determined by Paradise engineering team (pidwater.com) pp. 3-3 and Annex F-27). Further, the Mitigation Plan attached as part of PID's 2020 UWMP presents *Action 9. Backup Portable Generators* as a mitigation action based on their risk assessment study. Benefits that would result from funding this action include "The District would not experience a depressurization of distribution system (and would not) lose the ability to treat water for the Town of Paradise…". As such, PID presents backup portable generators as the solution to mitigate the potential for a long power outage or depressurization during wildfire (pidwater.com, 2020 urban water management plan, Annex F-47).

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			12	(Appendix B) The R5 letter indicates that [the] "Pipeline to Chico can be cost-effectively sized to accommodate a large range of flows." This indicates that the pipeline can likely accommodate significant wastewater flows over and above the needs of the Town for planned developments within Chico's southeast sphere of influence and rural Butte County along the pipeline route. Table 1 presents pipeline capacities for the proposed 10.5 mile 12" export pipe force main based on a range of flow velocities. Table 3 presents the carrying capacity of plastic pipe from an engineering manual which indicates velocities for 12" pipe within the range of 1.3 to 10.12 feet per second (fps). The 7 fps maximum figure presented in Table 1 is well within the range presented in the engineering manual. At that flow velocity, the export pipe capacity is about 2,400 gallons per minute (gpm), or about 1.7 million gallons per day (MGD) on an average day flow (ADF) basis and 3.4 mgd on a peak hour flow (PHF) basis. *(All references used in text can be found as part of original letter and exhibits [attached]).*	The section of the export pipeline referred to in the comment is the Gravity Force Main. As stated in the Draft PEIR (pp. 43-51), "Flow leaving the Transition Chamber would be under pressure based on the gravity flow from the steep Ridge Gravity Section, and the pipe would flow full, creating a beneficial force main based on the hydraulic behavior of the sewer (eliminating the need for a pump station, which is not a part of this system), so the effluent can reach the Chico WPCP. A modulating plug valve would keep the Transition Chamber and Gravity Force Main Sections full, to maintain the hydraulic function of the Gravity Force Main Section." Therefore, the Gravity Force Main was sized based on a differential head criteria, not based on a velocity criteria, such as the 3 to 7 feet per second figures stated in the comment. The comment appears to relate to a concern about additional connections happening along the export pipeline, between the Town of Paradise and the Chico Water Pollution Control Plant. The engineering work completed by HDR did not include provision for any such additional connections to the Gravity Force Main. In addition, the Principles of Agreement developed between the Town of Paradise and City of Chico, which are currently being drafted into an Inter-Municipal Agreement to be adopted by the Town Council and City Council, states "The Town and the City agree to prohibit future connections to the export pipeline in the portion of the pipeline that sits outside of the Town limits or City limit." (www.paradisesewer.com, 1st Draft Principles of Agreement version 7, 21-March-2022). Please also refer to response to L10-6 and other discussions of the Regional Water Board's 2020 study and letter to the Town.
			13	(Appendix B) At 1.7 mgd ADF, the lost opportunity for local water recycling in the Town, southeast Chico and rural Butte County could be about 2,000 acre-feet per year (afy) as indicated in Table 2. "Regionalization" as a primary justification for the 18-mile export project is clearly in conflict with the Governor's California's Water Supply Strategy since it forecloses on a potential 2,000 afy of urban water recycling in the Town and southeast Chico. Based on current drought and wildfire threat conditions, the Governor's office would likely strongly support the local reuse alternative over the export alternative. In that same light, the grant funding opportunities for local water reuse would likely be significantly greater than for the 18-mile export based on the Governor's strong emphasis on urban reuse projects anywhere in the state. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Please see responses to Mr. Ripley's comments #5 and #9. Anticipating what level of support would be imparted by the Governor's office would be speculative and does not speak to the Draft PEIR's adequacy or accuracy; therefore, this comment has been considered, but does not require specific response. However, it is anticipated that the Governor may give some deference to the findings of the Regional Water Board.

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			14	(Appendix B) The R5 letter fails to acknowledge that Butte LAFCo cannot approve an 18-mile extension of sewer service absent an existing or impending public health and safety threat. The 0.1 mgd post-fire subsurface dispersal in the sewer service area (SSA) that had a pre-fire permitted subsurface dispersal capacity of about 0.5 mgd cannot be considered an existing or impending health threat. Absent such a threat, Butte LAFCo cannot approve the extension as it is the only legally permissible justification available to LAFCo to approve a service extension request outside of an agency's (Chico) Sphere of Influence. The only path forward with the extension request therefore would likely be a waiver approved by the state legislature and the Governor, similar procedurally to Assembly Bill 36 (Gallagher, 2021). *(All references used in text can be found as part of original letter and exhibits [attached]).*	Please see response to Mr. Ripley's comment #6 above. Further, it is not within the Town or commenters' jurisdiction to interpret regulatory guidance or make a determination regarding what Butte LAFCo can or will approve, and, more immediately, is outside the scope of this Draft PEIR. LAFCo staff are uniquely qualified and appointed to make such determinations based on regulatory guidance and experience and the agency has its own process for public review and appeals.
			15	(Appendix B) The R5 November 2020 letter did not confirm the presence of an existing or impending public health and safety threat in Paradise of which it has the technical and regulatory authority to determine. Even if R5 made such a determination, the proposed export project serving only 14% of the Town would not alleviate most of the threat since there is ample high density residential, commercial, health careand institutional development outside of the proposed SSA which could also have subsurface dispersal issues. Absent an existing or impending health and safety threat, the 18-mile export project as indicated above is legally impermissible. In its alternative analysis of the regionalization versus local reuse options available to the Town, R5 erred in not considering Government Code restrictions on any extension of utility service from one jurisdiction to another in California. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Please see responses to Mr. Ripley's coments #11 (Town's lack of jurisdiction/expertise to explain findings of Regional Water Board), and #'s 6 and 14 (LAFCo Government Code restrictions). Further, the 2020 Regional Water Board letter was not required to discuss a public health and safety threat, as they had already declared it as such in their In a letter dated May 4, 1992; at that time the RWQCB approved the Town's plans to establish an "Onsite Wastewater Management Zone" to address public health and environmental concerns noted in previous studies (RWQCB 1992). The 2020 letter was intended, as titled, to present an Evaluation of Wastewater Treatment Plant Options (https://paradisesewer.com/wp-content/uploads/2021/04/2020-Central-Valley-Regional-Water-Quality-Control-Board-Alternatives-Analysis.pdf). Please also refer to comment response L10-14. Further, Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement; therefore, the Town is following existing regulatory guidance.

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			16	(Appendix B) 3. Siting local wastewater facility within residential and business areas: Figure 2 presents an image of a California Title 22 water reclamation facility sited in a residential setting in southern California. This facility was permitted by R8 (Santa Ana Region) under Title 22 criteria and had operated continuously between 1981 and 2006 when the facility was decommissioned with the arrival of an Inland Empire Utilities Agency (IEUA) purple pipe extension to two adjoining golf courses. During its 25-year operation, this author was not aware of a single odor or noise complaint from residents adjacent to the facility. This image was included in the Water Reuse textbook as an example of a satellite treatment plant located in a housing development. Figure 3 presents a 2021 satellite image of the decommissioned facility indicating its close proximity to numerous residences and a swimming pool. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Although the comment is not relevant to the project, some explanation may be of assistance. In review of the text accompanying the figure in this case study (Tchobanoglous, G., et al, *Water Reuse, Technologies, and Applications* , McGraw Hill, 2007, Figure 12-17), as introduced by the commenter, some points require clarification. The author of the textbook does state "The plant... is provided with odor control facilities. The design features have proved that a wastewater facility can be constructed and operated in a residential-type setting without nuisance" (p.760). However, there is no information on noise or odor complaints received and no description provided to understand the criteria used to determine "without nuisance" or to understand what the author's thresholds were. The project "was initially conceived and built by a developer who needed a golf course to improve marketability and value of the residential property", was used solely for the Upland Hills Country Club (p.760) golf course irrigation, and payment was made by the golf course for the recycled water. The author found that "Because the influent wastewater is of domestic origin and the influent has a TDS of about 485 mg/L, the effluent is well-suited for golf course irrigation (p.761). Treatment of the wastewater, as described in the case study, was limited as compared to another case study in the same textbook for the Solaire Building in New York constructed around 2005 (751). Reclaimed water at the NY facility was limited in use to only toilet flushing and cooling tower makeup, and later added irrigation at an adjacent park. However, the NY system also required ozone oxidation, ultraviolet disinfection, and ultrafiltration membrane units, injection of potable water, and later, for irrigation, the addition of a reverse osmosis system - all absent from the process flow description for the golf course facility as described in the textbook, possibly due to changing water quality requirements for reclaimed water over time or variances in state/regional regulatory requirements. Therefore, noise and odor effects could be very different if the golf course facility were required to add those additional treatment systems. Further, the facility was decommissioned because "... the facilities are in need of upgrading to preserve their integrity. Lack of adequate local financing for improvements is an obstacle in implementing necessary upgrades. ... unfunded replacement reserves would have facilitated needed rehabilitation and upgrades to ensure continued operations without full system replacement" (p.761). Therefore, the decision was to decommission the failing local facility and connect to the Inland Empire Utilities Agency facilities (as described in commenter's discussion).
			17	(Appendix B) 4. Lack of sufficient recycled water users in area Table 3 indicates PID's pre-fire estimate of total water demand in 2040 of 7,817 afy. This compares with 3,576 afy of PID's pre-fire estimate of 2040 wastewater dispersal as indicated in Table 4. These two values indicate that, on an annual basis, the total service area pre-fire potable and raw water demand is roughly 2.2 times the wastewater generation. On a seasonal basis, the non-potable exterior irrigation demand could be as high as 4 times the interior potable demand on peak summer days. Clearly, with dual distribution to all served parcels, the annual average non-potable demand exceeds the potential recycled water supply. *(All references used in text can be found as part of original letter and exhibits [attached]).*	PID updated their Urban Water Management Plan (UWMP) in 2021, which reports much lower estimates of demand over a 20 year horizon (2025 - 2045; published in June 2021 and available at: https://pidwater.com/docs/about-your-water/water-supply/2001-pid-2020-urban-water-management-plan/file). Given there is no water reuse in the Town at this time, the calculations include all water needs for the community. In this document, PID reports: "There is no known deficit of supply in the planning horizon of this UWMP, even considering the likely impacts of climate change in that time period with increasing temperature, reduction in rainfall, and declining snowpack." (PID UWMP 2021, Section 6.13, p.6-12) In the same document, DWR Tables 7-2, 7-3, and 7-4 (pp. 7-6 to 7-7) compare PID supply with Town estimated demand 2025-2045. These calculations look at a normal year (7-2), a single dry year (7-3), and up to five years of consecutive drought conditions (7-4). Even with up to five years of consecutive drought conditions, 2025-2045, PID shows a minimum estimated 1,312 acre-foot **overage**. PID states: "It is important to note that in all scenarios shown in these tables, Normal Year demands are shown, without the expected conservation percentages ranging from 10-50% that would be expected in drought conditions. By comparing reduced supply volumes in dry years to Normal Year demand levels, it is shown conservatively that PID is able to successfully meet demand in all year types." (p. 7-6). The 2015 UWMP appears to no longer be available at the PID website noted above; further, there are no estimates for "wastewater dispersal" in PIDs 2022 document; therefore, the quoted wastewater numbers in this comment can not be verified or discussed.

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			18	(Appendix B) 5. Large effluent storage facility needed for winter flows: Based on information provided by Town engineers, the heat of the Camp Fire at the ground surface did damage some septic tanks, particularly those constructed of plastic or fiberglass. However, of the 11,000+ leachfields there has been no reported damage. With that context, the Sewer, Water Reuse, and Wildfire Defense (SWRWD) Plan proposes to utilize the existing 11,000+ leachfields for shallow aquifer recharge in the winter months eliminating the need for a seasonal effluent storage facility. The dual distribution will be in place, and individual irrigation controllers will be used to control and meter delivery of tertiary effluent to existing leachfields in the winter months as/when needed. Ultimately, the pre-fire 2040 estimate 3,576 afy dispersal of septic tank effluent would be reduced to about 980 afy dispersal of tertiary effluent meeting strict Title 22 unrestricted irrigation standards. These values assume the long-term objective of the SWRWD Plan to serve most if not all of PID's 10,600 service connections and not just the 1,500 connections in the proposed SSA. *(All references used in text can be found as part of original letter and exhibits [attached]).*	As stated in Comment Response 17, based on PID's Urban Water Management Plan (UWMP) (2025 - 2045; published in June 2021 and available at: https://pidwater.com/docs/about-your-water/water-supply/2001-pid-2020-urban-water-management-plan/file) the 2022 UWMP (PID 2021 - reference in Comment Response 17), there is no projected shortage of water.
			19	(Appendix B) 6. Land for storage environmentally sensitive: Land for seasonal storage unnecessary. See response #5 above. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Please see response to comment #L10-4 above regarding the elimination of the local option as an alternative in the Draft PEIR.

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			20	(Appendix B) 7. Local WWTP construction would be a lengthy process: The 2016 General Order for Water Reclamation Requirements for Recycled Water Use provides an expedited path for recycle permits, since most non-potable recycled water projects rely on the same regulatory framework provided in Title 22. With low-pressure effluent collection and temporary treatment facilities at say, the abandoned Lava Creek golf course, time to first-flush would likely be less than 18 months, perhaps as little as 12 months from authorization to proceed. This compares with estimates of the gravity collection and 18-mile export project taking as much as a decade to first-flush. There is ample precedent in R5 for satellite water reuse facilities permitted under Title 22 criteria for disinfected tertiary recycled water. In combination with the 2016 General Order, the R5 approval process could be concurrent with the facility design thereby expediting the project delivery schedule. *(All references used in text can be found as part of original letter and exhibits [attached]).*	The project as proposed will be operational by Summer 2026, as shown in the schedule on paradisesewer.com.
			21	(Appendix B) 8. Auxiliary water system would for fire suppression would be a separate pipeline system: Yes, a separate pipeline system would be required modeled after El Dorado Irrigation District's dual distribution system (in operation for over four decades) and San Francisco's auxiliary water supply system (in operation for over a century). In addition, the dual distribution provides access to individual leachfields for winter subsurface dispersal and would provide assurance that, in the event of a repeat of an extreme wildfire event, that PID's potable system would be protected from depressurization caused by the abrupt increased demand from residential sprinklers and fire-fighting activity. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Thank you for your comments. They are outside the scope of the project and fire suppression is not one of the identified objectives of this project.

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			22	(Appendix B) 9. Inefficient oversizing of treatment facility in early years: Inefficient oversizing of infrastructure is not unique to wastewater treatment facilities – it is a given on any infrastructure project – water import and treatment facilities, power generation and transmission, highways, airports, rail facilities, ports, etc. etc. Utilization is never near optimum in the early years, and full utilization may come decades after construction is complete. For context, how efficient is a $184 million export project when the initial flow estimate is only about 0.1 mgd serving a 2026 connected population of 1,391? Since the $184 million figure is only a Class 5 estimate (- 30% to +50%) coupled with the recent inflation spike, the actual construction bid cost could easily exceed $300 million – with no possible opportunity for interim temporary facilities or phasing. Where's the early year efficiency in that? *(All references used in text can be found as part of original letter and exhibits [attached]).*	The pipeline has been sized to accomodate the flow from the Core Collection and Extended Collection system, as well as the Treatment Plant capacity, within the 30-year planning horizon as laid out in the Town of Paradise 2022 General Plan Housing Element Update (Section 2.5.1.1 of the Draft PEIR). Further, Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement. Estimates regarding "actual construction bid costs" would be speculative at this level of design.
			23	(Appendix B) 10. O&M for a full-scale treatment facility would be supported by a small initial ratepayer base: Figure 4 presents a satellite water reclamation facility owned and operated by Fresno County Special Districts, County Service Area #34. This facility was permitted by R5 under Title 22 criteria in 2005. Table 6 presents the 2022-2023 projected operating budget for operation and maintenance (O&M) of this facility. Compare that Fresno County CSA #34 O&M value with estimates for the export project O&M: $254,000/yr for the regional pipeline, $1,022,000 for the gravity collection system, and the $491,000 contribution to Chico WPCP O&M. These annual costs total $1,767,000/year starting at first-flush. How can the Town afford this when most of the SSA parcels are currently vacant? Add to this annual O&M cost the annual cost of the local share of loan debt repayment since it is unlikely that the project will achieve 100% grant funding for capital costs. If interior residential water use is reduced to 42 gallons per person per day (gpcd) by 2040 in accordance with recommendations by the California Department of Water Resources, the Town connected population served by a similar Title 22 facility (CSA #34 plant) could potentially be about 4,700, equal to the estimated population in the SSA at Year 2050. *(All references used in text can be found as part of original letter and exhibits [attached]).*	The local treatment alternative does not meet the goals of the project as set out in Section 2.3.2, Project Goals and Objectives. Further, as explained above, the Town has secured grant funding for the development of the preliminary engineering and preparation of the environmental documentation. We are also working to secure grant funding for the design, right-of-way, and construction stages of the project. The Town is aware of the cost estimates associated with design, construction, and operation of the sewer project, as is estimated at this early point in design. As noted in previous and subsequent comment responses, this comment does not speak to the physical environmental assessment of potential impacts that could result from proposed project implementation and speaks to potential costs, which is outside of the scope of the PEIR.

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			24	(Appendix B) 11. Treatment processes not easily scalable: The export plan has zero potential for phasing and cannot be scaled up ever once capacity is reached in the collected area of the SSA. The local treatment collection system and local water reuse plant, however, can be scaled up to ultimately serve all 10,600 connections and be designed to operate efficiently even at low initial flows. *(All references used in text can be found as part of original letter and exhibits [attached]).*	Please see Comment Response #L10-7 regarding scalability.
			25	(Appendix B) 12. Extensive ongoing monitoring required for local recycling: Table #6 does not call out monitoring costs since Fresno County operators conduct in-house lab tests as part of their normal daily and weekly routines. Monitoring costs are included in the "Professional and Specialized Services" line item. Monitoring reports are submitted by the operators to R5 on a quarterly and annual basis. All operators are state-certified and are employees of Fresno County.	Thank you for the information. The PEIR is to analyze the proposed Town sewer pipeline construction, operation and maintenance and does not include a discussion of costs.
Richard L. Harriman	August 30, 2022	L11	1	Thank you for granting my request for a one-day extension of time within which to submit the following Comments regarding the Draft Program EIR (DPEIR) for the above-referenced Project. I am submitting the following comments regarding the above-referenced proposed project on behalf of myself, as a resident of the City of Chico and the County of Butte, a taxpayer and rate payer of the City of Chico and the County of Bulle, and as a member of the Butte Environmental Council and in the public interest of other residents of the City of Chico and the County of Butte.	Thank you for your input.
			2	1. I join in the Comments submitted, by the Butte County Local Agency Formation Commission and the County of Butte, regarding the DPEIR.	Thank you for your input. We appreciate all viewpoints expressed by our community members.
			3	2. I also join in the Comments submitted by Dana Ripley, regarding the DPEIR.	Thank you for your input.

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			4	3. I am requesting that the Final PETR include a copy of my letter comments, dated June 3, 2021, regarding the Notice of Preparation which were submitted on that date and that they be included in the Response to Comments on the DPEIR for the proposed sewer line project, including the article that I prepared which analyzes the public policy, legal, and environmental benefits to be gained by reconsidering the "Preferred Project." The issues raised in my letter of June 3, 2021 have not been addressed, analyzed, or considered in the DPEIR and that they be analyzed and considered in the "Project Alternatives" section of the EIR prepared for the proposed project.	As requested, the June 3, 2021 letter with attachments has been appended to the (this) current comment letter from Mr. Harriman (#L11) and issues raised are addressed here. Since Mr. Ripley's SWRWD Plan and comments appear to be consistent with Mr. Harriman's June 3, 2021 letter and current comments, some issues have already been responded to and therefore, references to Mr. Ripley's L10 comment letter (comments 1 – 25) are provided, as appropriate. Issue 1. Response: Your agreement with LAFCo NOP comment letter dated May 20, 2021 is noted and the referenced LAFCo letter is attached to June 3 letter as part of this response to comments appendix; Issue 2. Response: Thank you for providing your "Urban Water Conservation: Another Alternative" opinion paper. Similar to the SWRWD Plan, calculations and opinions are included that the Town is not required to provide responses to as there is no substantiation or factual documentation to consider. Further, comments on costs and financing options are outside the scope of the PEIR. Any remaining points described in the your paper are similar to, and in some cases identical to, the SWRWD plan and are responded to in responses to Mr. Ripley's letter (#L10, 1 to 25). Issue 3. Assessment of environmental, planning, and economic impacts corresponding to updates to the General Plan would be speculative and are outside the scope of this sewer project PEIR – as noted by Mr. Harriman, both the Town and City have separate CEQA documentation to analyze effects that may result from future updates to both communities' General Plans. Issue 4. Given that the Proposed Project Description has evolved and been updated between the commenters letter date of June 3, 2021 and the posting of the Draft PEIR for public review on July 14, 2022, this issue has been resolved. There were no comments received on the Draft PEIR from Mr. Harriman or any other commenters on the Draft PEIR that contested the completeness or accuracy of the description of the Proposed Project. Further, this comment again focuses on opinion regarding the rationale for project, but does not reference facts to support the opinion; therefore, the Town is not required to respond. Issue 5. As you request in comment, the PEIR does "disclose, analyze, discuss and address the potential significant impacts to the environment which may occur". However, the EIR cannot address possible future changes to the final project, as they are unknown and would be speculative; however, as required by CEQA (Section 15162 (a) and (a)(1)), "When an EIR has been certified… for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines… (that) substantial changes are proposed in the project which will require major revisions of the previous EIR… due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects", the Town would be required to complete additional CEQA analysis if either of the conditions referenced above were to result from changes to the final project. Section 5.2 of the PEIR describes why the Town has eliminated the "local option" from consideration as a feasible alternative; therefore, there is no discussion of the issues presented in the letter within the "Project Alternatives" section of the PEIR, rather all are addressed here. Please also see responses to Ripley's letter – L10, Responses #4 and #11 regarding alternatives.

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			5	4. The benefits for prevention of significant adverse environmental effects from recurrent wildfires on the Ridge that could be provided by the alternative recommended by Dana Ripley in his comments regarding the true "Preferred Alternative" were not considered in the previous Study relied upon in the DPEIR. The previous Study and Analysis needs to be updated in light of advantages of the locally owned and controlled specially engineered Treatment Facility on the Ridge. The reason for this request is that the previous analysis relied upon in the DPEIR was prepared before lhe Paradise Camp Fire and needs to be updated, due to the elevated risk of recurrent wildfire, which can be mitigated by the re-use of treated effluent to irrigate and enhance the defensive open space needed to protect new urban development in the Town of Paradise and in the County of Butte.	Regarding existing wildfire risk, the PEIR evaluated the proposed project in light of this resource and, with mitigation incorporated (Section 3.18.4, Table 3.19-1), the Town's analysis found that implementation of the proposed project did not result in "significant adverse environmental effects" on Wildfire, a finding that was not disputed by Mr. Harriman in this comment letter. Development of solutions to current wildfire conditions would be a separate project and is not within the scope of this PEIR. As relates to the reference to Mr. Ripley's comment, Mr. Ripley's "preferred alternative" (as defined by Mr. Ripley and not related to the Town's CEQA analysis) was considered but eliminated from consideration as an alternative as described in the Town's response to Mr. Ripley's comment #L10-4. In addition, this is the first mention of the "Treatment Facility on the Ridge", which has not been described or otherwise mentioned in comments received on Draft PEIR; the only reference to "the Ridge" was found in a letter Mr. Harriman distributed at a meeting with the Town and Town attorney, that he had written to the Chico Enterprise-Record on June 4, 2021 (Letter is provided as an attachment to Mr. Harriman's comment letter following the June 3, 2021 letter discussed in L11-4 above). In this letter to the press, "the Ridge" is described as being part of unincorporated (Butte) County, not within the Town boundaries. The Town would not have jurisdiction to propose facilities outside of the Town boundaries; therefore this is outside of the scope of this Paradise sewer project PEIR. Finally, regarding the request for additional studies and analysis, *ParadiseSewer.com* provides links to all of the studies considered in developing the Proposed Project (under the "Project Materials" tab); the list does include pre-wildfire studies, but they are matched in number by those completed since 2020, post-fire. Further, please refer to Comment Response #L10-4 regarding the requirements to analyze an alternative under CEQA.
			6	5. Although I have made this comment at public meetings regarding the proposed project, it should be noted that the DPEIR does not address, analyze, or consider the environmental, planning, and economic impacts of not requiring lhe preparation of the updated General Plans and Environmental Impact Reports for Town of Paradise and the City of Chico as part of the "Preferred Project" analysis, although the Butte County LAFCo has been requesting the Town of Paradise to do so, since 1985. The DEIR should require a Condition to require such updates to be prepared and approved, prior to the commencement of construction of the proposed project or as a condition of approval by LAFCo.	As stated in multiple Sections of the Draft PEIR, including Sections 2.2.1, 2.2.2, and 2.3.1, the Proposed Project is consistent with the goals of the 1994 Town of Paradise General Plan and accounts for growth consistent with the recently updated Town of Paradise 2022 Housing Element. Further, a resolution (#13-04, included in Appendix B of the PEIR) was adopted by the Paradise Planning Commission in 2013 finding the "1994 Paradise General Plan substantially complies with the statutory mandates under Government Code Section 65302" (Appendix B). Please also review response to L11-4 above, which discusses environmental review of updates to general plans.

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			7	6. The Project Description is not stable, finite, and accurate. Draft Program EIR should be revised, amended, corrected, and re-circulated and the public comment period be re-opened and new public Scoping Meetings held by the lead agencies, including both the City of Chico and the Town of Paradise. The reason for require the requested action is that because the purported rationale for the proposed project [expedited redevelopment of the Town of Paradise] will not be achieved by the development and construction of the proposed project, as defined. In fact, the construction of the Project Alternative advocated by Civil Engineer Dana Ripley could be expedited and achieved much more rapidly than the construction of the "Preferred Alternative" recommended for adoption in the DPEIR.	The project as proposed fulfills the Project Goals and objectives stated in Section 2.3.2 of the Draft PEIR. Please also review response to L11-4 above, which discusses sufficiency of the project description.
			8	7. The DPEIR fails to disclose, analyze, discuss and address the potential significant impacts to the environment which may occur, depending on what changes arc made to the "Final Project" pursuant to the "Design Build" legislation adopted in AB 36 (Gallagher). The adoption of AB 36 by the State Legislature has rendered the DPEIR's analyses legally inadequate, because the proposed Preferred Alternative may bear little or no resemblance to tbe proposed Preferred Project Alternative, due to currently unknown changes made to the final design prior to and/or during construction of the project. Further, due to the preparation of a Draft "Program" EIR, the actual project may be significantly changed during construction by circumventing the project description in the Final PEIR tluough the use of multiple Project Addendums that do not require notice to the public or public review during the course ol' construction of the Final Project design, whatever it may be.	Please see response to L11-4 above, which discusses future project plan updates. Further, *County of Inyo, supra, 71 Cal.App.3d* at p.199 as referenced in *South of Market v City and Co of San Francisco, supra, 33 Cal.App5th 321* at p.8, concludes that "the CEQA reporting process is not designed to freeze the ultimate proposal in the precise mode of the initial project; indeed, new and unforeseen insights may emerge during investigation, evoking revision of the original proposal". The Town recognizes that "Project Addendums" are not required to be noticed to the public; however, CEQA Addendums are also only allowed "if some changes or additions are necessary but none of the conditions (described in CEQA Section 15162 (a), which is quoted in L11-4, Comment 5 above)..." that would call for preparation of a subsequent EIR (new significant effects or substantially increased effects and others listed in Section 15162), would occur. Therefore, if updates to the Proposed Project did occur in the future, the Town would consider what level of additional CEQA analysis, if any, was appropriate based on the potential for new or increased physical effects on the environment or other conditions occur described in Section 15162. Further, Chico City Code Section 15.40.285, *Regulation of Waste Received from Other Jurisdictions* , requires that any project with another municipality which would utilize the Chico sanitary sewer system requires an intermunicipal agreement (IMA) and sets out the requirements for such agreement; therefore, regulatory requirements already in place are being adhered to.

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			9	8. However, the most egregious legal inadequacy of the DPEIR is that it is barely readable and understandable, due to the lack of a Table of Contents and inadequate organization and disclosure of the Comments made during the Notice of Preparation process. The DPEIR glosses over the numerous comments and objections that were made in the Notice of Preparation process. Specifically, without having the Town General Plan updated since 1980, the changes in density requirements and other legislation that has been adopted by the State Legislature to provide for more dense residential dwelling units and reduction of Green House Gasses are barely even mentioned in the DPEIR, which results in accelerated "urban sprawl" within the Town's Sphere of Influence. Instead of focusing on dense multi-story and affordable multi--family housing in the Town's previously developed urban footprint, the "Preferred Alterative" supports and incentivizes accelerated inefficient sprawl in the Town and into the County's Jurisdiction.	The Draft PEIR document begins with a Table of Contents. All comments received during the NOP public comment window are included with the DPEIR in Appendix A: NOP Scoping Report, organized into a Comment Matrix, as well as Town responses. All comments received in response to release of the Draft PEIR have been reviewed and considered in the process of creating the Final PEIR, in addition to comments received from Mr. Harriman outside of both public comment periods (see response to Comment L11-4). The version of the The Town of Paradise General Plan used in the development of the Draft PEIR, drafted in 1994, rather than 1980, includes amendments through 2008, and the Town of Paradise Housing Element referenced in the Draft PEIR was updated in 2022 (see response to L11-6 and PEIR, Appendix B). Density (multi-family housing or vertical construction) becomes more feasible with a sewer system, and is one of the benefits of the sewer project. Please see Comment Response #W17-6 regarding growth outside of the Town of Paradise. Regarding the Draft PEIR focus on affordable housing, as stated in 2.3.2 Project Objectives and Goals, providing economic recovery and construction of affordable housing are integral to the Proposed Project, being identified as the primary objectives and goals of the project to meet the needs of the community (Section 2.3.1).
			10	9. Finally, the DPEIR's failure to adequately disclose, analyze, discuss, consider, and compare and contrast the expense of the Preferred Alternative to the more efficient and expandable specially engineered waste treatment facilities discussed in great length in the Comments submitted by Dana Ripley in his Comments and "White Paper" demonstrates the legal inadequacy of the DPEIR and the failure to proceed in the manner required by law, pursuant to Public Resources Code sections 21 168 and 21 168.5.	Please see Comment Response #L10-4 and #L11-5 regarding the requirements to analyze an alternative under CEQA. CEQA Guidelines Section 15064 describes how to determine significance of effects. Section 15064 (d) states that a Lead Agency should "consider direct physical changes in the environment which may be caused by the project" and defines a "direct physical change" as "a physical change in the environment which is caused by..." the project (Section 15064 (d)(1)). CEQA Guidelines Section 15124, defining what must be include in a project description, does not state that cost of a project is required. Often estimated costs at the early levels of design, such as here, carry huge contingencies as there isn't sufficient detail to make a refined cost estimate. What is required in the CEQA Project Description is "A general description of the project's technical, economic, and environmental characteristics" (Section 15124 (c)). As noted in previous response, economic recovery of the community is integral to the Proposed Project and a primary objective (Section 2.3.1).

Paradise Sewer Project PEIR Comment Matrix					
Commenter/Agency	**Comment Date**	**Letter No.**	**Comment No.**	**Comment Text**	**Comment Response**
			11	Please include this letter and Comments in the Record of Proceedings and include all of the Comments made regarding the Notice of Preparation previously relied upon by the public to review this very expensive and unnecessary public project in a Revised and Amended Draft EIR for the Preferred Project, instead of Program EIR for this vague, inadequately described, and expensive "Preferred Project". In addition, please remand the review of this proposed project back to the Public Works Department Staff for the preparation of an updated Project Review and Analysis, based on current water resource conditions and Wildland Urban Interface (WUI) environmental setting and background on the Town of Paradise, in the light of the Governor's Water Resiliency Portfolio and recently adopted Water Policy focusing on more efficient use of our water and energy resources. Finally, the Town of Paradise should be required to conduct the updated Study while contemporaneously updating the Town's General Plan.	Given that most of this is strictly opinion and how the Town will proceed is under jurisdiction of the Town administration, there is no response required for most of statements included in this comment. All comment letters received during the NOP public review period (July 14 through August 29, 2021) are contained and responded to in the Scoping Report that was/is attached to the PEIR (Appendix A). Comments received separately from Mr. Harriman outside of a formal public review period (June 3, 2021), have been included as attachments to this letter addressing comments on the Draft PEIR (#L11) and are responded to above in response to comment #L11-4.
			12	Thank you for the opportunity lo comment on the DPEIR. Please put me on your circulation list for the this Draft EIR and/or any changes in the process, including recirculation of a revised or amended NOP, Project Description, and/or revised or amended Draft EIR for this amorphous project.	We will continue to include you in the circulation list for any further documentation on the project, as was done on previous phases of this process (see attached email dated July 14, 2022 titled *Paradise Sewer Project Draft PEIR is Available!*).
Dannette Barefield	August 30, 2022	W39	1	I support the pier project	Thank you for your input. We appreciate all viewpoints expressed by our community members.
Patty Wilson	August 30, 2022	W40	1	I only wanted to know how the sewer was going down the hill. After repaving the skyway, I would hope you would not have to dig it back up. I can not see where the town plans on digging.	Thank you for your comment. Section 2.5.2.1 outlines how the sewer flows travel the Export Pipeline System, including the Ridge Gravity Section for downhill flows and the Gravity Force Main Section for uphill flows. Any digging will take place in the public right-of-way. Much of Skyway falls under County jurisdiction, and is outside of the jurisdiction of the Town.

L1

Marc Mattox
Town of Paradise
5555 Skyway
Paradise, CA 95969

Dear Mr. Mattox:

ENVIRONMENTAL IMPACT REPORT (EIR) FOR TOWN OF PARADISE (TOWN); PARADISE SEWER PROJECT (PROJECT); BUTTE COUNTY; STATE CLEARINGHOUSE NO. 2021050008

We understand that the Town is pursuing Clean Water State Revolving Fund (CWSRF) financing for this Project (CWSRF No. C-06-8568-210). As a funding agency and a state agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information on the EIR to be prepared for the Project.

The State Water Board, Division of Financial Assistance, is responsible for administering the CWSRF Program (Program). The primary purpose for the Program is to implement the Clean Water Act and various state laws by providing financial assistance for wastewater treatment facilities necessary to prevent water pollution, recycle water, correct nonpoint source and storm drainage pollution problems, provide for estuary enhancement, and thereby protect and promote health, safety and welfare of the inhabitants of the state.

The Program is partially funded by the United States Environmental Protection Agency (USEPA) and requires additional "California Environmental Quality Act (CEQA)-Plus" environmental documentation and review. Two enclosures are included that illustrate the Program's environmental review process including the additional CEQA-Plus federal requirements. For the complete environmental application package and instructions please visit: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml . The State Water Board is required to consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by the federal agencies or their representatives will need to be resolved prior to the State Water Board's approval of a CWSRF financing commitment for the proposed Project. For further information on the Program, please contact Mr. Brian Cary, at (916) 449-5624.

It is important to note that prior to a CWSRF financing commitment, projects subject to provisions of the Federal Endangered Species Act (ESA), must obtain ESA, Section 7 clearance from the United States Department of the Interior, Fish and Wildlife Service (USFWS), and/or the United States Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) specific to any potential effects to special-status species.

Please be advised that the State Water Board will coordinate with the USEPA to consult with the USFWS, and/or the NMFS regarding all federal special-status species that the Project has the potential to affect if the Project is to be financed by the Program. The Town will need to identify whether the Project will involve any direct effects from construction activities, or indirect effects such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have a potential to occur in the Project site, in the surrounding areas, or in the service area, and to identify applicable conservation measures to reduce such effects.

In addition, CWSRF projects must comply with federal laws pertaining to cultural resources, specifically Section 106 of the National Historic Preservation Act (Section 106). The State Water Board is responsible for ensuring compliance with Section 106 and is required to consult directly with the California State Historic Preservation Officer (SHPO). The SHPO consultation is initiated once sufficient information is provided by the CWSRF applicant (https://www.waterboards.ca.gov/water_issues/programs/grants_loans/docs/cultural_resources_report_prep.pdf). If the Town decides to pursue CWSRF financing, please retain a consultant that meets the Secretary of the Interior's Professional Qualifications Standards (http://www.nps.gov/history/local-law/arch_stnds_9.htm) to prepare a Section 106 compliance report.

Note that the Town will need to identify the Area of Potential Effects (APE), including construction and staging areas, and the depth of any excavation. The APE is three-dimensional and includes all areas that may be affected by the Project. The APE includes the surface area and extends below ground to the depth of any Project excavations. The records search request should extend to a ½-mile beyond project APE. The appropriate area varies for different projects but should be drawn large enough to provide information on what types of sites may exist in the vicinity.

Other federal environmental requirements pertinent to the Project under the Program include the following (for a complete list of all federal requirements and instructions please visit http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml :

A. An alternative analysis discussing environmental impacts of the Project. The alternative analysis must include:

- A “no project/no action” alternative.
- Comparative analysis among the alternatives that includes discussions of beneficial and adverse impacts on the existing environmental, future environmental, and individual sensitive environmental issues associated with the project.
- Analysis of direct, indirect, and cumulative impacts on sensitive environmental resources, if applicable.
- Appropriate mitigation measures to mitigate adverse impacts, if appropriate.
- Thorough discussion of the rationale for selection of the chosen alternative for the project.

B. A public hearing or meeting for certification of the EIR.

C. Compliance with the Federal Clean Air Act: (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, or severe (if applicable); (ii) if emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections.

D. Compliance with the Coastal Zone Management Act: Identify whether or not the Project is within a coastal zone and the status of any coordination with the California Coastal Commission.

E. Protection of Wetlands: Identify any portion of the proposed Project area that should be evaluated for wetlands or United States waters delineation by the United States Army Corps of Engineers (USACE), or requires a permit from the USACE, and identify the status of coordination with the USACE.

F. Compliance with the Farmland Protection Policy Act: Identify whether or not the Project will result in the conversion of farmland. Identify the status of farmland (prime, unique, local or statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract.

G. Compliance with the Migratory Bird Treaty Act: List any birds protected under this act that may be impacted by the Project and identify conservation measures to minimize impacts.

H. Compliance with the Flood Plain Management Act: Identify whether or not the Project is in a Flood Management Zone and include a copy of the Federal Emergency Management Agency flood zone maps for the area.

I. Compliance with the Wild and Scenic Rivers Act: Identify whether or not any Wild and Scenic Rivers would be potentially impacted by the Project and include conservation measures to minimize such impacts.

Following are specific comments on the Town's draft EIR:

1. On page 70, there might be an error in the section references as most of the references say Section 0.

Please upload to the Financial Assistance Application Submittal Tool (FAAST) (https://faast.waterboards.ca.gov/) the following documents applicable to the proposed Project following the Town's completion of the CEQA process: (1) one copy of the draft and final EIR, (2) the resolution certifying the EIR and making CEQA findings, (3) all comments received during the review period and the Town's response to those comments, (4) the adopted Mitigation Monitoring and Reporting Program and (5) the Notice of Determination filed with the Butte County Clerk and the Governor's Office of Planning and Research, State Clearinghouse. In addition, we would appreciate notices of any hearings or meetings held regarding environmental review of any projects to be funded by the State Water Board.

Thank you for the opportunity to review the Town's draft EIR. If you have any questions or concerns, please feel free to contact me at (916) 341-5879, or by email at Kristen.Way@waterboards.ca.gov or contact Brian Cary at (916) 449-5624, or by email at Brian.Cary@waterboards.ca.gov.

Sincerely,

Kristen Way
Environmental Scientist

Enclosures (2):

1. Clean Water State Revolving Fund Environmental Review Requirements
2. Clean Water State Revolving Fund Below-Market Financing for Wastewater & Water Quality

cc: State Clearinghouse
(Re: SCH# 2021050008)
P.O. Box 3044
Sacramento, CA 95812-3044

L2

TOWN OF PARADISE
SEWER PROJECT

Comment Card: To submit comments on the Draft PEIR, please fill out this comment card then affix stamp and place in the mailbox.

I am so happy to see this project going forward. As a 36 year resident of Paradise I am well aware of all the projects that have fallen thru due to lack of sewers or septic capacity. I look forward to seeing new businesses in Paradise that were made possible because of the sewer project. The entire town population will certainly benefit, even if they are not directly connected.

Your comments will be taken into consideration during the preparation of the Final PEIR

Name: Vicki Taylor

Address: 1844 Merrill Rd
Paradise

Phone Number: 530-514-8525

E-mail: audio51@aol.com

Submit comments by 5:00 p.m. August 29, 2022:

Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

Scan and send to: ccurtis@townofparadise.com

1672

L3

TOWN OF PARADISE
SEWER PROJECT

Comment Card: To submit comments on the Draft PEIR, please fill out this comment card then affix stamp and place in the mailbox.

Sounds good. Build it.

Your comments will be taken into consideration during the preparation of the Final PEIR

Name: _____

Address: _____

_____

Phone Number: _____

E-mail: _____

Submit comments by 5:00 p.m. August 29, 2022:

Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

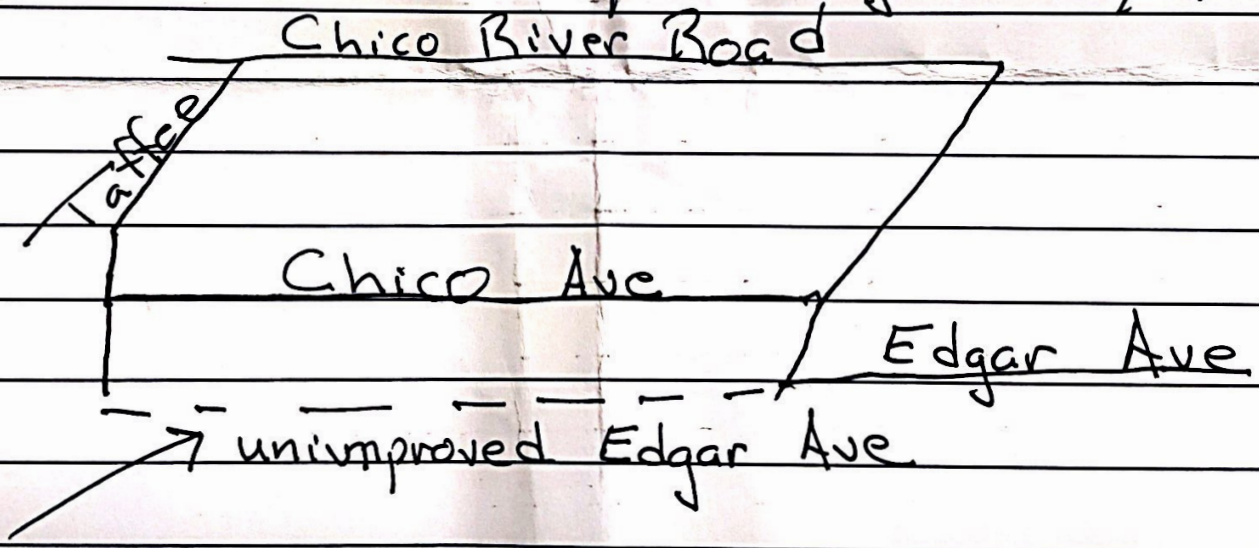
Scan and send to: ccurtis@townofparadise.com

L4

TOWN OF PARADISE
SEWER PROJECT

Comment Card: To submit comments on the Draft PEIR, please fill out this comment card then affix stamp and place in the mailbox.

Could the pipeline go west on the unimproved portion of Edgar Ave instead of Chico Ave. Then North to Taffee. This would safe having to distroy a paved road (Chico Ave). I understand those are public right of ways.



Your comments will be taken into consideration during the preparation of the Final PEIR

Name: Tod Kimmelshue

Address: 8610 Harvest Ln
Durham, CA 95938

Phone Number: 530-570-1076

E-mail: kimmelshuet@gmail.com

Submit comments by 5:00 p.m. August 29, 2022:

Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

Scan and send to: ccurtis@townofparadise.com

L5

TOWN OF PARADISE
SEWER PROJECT

Comment Card: To submit comments on the Draft PEIR, please fill out this comment card then affix stamp and place in the mailbox.

I OWN A 20 ACRE WALNUT ORCHARD AT 3662 HEGAN LN. CHICO. CROSS FROM FINLEY/HEGAN INTERSECTION. PGTE INSTALLED A NEW GAS LINE ON THE NORTH SIDE OF HEGAN @2-3 ft. NORTH OF EDGE OF PAVEMENT. WHERE IS THE SEWER LINE GOING TO BE PLACED IN MY AREA. UNDER HEGAN LANE? NORTH SIDE OF HEGAN LN. OR SOUTH SIDE OF HEGAN LANE? IF ON THE SAME AREA AS PGTE GAS LINE, WHAT IS THE MINIMUM DISTANCE FROM GAS LINE? WHAT IS THE DIAMETER OF ~~GAS~~ SEWER LINE? MY CONCERN IS IF THE TRENCHING WILL KILL THE WALNUT ~~TREES~~ TREES / ROOT SYSTEM. OR IF TREES WILL HAVE TO BE REMOVED FOR THE TRENCHING?

Your comments will be taken into consideration during the preparation of the Final PEIR

Name: RICHARD SMITH

Address: 3662 HEGAN LN. CHICO, CA. 95928

Phone Number: 530-894-4078

E-mail:

Submit comments by 5:00 p.m. August 29, 2022:

Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

Scan and send to: ccurtis@townofparadise.com

1675

Scanned with CamScanner

L6

RECEIVED
AUG 26 2022
TOWN CLERK'S DEPT

The Town has asked for public input regarding the proposed sewer project, and I would like to submit these comments:

First, the responsibility of Government is the safety and protection of its citizens; our basic rights are life, liberty and property. When you meet those basic rights; then, and only then, do you look for other benefits to the community that you govern.

So, the question is about the Town Govt. meeting the basic needs of the folks in Town.

1 The basic services for public safety are police, fire, and emergency medical services. Then ask yourself if you feel safe with the current facilities and staffing. (Remember, the third fire station was never built, the hospital is gone, and our cops are stretched thin). And there is no plan for change in these vital areas. Having a sewer does not correct or improve the absence of the above. We are no safer by having a sewer!

Second, there is no good justification to change from a septic system to a sewer system. Septic systems have worked extremely well for many rural communities for many many years. In Paradise, we have had very few failed or questionable septic systems; but let me just highlight a few examples of addressing a 'questionable' system. Cozy Diner: The Town, (based on limited space concerns) wanted to close the restaurant; there was no room to extend the leach field and the volume produced at the diner was exceeding the capacity of the existing septic system. Cozy management found a solution, agreed to spend a lot of money, and made the necessary improvements. Next, the Holiday Market leach field (it is under the asphalt parking lot) (which is not the best location for a leach field); Holiday was willing to spend a lot of money to dig up the old system and replace it with deeper drainage. It works just fine. Next, the MacDonalds Restaurant on Clark

2 Rd. Here was another "questionable" leach field, and there was not enough property to expand it. MacDonalds Corp. increased the parking lot size to accommodate additional leach field space (at a substantial cost). And lastly, the new Safeway Store on Skyway, they wanted to add a gas station and restaurant on the property, but there wasn't enough space for an extended leach field. So, Safeway Corp. bought additional acreage to be able to accommodate a larger leach field. Each of these examples show that whatever the concern is from the Town about a septic system, there was a remedy, if the property owner was willing to spend the dollars and improve the system. Have you ever heard of someone having an 'ailment' of any kind, because the septic system failed? Septic systems are not unsafe, or unhealthy.

There are other CA communities with similar concerns that have never been forced by the local Govt. to re-do their septic systems.

Looking at the benefits to having a sewer system, is not based on what problems you get rid of (see above); but consider the possible benefits to collecting sewerage, treating it, and using the effluent. Many folks thought that if the Town got some benefit from having a sewer system, then maybe it was a good idea. There are samples all over CA where treated wastewater is used for irrigation (especially on large grass areas - schools,

3 playgrounds, golf courses, cemetery districts, etc.) Anywhere that reclaimed water can be used reduces the amount of potable water used. Some communities have plumbed all the fire hydrants with treated wastewater. But that is not the plan for Paradise (there was an original plan to have local treatment), but the current proposal is to run a pipe (nearly 20 miles) from paradise to Chico. The wastewater from Paradise would end up at the Chico treatment plant. The discharge of treated wastewater goes into the Sacramento River; ergo, neither Paradise nor Chico get a benefit from our wastewater.

And, there are costs that go along with having a sewer system: a cost to get hooked up

4 (including, the digging up the street), a cost to discharge, a permit fee (annually or monthly), and, is that cost then passed on to consumers? Would all the commercial

5 facilities with new sewers raise their prices to cover the costs of using a sewer? Would

6 Paradise folks go to Magalia (with no sewer) and shop to avoid the price increases in Paradise?

7 Wouldn't it be nice if there was a plan to use treated wastewater here in Paradise to irrigate our new golf course?

8 Other comments: there are septic systems in CA, where there is no requirement for an inspection every ten years.

9 This is a summary of numerous comments/complaints I received since the question of a sewer for Paradise came up seven + years ago. But, remember, this happened before and the Town Council was 'recalled'!

L7

Department of Public Works Joshua Pack, Director

Butte County
PUBLIC WORKS

7 County Center Drive
Oroville, California 95965

T: 530.538.7681
F: 530.538.7171

buttecounty.net/publicworks

August 29, 2022

Colette Curtis
Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

Subject: Draft Program Environmental Impact Report for the Paradise Sewer Project

Dear Ms. Curtis,

The Department of Public Works has reviewed the Draft Program Environmental Impact Report (PEIR) that was issued for the public review and comment period on July 14, 2022. Based on our review, the following comments have been prepared under Butte County's authority as a Responsible Agency:

1. Permitting Authority: The PEIR acknowledges that the details of the required permitting and agreements that will be needed for the construction and ongoing operations of the Export Pipeline System within the County right-of-way have yet to be determined. Table ES-1 summarizes the anticipated required project permits and approvals for agencies and jurisdictions (p. xxiv). However, the table does not specify permitting authority for Butte County.

   The need for obtaining encroachment permits for work within the County rights-of-way is discussed several times in the PEIR, including Section 1.5 *Issues to be Resolved* (p. 10). Butte County is a Responsible Agency based on its discretionary approval power over certain aspects of the project including permitting authority which should be specifically recognized in Table ES-1.

2. Impact HAZ-6 Background and Analysis: Section 3.9 Hazards and Hazardous Materials does not appear to provide adequate discussion and analysis on how the proposed mitigation measures will reduce Impacts HAZ-6 and HAZ-7 to a less than significant level.

   - Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

   - Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

   The Department requests that additional discussion and analysis should be provided in the PEIR to demonstrate how the proposed Mitigation Measures, specifically MM-HAZ-3, MM-HAZ-4, and MM-HAZ-5, will reduce the identified significant impacts to a less than significant level. For example, further discussion providing information on the importance of a Rapid Demobilization Plan and how rapid demobilization will be critical during an emergency would support the proposed mitigation measures.

3 Both the Rapid Demobilization Plan and Evacuation Warning Procedures should be provided to Butte County Public Works for review as part of the encroachment permit application process.

Please feel free to contact me at (530) 538-7681 or at khunter@buttecounty.net if you have any questions.

Sincerely,

Kim Hunter
Project Manager
Butte County Public Works – Land Development Division

CC: Joshua Pack, Director, Department of Public Works

L8

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

411 Main Street, 2nd Floor
P.O. Box 3420
Chico, CA 95927-3420

Phone: (530) 879-6900
Fax: (530) 895-4899
www.ci.chico.ca.us

Colette Curtis, Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

August 29, 2022

RE: DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR) FOR PARADISE SEWER PROJECT (SCH# 2021050008)

Dear Ms. Curtis –

Thank you for the opportunity to comment on the above referenced project. The City has reviewed the Draft PEIR and offers the following comments:

The City understands that the Paradise Sewer Project (Project) is a critical component to the Town of Paradise's (Paradise) overall Camp Fire recovery effort and that the design of the project is in an early phase. Given the scope of the Project, the alignment of certain segments of the proposed pipeline, the location of associated equipment located within or adjacent to the City limits and Sphere of Influence, and the pipeline's ultimate connection to the City's Water Pollution Control Plant (WPCP), we look forward to coordinating closely with Paradise during the design, construction, and implementation phases of the Project.

Close coordination will be particularly important for numerous reasons, including, but not limited to:

1

1) Avoiding potential conflicts between the Paradise Sewer Project and the City's proposed infrastructure projects that are located along or adjacent to the Project's proposed alignment (e.g., the P-18 sewer trunkline segments located within the railroad grade in South Chico and within the Entler Avenue and Midway rights-of-way, the intersection improvements at Hegan Lane and Midway, etc.).

2) Ensuring collaboration regarding the design of those project components (e.g., the Transition Chamber located off lower Skyway, the Flow Control and Metering Structure proposed near the WPCP, and all connections to the City's existing and proposed facilities) that are located within or adjacent to the City to avoid and minimize the potential environmental impacts (soil contamination, water pollution, odors, etc.) that could result from system failures.

2

The City appreciates Paradise's inclusion of the permitting requirements in the PEIR, including the Sanitary Sewer Systems General Order and associated conditions requiring the preparation of a Sewer System Management Plan and an Overflow

2 Emergency Response Plan that will be both reviewed and approved by the City of Chico. These documents will provide the policies, procedures and activities covering the planning, management, operation, and maintenance of the collection system. In addition, these efforts will result in emergency response planning to identify measures to protect public health and the environment, particularly as they relate to an inadvertent release of sewage.

3 According to the PEIR, wastewater studies prepared for the Town determined the Project export pipeline system design should be based on an estimated average wastewater conveyance and treatment need for the Paradise sewer service area to be 0.464 million gallons per day (mgd). Due to the conceptual nature of the inclusion of the entire Extended Collection System outside of the Core Collection System, as identified in Figure ES-1, it is unclear at this time if serving the greater area would have the potential to exceed the maximum design of 0.464 mgd. Any future expansions should be analyzed and agreed to by the City to prevent any unforeseen wastewater exceedances that could negatively affect pipeline and plant capacities.

4 The City looks forward to collaborating with the Town of Paradise and its professional sewer design team in the development of the project and looking for partnership opportunities that will benefit both communities.

If you have any questions, please feel free to contact me at (530) 879-6901 or LeighAnn.Sutton@chicoca.gov.

Sincerely,

Tracy R Bettencourt for

Leigh Ann Sutton, P.E.
Direct of Public Works Engineering

Cc: Marc Mattox, Town of Paradise Public Works Director

L9

August 29, 2022

1 of 3

To: Town of Paradise
From: Laurie Noble and Jim Noble
Regarding: Town of Paradise Sewer Project Draft Environmental Impact Report

RECEIVED
AUG 29 2022
TOWN CLERK'S DEPT

Public Information

There needs to be a very accessible public forum of information regarding the Town of Paradise Sewer Project. Very few people have participated and know of plans to date regarding this immense project. 1

Blue Flamingo could be a group to widely dissemenate information. There are numerous and very complex issues to deal with as this project moves forward. Residents should have opportunity for imput.

Water retention

We are hearing from individuals a very strong concern regarding grey water and storm water retention

Both have been a significant part of Paradises ground water for many decades. The installation of signal lights and reconfiguring the intersection at the top of Clarke Road directed storm water runoff to be diverted from the triangle parcel between Skyway Rd and Clark. Trees on that property died over the course of a couple of years. They were cut off from their supply of water. 2

As streets throughout town are repaired and upgraded will the strom drains ~~turned off~~ immediately run off the ridge or be directed to catchment basins? What are the details of all the plans?

Future Economic Development / Commercial Development

is on hold until a sewer system is in place. What is the time line for installation of the system including connection to west of Chico Sewage treatment Plant? 3

How does it fit in with rebuilds and repaving of roadways?

4 Cal Poly water/design ideas presented by students in Spring of 2019 should be revisited. They had some good ideas — how to deal with terrain elevations as an example.

5 Santa Cruz converting from septic tanks to sewer system — abandoned tank → sink holes — legal disclosures for property sales — Town of Paradise policy - need to dealt with.

6 Davis - Sewer Issues having to clean to keep system moving.

intentionally Blank

7 Drought issues need to be considered. This is not just in Paradise, in Butte County, in ~~the~~ the western states in north America it is a global world wide issue & needs to be dealt with now.

8 Water added to make the sewer system flow clear to the Sacramento River area ~~of~~ a treatment plant is possibly inappropriate be it fresh potable water added or grey water.

9 Pump up sewage from low lying areas of the community to the main lines ~~may~~ may be restrictive and financially prohibitive.

10 Lawn installations
Another drought issue the Town of Paradise could and should deal with immediately is lawn development / installation. Curtail or limit it immediately there is NO water, Mount Shasta is bare of snow except for a few glacial remains.

3:34pm

11 Draft Program Environmental Impact Report page 4/29 Hydrology and Water Quality HYD-2: is in need of more evaluation. The removal of all waters from households and businesses could have a very long lasting impact. Details of well level in Swayle when opened to install solar water pump was about 6" from ground level during drought year when wells were failing in the Valley. Laurie Noble 8/29/2022

L10

Date: August 29, 2022

To: Marc Mattox, mmattox@townofparadise.com

Cc: Kevin Phillips, kphillips@townofparadise.com
Colette Curtis, ccurtis@townofparadise.com

From: Dana Ripley, PE, dana@ripleypacific.com

Re: Paradise Sewer Project, Draft Program EIR
Public Comment

Marc,

The opportunity to provide this public comment on the Paradise Sewer Project Draft Program Environmental Impact Report (PEIR) is appreciated. As you are aware, I have been advocating for nearly two years a local water reuse project in Paradise as an alternative to the 18-mile wastewater export identified as the superior project in the draft PEIR. On November 30, 2021 I submitted to your office a white paper entitled *Town of Paradise, Butte County CA, Sewer, Water Reuse and Wildfire Defense Integrated Plan* (SWRWD Plan). That white paper is included in this public comment as Exhibit A.

In light of the broad implications of the export versus local reuse options for Paradise, it may be instructive to consider the California Environmental Quality Act (CEQA) Guidelines which includes as an advantage of the "Program" EIR[1] the following:

> *Allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts.*

This public comment will attempt to respond to the draft PEIR's assertions that the SWRWD Plan is infeasible and further highlight the benefits to Rebuild Paradise goals and aspirations for restoring a vibrant community with state-of-the-art infrastructure to serve many generations to come. This PEIR is now *at an early time* when Paradise has the opportunity to reconsider *broad policy alternatives* that may have been overlooked or misunderstood in the draft report.

This draft PEIR public comment is presented as follows.

Area of Known Controversy #1: Growth Inducing Impacts

The draft PEIR, Section 1.4, recognizes that there may exist growth inducing impacts *specifically in the City of Chico and rural Butte County outside of Town and City limits.*

In a November 4, 2020 letter from the Central Valley Regional Water Quality Control Board, Region #5 (R5) addressing the local facility versus regional alternatives for Paradise, the statement is made that the "*Pipeline to Chico can be cost-effectively sized to accommodate a large range of flows.*" In a tabulation of pipe carrying capacities of the 10.5 mile 12" diameter export pipe force main along the valley floor (from Skyway at Butte Creek to the Chico WPCP) utilizing reasonable flow velocities ranging from 3 feet per second (fps) to 7 fps[2], the available capacity could potentially be as high as 1.758 million gallons per

day (mgd) average daily flow (ADF)[3]. This capacity is approximately 3.8 times the 0.464 mgd ADF capacity allocated to Paradise in the inter-municipality agreement between Chico and Paradise considered as part of the draft PEIR.

The tabulation indicates that up to approximately 1.3 mgd ADF of wastewater export pipe force main capacity could be available to undeveloped properties in southeast Chico as well as rural Butte County along the pipeline alignment.

Area of Known Controversy #2: Reconsideration of Local Treatment Option

The draft PEIR, Section 1.4, recognizes potential *reconsideration of local treatment plant construction instead of the proposed connection to the Chico WPCP, which was evaluated in 2017 and 2020.*

In both Bennett 2017[4] and HDR 2020[5], the local treatment alternatives described did not consider distributing recycled water to all parcels served by the sewer system. Conversely, the SWRWD Plan considers extensive urban reuse serving all collected parcels thereby adding a water supply component to PID's portfolio enhancing its drought preparedness and supply resiliency. As described in the white paper, the dual distribution included in the SWRWD Plan has multiple benefits including 1) delivery of non-potable recycled water for residential, park, sports, commercial, and buffer area irrigation, 2) seasonal shallow aquifer recharge in winter months, 3) automated community-scale wildfire defense for essential facilities, public/private buildings and evacuation routes, 4) high pressure supplemental water supply for fire suppression, 5) protection of Paradise Irrigation District's (PID) potable distribution from depressurization in the event of another extreme wildfire event, and 6) beneficial use of nutrients inherent in municipal wastewater.

The draft PEIR, Section 5.2.1, Table 5.2-1 *Local Alternatives and Reasons for Elimination from Consideration*, lists as Local Alternative #3: *Local WWTP with Water Recycling with the Town for Local Reuse and Wildfire Defense.* In response to the 12 bullet points asserting infeasibility, included in this public comment is Exhibit 2 providing a rebuttal to each point individually in table format.

Lost Opportunity for Recycled Water

Assuming the export pipe force main has an ADF capacity of about 1.8 mgd, the potential lost opportunity for urban water reuse in Paradise and southeast Chico could be as much as 2,000 acre-feet per year (afy)[6].

On August 11, 2022, Governor Newsom announced *California's Water Supply Strategy, Adapting to a Hotter, Drier Future*[7]. Part of the *Strategy* is to increase urban water recycling in coastal and inland communities to about 0.8 million acre-feet per year (MAF) by 2030 and to about 1.8 MAF by 2040[8]. Urban water reuse in Paradise and southeast Chico would clearly be consistent with the *Strategy* and likely would be eligible for significant grant funding included in the 2021-2022 $5.2 billion state appropriations for California water systems including water recycling.

In its 2020 Urban Water Management Plan (UWMP), PID indicated that *the community will continue to work to examine the viability of a centralized sewer system and any associated opportunities to develop a recycled water supply as it continues to recover from the Camp Fire and look to the future of rebuilding and redevelopment of Butte County*[9]. The 18-mile export plan would foreclose on any opportunity in the foreseeable future to develop a recycled water supply in Paradise.

In similar fashion, Cal Water-Chico District indicated in its 2020 UWMP that *Cal Water continues to actively investigate recycled water opportunities, such as satellite, or decentralized, recycled water generation at select areas within the Chico area, for use in that area*[10]. The 10.5-mile export force main pipeline would likely also foreclose on Cal Water's ability to a develop recycled water supply in southeast Chico in the foreseeable future.

In both Paradise and southeast Chico, the export pipeline would represent a lost opportunity to develop local recycled water resources that might otherwise be available. This would be inconsistent with the Governor's *Water Supply Strategy* to maximize alternative urban water supplies, including recycled water for non-potable urban demands, for a more secure and resilient water supply future.

Issue to be Resolved: Butte LAFCo service extension approval

The draft PEIR, Section 1.5 indicates that Butte LAFCo's approval of the 18-mile extension of sewer service by Chico to Paradise is an issue to be resolved. However, the required LAFCo approval may be in conflict with state Government Code as indicated by the Executive Officer's letter of May 20, 2021 which states:

> *Provisions for extension of service requests are found in Government Code §56133 and in Section 4.5 of the Commission Policies and Procedures. Service extensions outside of an agency's Sphere of Influence may only be approved by LAFCo if there is "an existing or impending threat to the health or safety of the public or the residents of the affected territory. (§56133(c)) . . . . . The City/Town will need to provide documentation/justification of the existing or impending public health and safety threat the extension of services would address. This is a critical prerequisite to the project as* ***it is the only legally permissible justification available*** *[emphasis added] to the LAFCo to approve a service extension request outside of an agency's (Chico) Sphere of Influence*[11].

Since *an existing or impending threat to the health or safety of the public or the residents* does not exist, it appears that Butte LAFCo cannot approve the sewer extension request even if it wanted to. The only path forward on this may in fact be a waiver by the state legislature and Governor similar procedurally to Assembly Bill 36 (Gallagher, 2021). Recognizing that the 18-mile extension request is contrary to the Governor's *Water Supply Strategy* because it could potentially foreclose on up to 2,000 afy of urban water recycling, the Governor would likely not support the waiver legislation even if approved by the State assembly and senate.

Scalable to Sewer Entire Town

The export project as proposed in the draft PEIR limits the Paradise wastewater contribution to the Chico WPCP to 0.464 mgd. This limits sewer service to about 1,500 residential and commercial parcels within the sewer service area (SSA).

The SWRWD Plan, conversely, is scalable to whatever service area Paradise chooses long term, including service to all 10,600 parcels served by PID pre-fire. This would be consistent with a local Paradise Post press report stating:

(Congressman Doug) LaMalfa pointed to the sewer as an essential infrastructure need for Paradise. "You know, a portion of this is going to help with that longtime need for a sewer system to this town, which unlocks a lot of possibilities for (Paradise)," he said. He also pointed out that as Paradise rebuilds, it can be part of an important part of California's need to build more housing, pointing out that California is 2.5 million units short of what it needs[12].

For context on the limitations with sewer service only to within the SSA, the draft PEIR states:

Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California[13].

This metric would likely remain unchanged with the 18-mile export plan serving only the SSA – Paradise would ***still*** be the *largest unsewered community in California* since the SSA includes only about 14% of the permitted parcels within the Town.

State-of-the-Art Infrastructure

The same local Paradise Post press report indicated that:

[Paradise Mayor Steve] Crowder pointed out that the undergrounding project by Pacific Gas and Electric is also a critical project that will make Paradise "a state-of-the-art community with a brand new infrastructure."[14]

Beyond underground electrical power distribution, "*state-of-the-art*" infrastructure should also include sewer collection, potable water distribution, non-potable water distribution, independent high pressure supplemental fire supply, fiber optic distribution, and community-scale wildfire defense integrated with the recently authorized wildfire early warning system[15]. Clearly, all underground utility construction should be coordinated and should precede construction of any new public roads where the utilities are installed.

Summary

Section 15168(b)(4) of the CEQA Guidelines allows the lead agency to *consider broad policy alternatives and program-wide mitigation measures* ***at an early time*** with a "Program" EIR. This public comment suggests that now is the early time for the Town to reconsider the fundamental broad policy alternatives of 18-mile wastewater export/river discharge versus 1) water conservation, 2) water reuse, 3) aquifer recharge, 4) enhanced fire suppression, 5) community-scale wildfire defense, 6) protection of potable water distribution from depressurization and 7) beneficial use of nutrients. Further, the local reuse alternative offers the upside potential of ultimately providing sewer service to 100% of the Town.

The recommendation, therefore, is to elevate the SWRWD Plan as presented in Exhibit A to "feasible" CEQA status and then reconsider what is in fact the environmentally superior alternative. In reconsideration of the 18-mile export plan, its feasibility might rest with a legislative waiver of GC §56133(c) since absent such a waiver, it may not be *legally permissible*.

If the Town accepts the recommendation above, the draft PEIR should be recirculated consistent with CEQA guidelines[16].

List of Exhibits

Exhibit A	Town of Paradise Sewer, Water Reuse and Wildfire Defense Integrated Plan White Paper, November 30, 2021
Exhibit B	Rebuttal responses to Draft PEIR Table 5.2-1: Local Alternative #3 Infeasibility, August 29, 2022

References

[1] Association of Environmental Professionals, CEQA Statute and Guidelines, Section 15168 (b)(4), p.240
[2] See Exhibit B, Table 1
[3] HDR, Inc., Export Pipeline Analysis, Technical Memorandum #8, March 31, 2022. Peaking factors extracted from Table 1. Design Flows.
[4] Bennett Engineering Services, *Town of Paradise Sewer Project, Alternatives Analysis and Feasibility Report: Determining a Preferred Alternative for Implementation*, June 21, 2017.
[5] HDR, Inc., *Local Wastewater Treatment and Disposal Alternatives, Technical Memo #4, Paradise Sewer Project,* November 11, 2020.
[6] See Exhibit B, Table 2
[7] See California's Water Supply Strategy
[8] See Exhibit B, Figure 1.
[9] Paradise Irrigation District, 2020 Urban Water Management Plan, Section 6.7.
[10] Cal Water-Chico Hamilton District, 2020 Urban Water Management Plan, Section 6.5.4
[11] Butte LAFCo letter dated May 20, 2021 by Executive Officer Stephen Lucas
[12] *Paradise to get nearly $200 million in infrastructure funding,* Paradise Post, August 23, 2022.
[13] Town of Paradise Sewer Project, Notice of Availability of Draft Program Environmental Impact Report and Public Meetings for the Paradise Sewer Project, July 14, 2022.
[14] *Paradise to get nearly $200 million in infrastructure funding,* Paradise Post, August 23, 2022.
[15] *Council approves early warning project*, Paradise Post, July 16, 2022
[16] Association of Environmental Professionals, CEQA Statute and Guidelines, Section 15088.5(3), p. 203

EXHIBIT A

Town of Paradise
Butte County, CA

Sewer, Water Reuse and Wildfire Defense
Integrated Plan

White Paper

Town of Paradise

Butte County, California

Sewer, Water Reuse, and Wildfire Defense Integrated Plan

White Paper

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Paradise SWRWD White Paper and appendices

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Appendix

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Appendix Y	Governor Newsom Signs $15 Billion Climate Action Bills
Appendix Z	Wildfire Insurance Crisis

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1 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This white paper[1] is presented to the Town of Paradise (TOP) and Butte County as an alternative vision and approach to solving the Town's longstanding sewer infrastructure needs. It is an attempt by the author to provide an independent view of the recognized sewer problem facing TOP, and offer an alternative opinion and recommendation as to a comparable cost, environmentally superior solution relative to the sewer project currently under California Environmental Quality Act (CEQA) review.

1.2 18-MILE WASTEWATER EXPORT PLAN

The project currently under CEQA review is described in the Notice of Preparation dated May 3, 2021, as follows:

> *The Proposed Project consists of three constructed components—a wastewater collection system in Paradise, an 18-mile export pipeline to convey wastewater to the Chico Water Pollution Control Plant (WPCP), and connection to the WPCP — and operation of the new sewer system. The export pipeline would begin at the southwest edge of Paradise and run for approximately 8 miles along Skyway until reaching south Chico, at which point the pipeline would leave Skyway and continue west, crossing Butte Creek, Highway 99, and the Union Pacific Railroad, and terminating at the Chico WPCP in Chico. The Proposed Project would not change the service area of the Chico WPCP other than the addition of the Paradise connection and treatment. Moreover, there would be no additional fees for Chico residents and existing Chico WPCP rate payers as a result of the Proposed Project. This long-term wastewater solution will allow for sustainable housing and business activity in Town, supporting the community's economic recovery and vitality*[2].

For purposes of this white paper, the current proposed project is referred to as the "Export Plan." The total capital cost of the Export Plan as presented by TOP's consultant in December 2020 is $184 million[3]. This estimate provides sewer service to approximately 1,470 parcels within the existing Sewer Service Area (SSA).

1.3 SEWER, WATER REUSE AND WILDFIRE DEFENSE INTEGRATED PLAN

The alternative project as presented in this white paper includes the following major components:

1. Effluent-only pressure sewer collection within the SSA
2. Local water recycling facility sited within or adjacent to TOP
3. High pressure non-potable auxiliary water supply system (AWSS)
4. Non-potable AWSS distribution to all parcels within SSA
5. Non-potable water irrigation supply for all parcels within SSA including parks, irrigated buffers, evacuation routes, high-risk slopes
6. California Title 22 disinfected tertiary recycled water for seasonal aquifer recharge

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7. Non-potable water tank storage within TOP serving multiple pressure zones
8. Supplemental raw water supply for AWSS bypassing PID treatment plant in emergencies, if necessary
9. Supplemental groundwater supply for AWSS in emergencies, if necessary
10. Strategic wildfire defense capabilities including rooftop sprinklers, water cannons, water misters protecting essential and high value assets from wind-driven ember cast
11. Separation of potable and non-potable water distribution to prevent depressurization of potable system and chemical contamination caused by abrupt increase in water demand during a wildfire event
12. Robust community-scale wildfire mitigation and defense strategy to reduce insurance underwriters' risk profile and lower property insurance premiums
13. Septage receiving facility to accommodate biosolids from all TOP septic tanks
14. Expedited system delivery of 18-24 months from award of design-build contract to first flush relative to 5-10 years for the Export Plan
15. Significant opportunity for state and federal grant funding sources otherwise not available to the Export Plan
16. Ability to ultimately expand system to include all residential and commercial parcels within TOP

For purposes of this white paper the sewer, water reuse, and wildfire defense integrated plan is referred to as the "SWRWD Plan." A preliminary budget for this alternative plan is presented that relies in large part of prior estimates prepared by TOP's own consultant teams. For specific components not estimated previously, planning level budgets are presented. Based on these preliminary budgets, the capital cost of the SWRWD Plan serving the existing SSA is estimated at $187 million.

1.4 Purpose of White Paper

The intent of this white paper is to present an alternative vision and approach to solving TOP's sewer needs with a multi-dimensional set of objectives – an approach that recognizes value in local water reuse coupled TOP's overwhelming need to develop a robust community-scale wildfire defense strategy.

The Export Plan offers the one-dimensional benefit of regional wastewater disposal. The SWRWD Plan, on the other hand, offers 16 multi-dimensional co-benefits as listed in Section 1.3 above. This white paper also discusses beneficial non-technical aspects of the SWRWD Plan including permitting, capital costs, grant funding, property/wildfire insurance, system procurement, and time to implement.

By preparation of this white paper, a request is made to TOP to review the information herein and include the SWRWD Plan in the "Alternatives" section of the Draft Environmental Impact Report (DEIR) in accordance with CEQA guidelines. Upon approval of a Final EIR with both options included, TOP would be able to competitively bid the Export Plan and the SWRWD Plan on a design-build (DB) basis.

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2 SEWER COLLECTION

Two alternative collection systems serving the SSA have been evaluated by TOP consultant teams previously resulting in distinctly different recommended technical approaches and cost estimates. In November 2020, HDR, Inc. in its Technical Memo #3 recommended a gravity collection system with an estimated capital cost of $119.6 million[4]. In June 2017, Bennett Engineering Services in its Alternatives Analysis and Feasibility report recommended an effluent-only pressure sewer system with an estimated capital cost of $47.4 million[5]. For each alternative evaluated, the specific number of parcels included within the same SSA were both approximately 1,470.

This section will briefly compare the two collection approaches evaluated previously.

2.1 GRAVITY COLLECTION

The gravity collection system proposed in 2020 consists of 154,000 lineal feet (lf) of gravity sewers, 27,000 lf of pressure force mains, 27 pump stations, 791 manholes, and 1,469 service lateral connections. Of the gravity sewers, most will require excavation in the range of 4 to 16 feet below ground, however approximately 2,000 lf will require excavation to depths ranging from 16 to 20 feet.

Excavation to these depths may prove difficult given that the Tuscan formation, in its "unweathered" state, is marked by predominantly hard and course rock fragments that make excavation difficult without blasting or the use of rock trenchers[6]. The constructability of deep gravity sewers in hardrock soils within the SSA is likely the predominate factor in the relatively high estimated construction cost.

Figure 1 presents images of gravity sewer construction in sandy soils showing how impactful deep trench installation of manholes and pipelines can be in residential neighborhoods. For TOP, the impact may be substantially greater if blasting or rock trenchers are required for deep trenches in hardrock areas.

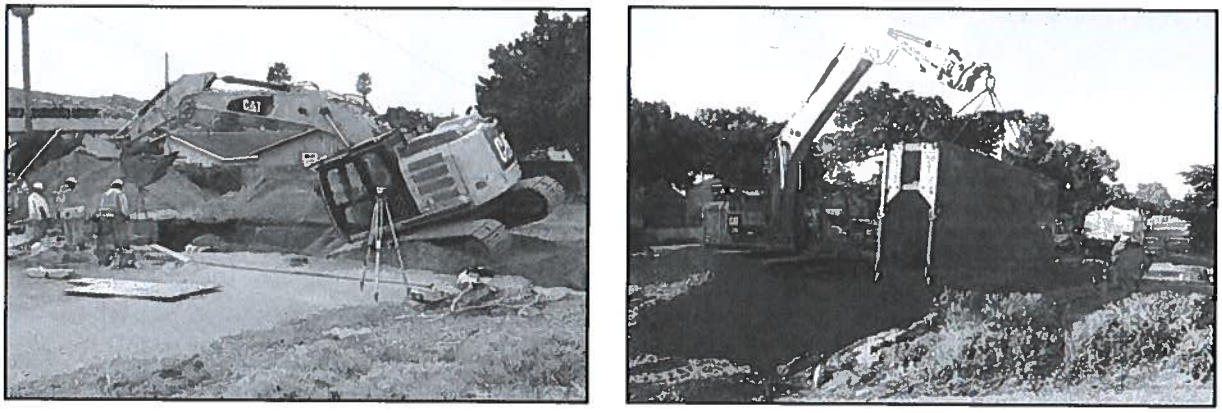

Figure 1 Gravity Collection Construction, San Luis Obispo County, CA

2.2 LIQUID-ONLY PRESSURE COLLECTION

The effluent-only pressure collection system proposed in 2017 consists of approximately 120,000 lf of sewer collectors, 60,000 lf of pressure trunks, 8,000 lf of gravity trunk, one local pump station, and 1,471 private connections each with its own interceptor tank. Since the collection system is pressurized, shallow pipelines with variable grades do not require deep trench excavations. Bennett indicated that

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after conducting extensive research, a low-pressure system was selected in lieu of a more expensive gravity system. Cost savings were realized by reduced pipe size and shallower depth (three feet below the surface) for low pressure systems as compared to gravity systems[7].

Figure 2 presents images of low-pressure collection utilizing horizontal directional drilling (HDD) construction in a residential neighborhood. HDD installation is significantly less impactful during construction relative to open deep trenches required for gravity collection.

Figure 2 Horizontal Directional Drilling Low-Pressure Sewer, South Kent Island, MD

HDD construction is commonly used for other underground utilities including potable and recycled water distribution, underground electrical power distribution, cable TV, and fiber optic cable.

2.3 Recommended SWRWD Collection System

In 2020, TOP rejected the effluent only-pressure effluent collection in favor of gravity collection, as follows.

> *To reduce collection system capital costs, the 2017 Report recommended the use of a septic tank effluent pumping (STEP) system, which discharges into shallow gravity sewers. This STEP system would require that individual septic tanks remain in use. After completion of the 2017 Report, Paradise citizens indicated a strong preference to eliminate septic tanks and/or pumps on individual parcels. As a result, for this Project, the Town directed the development of a traditional gravity sewer system, which eliminates septic tanks[8].*

The collection system recommended for the SWRWD Plan is summarized as follows.

> *A low-pressure sewer effluent system is preferred to serve the Town. While the system requires a portion of infrastructure and maintenance on each parcel, it limits the number of pipelines and manholes needed in the collection system and reduces the cost of the collection system[9].*

Based on the cost estimates prepared by HDR and Bennett, a collection cost reduction of $72.2 million is realized by selection of effluent-only pressure system. In addition to the significant cost reduction, deep trenches (up to 20 feet) required for gravity collection in hardrock areas, may in fact be infeasible from a construction standpoint absent blasting. For these reasons, the effluent only pressure collection system as recommended by Bennett is recognized as the only technically and economically feasible collection option for TOP in the SWRWD Plan.

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3 WASTEWATER TREATMENT

The regional plan includes an 18-mile export pipeline for treatment at the Chico Water Pollution Control Plant (WPCP) while the SWRWD Plan includes treatment at a new local facility located within or near the TOP. This section summarizes the two options and their prior cost estimates.

3.1 EXPORT TO CHICO WPCP

Based on the HDR 2020 investigation, the cost of this option is $52.2 million for the export pipeline and $13.0 million for connection to the Chico WPCP, for a total of $65.2 million[10]. This option would require a fee and operations agreement with the City of Chico, as well as a service extension approval from Butte LAFCo, land use approvals from Butte County, and right-of-way acquisition from various private landowners.

The alignment of the proposed 18-mile export pipeline is presented in Figure 3.

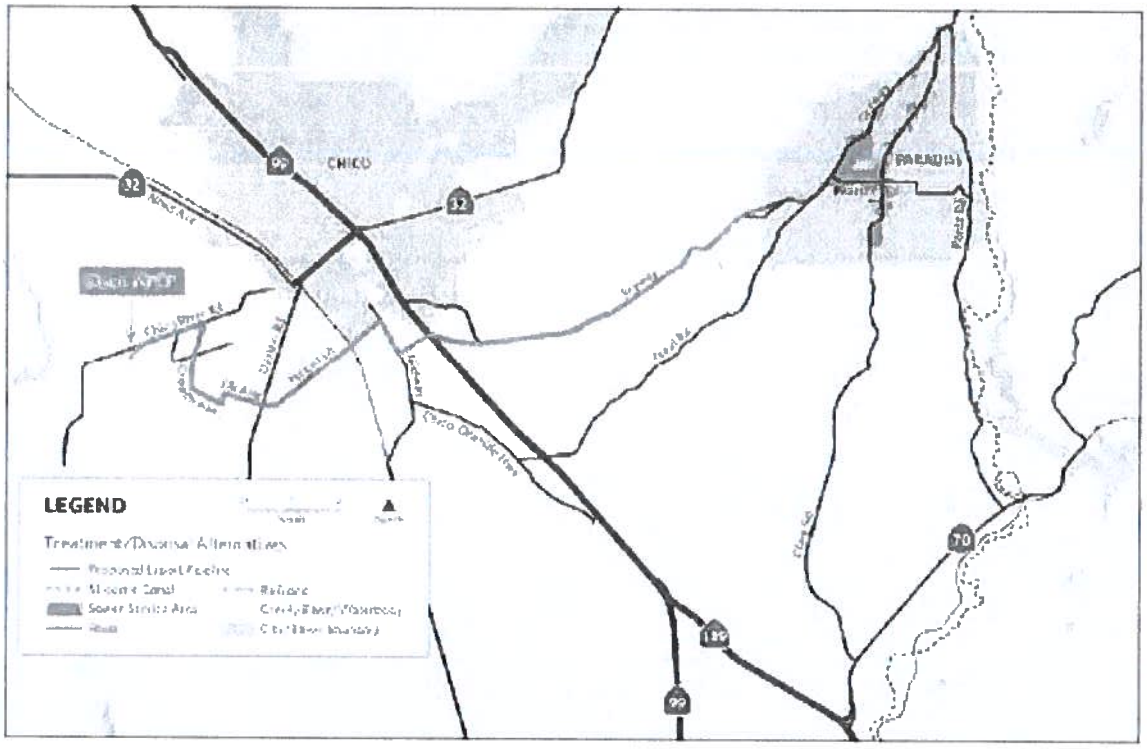

Figure 3 Export Pipeline Alignment[11]

The Chico WPCP discharges all of its treated secondary to the Sacramento River. Based on the 2021 Cal Water Urban Water Management Plan, there are no plans for upgrading the WPCP effluent to tertiary treatment and distribution of recycled water back to the City of Chico within the foreseeable future as indicated below.

> *Implementation of a recycled water program at either treatment plant would require upgrades allowing for tertiary treatment and new distribution infrastructure between the treatment plant and potential District customers. Based on these conditions, a recycled water system in the Chico District is not planned at this time and will likely only be considered if conditions related to District*

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supply change significantly in the future. As shown in Table 6-4, there is no recycled water supply for the Chico District[12].

It would be infeasible at any point in the future to return recycled water 18-miles from the Chico WPCP back to TOP.

3.2 Local Treatment Facility

Both HDR and Bennett estimated costs for a local treatment facility. For a local recycling plant producing California Title 22 (T22) disinfected tertiary recycled water with ultraviolet disinfection, HDR estimated a capital cost of $37.4 million in 2020[13]. For a similar facility, Bennett estimated a capital cost of $25.1 million in 2017[14].

In order to minimize pumping energy and costs for recycled water use within TOP, the SWRWD Plan proposes to site the local treatment facility at a location where elevation can be preserved to the greatest extent feasible. With effluent-only pressure sewer collection, the treatment site could be located anywhere in the lower half of the SSA without any intermediate pump stations. Three potential undeveloped parcels are listed in Table 1 that are located near the lower southern limit of the TOP jurisdictional boundary (and contiguous to the SSA) that provide ample area for the treatment facility as well as for any buffer or setback requirements.

Table 1 Potential Local Treatment Sites

APN	Zoning	Acres	Street	Elevation
055-180-001	TOP	40	Old Clark Road	1,510'
054-380-002	TOP	47	Dudley Lane	1,600'
017-090-097	AG-160	59	Skyway Xing	1,370'

The area requirements for the actual treatment facility itself is less than 3 acres for a 0.45 million gallon per day (mgd) capacity serving the existing SSA[15]. The facility would be fully enclosed with integral noise and odor control. All critical unit processes would have component parallel redundancy consistent with T22 regulations including an on-site reserve emergency storage pond if ever needed.

Because all three parcels are located in a "very high fire hazard severity zone" the treatment facility will be constructed of fire-resistant materials including concrete, masonry, and metal siding. There would be no unit process exposed to the exterior elements including wildfire ember cast. In defense against embers, an additional layer of protection would include rooftop sprinklers and strategically placed water cannons (as presented in Section 5 below) in the facility design.

An example of a water filtration plant constructed with fire-resistant materials is presented in Figure 4. A 0.45 mgd T22 water recycling facility serving the existing 1,470 parcel SSA would be similar in size to the 12,000 square foot building shown.

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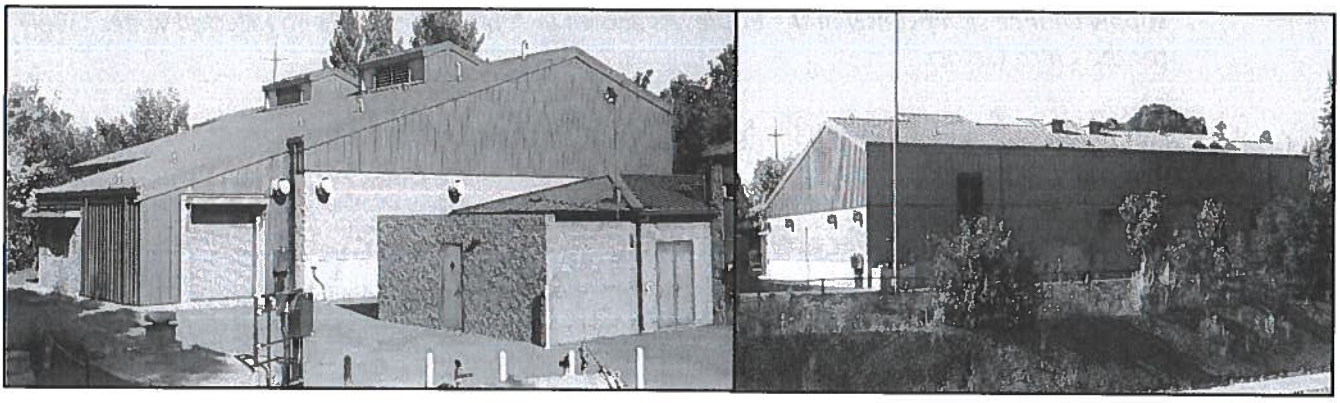

Figure 4 Fire-Resistant Water Filter Plant Building, Pleasanton, CA

3.3 Septage Receiving Facility

The proposed Export Plan does not include a septage receiving station even though that plan serves only about 14% of the existing parcels within TOP. HDR states that Providing a septage receiving station is only feasible if a local WWTP is constructed[16]. The SWRWD Plan includes a septage facility to serve the 1,470 parcels within the SSA as well as the approximate 9,000 TOP parcels not included in the SSA. The septage plant would be co-located with the water recycling facility discussed in Section 3.2 above and would be included in the 3-acre treatment facility footprint. The estimated capital cost of the septage receiving facility is $10.1 million[17].

3.4 Energy Intensity

The regional Export Plan requires significant energy to pump raw wastewater 10 miles from Pump Station #2 (Skyway at Butte Creek) to the Chico WPCP. The estimated energy intensity of pumping from PS #2 to the WPCP in dual 6" PVC pipelines is about 5 megawatt-hours per million gallons (MWh/mg)[18]. Adding an additional 1.5 MWh/mg for secondary treatment at the WPCP, the total energy intensity for the Export Plan is estimated to be about 6.5 MWh/mg.

The energy intensity of various treatment alternatives published by authoritative sources is summarized in Table 2. These are examples of local treatment process options that potentially could be used in the SWRWD Plan. By comparison, the Export Plan relative energy requirement could be multiples of the energy requirement for the local project.

The energy intensity of the collection system is assumed to be equal for the Export Plan and the SWRWD Plan, however effluent-only sewer pump efficiency is substantially higher that the pump efficiency of the 27 raw wastewater pumps used in gravity collection systems.

Due to the risk of electrical transmission equipment igniting more wildfires after the devastation of the Camp and Dixie wildfires, PG&E has recently announced plans to underground 10,000 miles of power transmission lines at a cost that could exceed $20 billion[19]. This is in addition to the planned 300 miles of undergrounding power distribution in Butte County including Paradise[20]. Based on the future costs to harden both transmission and distribution power lines, the PG&E customer costs for utility power will likely increase substantially in the foreseeable future. For this reason, the energy intensity for any project should be a critical consideration not only for environmental impact including greenhouse gas emission, but for ongoing operating costs over the life of the project.

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Table 2 Energy Intensity SWRWD Treatment Alternatives

Secondary Treatment Alternatives	WEF MOP[21] (MWh/mg)	M&E[22] (MWh/mg)	WEF/EPRI[23] (MWh/mg)	PA Survey[24] (MWh/mg)	PA Survey[25] (kWh/lb BOD)
1. Extended Aeration (EA)	--	--	--	<3.8	<2.9
2. Membrane Bioreactor (MBR)	1.8	1.9-3.8	2.7	--	--
3. Seq. Batch Reactor (SBR)	1.3	--	1.1	<1.8	<1.6
4. Oxidation Ditch (OD)	--	--	--	<2.0	<1.6
5. Trickling Filter (TF)	0.12	0.23-0.35	0.6	<0.5	<0.4

4 Effluent Reuse

Reuse of municipal wastewater has many decades of history in California. Currently, over 700,000 acre-feet per year (230 billion gallons/yr) are recycled in the state for golf course, landscape, turf, agricultural, commercial, industrial, and fire suppression uses as well as groundwater recharge[26]. The reuse of wastewater generated within TOP is the dominant distinguishing feature of the SWRWD Plan relative to the Export Plan.

4.1 Dual Distribution

In order to beneficially use recycled water within TOP for non-potable uses such as irrigation and fire suppression, a dual distribution pipeline network is required. For the SWRWD Plan, a "purple pipe" distribution system is proposed to serve each parcel in the SSA.

4.1.1 Residential Landscape Irrigation

The predominate non-potable water demand within TOP is residential landscape irrigation. The use of recycled water for residential landscaping has been in practice at El Dorado Irrigation District for over three decades. EID has developed outreach and technical materials available to homeowners, engineers, landscape designers, and contractors related to recycled water use on residential properties[27]. Images of EID purple pipe recycled water irrigation systems on residential and commercial properties under construction are presented in Figure 5.

For potable water service at EID, each service connection has a water meter, backflow prevention device, and pressure reducing valve. For recycled water service, each connection has a water meter and pressure reducing valve[28]. For the SWRWD Plan, backflow prevention devices are recommended for both potable and recycled connections.

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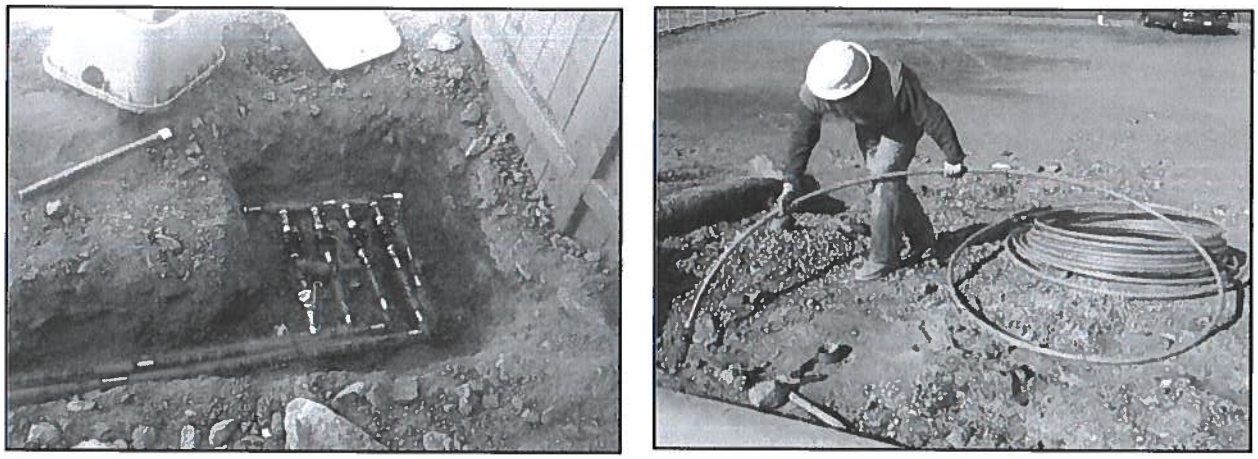

Figure 5 Recycled Water Residential Irrigation Installation, El Dorado Hills, CA

4.1.2 Public Area Landscape Irrigation

The SWRWD Plan includes non-potable water distribution for irrigation of parks, school campuses, sports fields, irrigated road medians, etc. An example of recycled water utilized for sports field irrigation is presented in Figure 6. It should be noted that the local wholesale water district[29] has requested a 10% curtailment in water use by its retail customers due to spring 2021 drought conditions, however that curtailment request does not apply to recycled water irrigators. This sports park has had an active summer 2021 soccer tournament season with outstanding turf conditions despite the drought.

Figure 6 Recycled Water Irrigation of Sports Park, Pleasanton, CA

4.2 Wildfire Risk Reduction Buffers

In the June 2020 report by the Conservation Biology Institute, wildfire risk reduction buffers (WRRB's) are recognized as a scientific justification for a "defensible space" zone around a community. In CBI's findings, it concluded that:

> *The model results, as well as the conversations with the Paradise TAC, support the hypothesis that reducing flammability of land cover in the region between the wildland area and urban area in Wildfire Risk Reduction Buffers reduces risk of ignition in the urban area. According to this model, which emphasizes the effects of strong winds, focusing on reducing fire risk in the upwind areas adjacent to the town would provide maximum ignition risk-reduction benefits. We used the north-easterly "Jarbo Gap" wind direction in our analysis, but this process could be modified to explore priority locations for other wind directions or scenarios, as suggested by the Paradise TAC[30].*

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Since June 2020 when CBI issued its report on WRRB's, the 2021 Dixie Fire has demonstrated that southwesterly winds can be just as intense and destructive as the northeasterly winds of the Camp Fire. It is therefore assumed that for wildfire defense planning, that winds from any direction be included in all planning scenarios. For the SWRWD Plan, strategic perimeter WRRB's could be irrigated with non-potable water for open space recreation and areas of refuge in time of emergency. These areas could be irrigated throughout the summer season to ensure maximum protection during the fall and early winter wildfire season.

Beyond WRRB's at the perimeter of the community, interior irrigated buffers have demonstrated protection during the 2018 Camp Fire within TOP. The satellite image presented in Figure 7 clearly demonstrates how the irrigated Paradise Community Park shielded downwind buildings across Black Olive Drive from the prevailing northeasterly winds at the time. This demonstrates not only the usefulness of the linear park as defensible space, but the added benefit as an irrigated buffer to reduce flammable dry vegetation upwind of high asset value buildings and public facilities.

Figure 7 Irrigated Paradise Community Park (center), December 11, 2018[31]

This irrigated buffer concept could be replicated at essential facilities such as evacuation centers, schools, government buildings, hospital campus, churches, retirement homes, fire stations and high value commercial properties. Since wildfire wind direction is variable and unpredictable, these irrigated buffers could potentially surround essential and high valued real estate assets on all sides.

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4.3 PID 2020 Urban Water Management Plan

Paradise Irrigation District (PID) recently submitted its Urban Water Management Plan (UWMP) to the California Department of Water Resources as required by the Urban Water Management Planning Act of 1983. The Plan summarizes PID's plans for use of recycled water, as follows.

> *At the time of plan preparation, structures are served by septic tanks throughout the Town, with no centralized sewer system owned or operated by any entity. With no centralized sewer system, there is no opportunity for treatment or use of recycled water within PID's boundary. The viability of a local sewer system is being examined at this time at a conceptual level, creating the possibility of recycled supply in the long-term planning horizon. DWR Table 6-4 and DWR Table 6-5 reflect the inapplicability of this resource through the planning horizon of this document.*
>
> *The community will continue work to examine the viability of a centralized sewer system and any associated opportunities to develop a recycled water supply as it continues to recover from the Camp Fire and look to the future of rebuilding and redevelopment of Butte County*[32].

4.4 Seasonal Irrigation Demand

PID's previous 2015 UWMP provided a 2020 pre-fire water demand estimate of 6,623 acre-feet (af) for potable and raw water customers. Of that amount, 3,030 af was assumed to ultimately be discharged to septic tanks then subsurface leachfields. These values indicate that about 55% of PID's pre-fire demand was for exterior irrigation on an annual basis. Based on historical precipitation and evapotranspiration data, most of the irrigation demand would be between April and September. For the SWRWD Plan, it can be assumed that most of the recycled water produced will be used for irrigation during these months.

4.5 Winter Aquifer Recharge

During the months of October through March, there will be more recycled water produced than required for irrigation. During these months, the SWRWD Plan proposes to utilize existing leachfields for shallow aquifer recharge of the same T22 disinfected tertiary recycled water effluent quality required for unrestricted irrigation. The dual distribution system, which provides non-potable supply to each parcel within the SSA, would also discharge to the existing subsurface dispersal fields utilizing the irrigation manifolds and controllers already located at each parcel[33]. This concept avoids the need for seasonal effluent storage reservoirs and/or large centralized wintertime subsurface dispersal facilities.

This concept maintains widespread distribution recharge of the fractured rock aquifer underlying TOP, which supplied domestic and agricultural demands prior to the PID surface water treatment plant and distribution system. PID has also historically used one well for seasonal supplemental supply and emergency backup, though since 2020 it is not currently in operation due to mechanical issues[34]. Additional wells located at recycled water tank sites could supplement the AWSS system described in Section 5.2 below.

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5 WILDFIRE DEFENSE

5.1 FIRE HAZARD SEVERITY ZONE MAPPING

As indicated in Figure 8, Cal Fire has designated most of the TOP land area within its jurisdictional boundary as within a "very high fire hazard severity zone" (VHFHSZ).

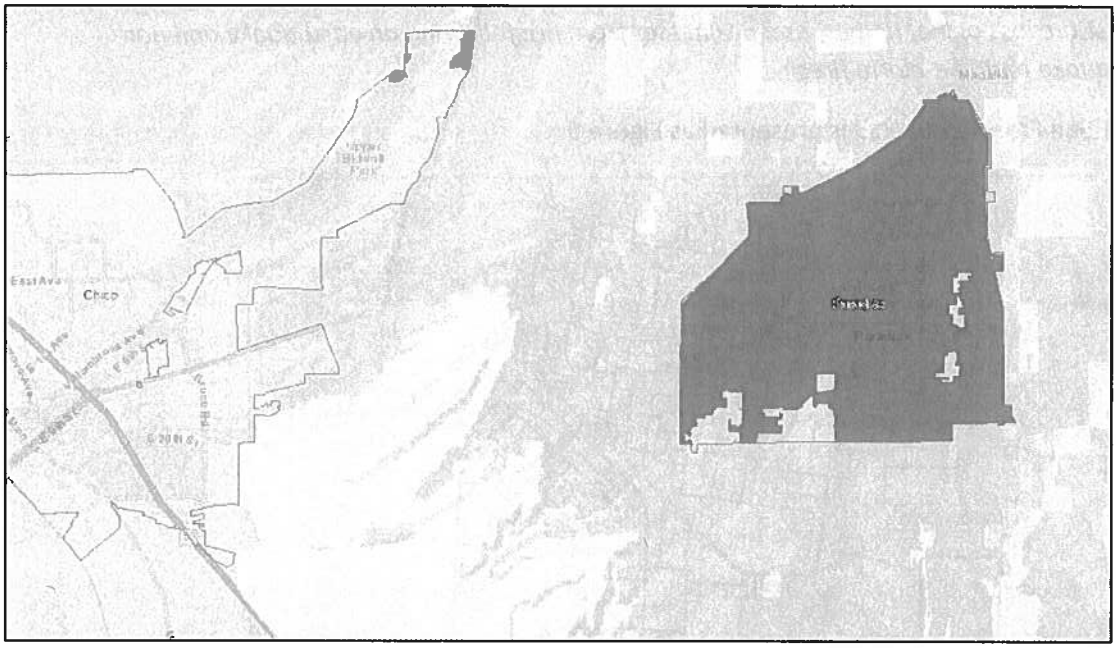

Figure 8 Fire Hazard Severity Zone Map[35]

Beyond providing sewer and recycled water service to parcels within the SSA, the SWRWD Plan proposes a robust community-scale wildfire defense strategy in light of the VHFHSZ designation for nearly all parcels within TOP. The wildfire defense strategy is proposed to ensure that the 2018 Camp Fire devastation within the SSA never occurs again.

The January 2021 California Wildfire and Forest Resilience Action Plan states:

> *Protect Wildfire-Prone Homes and Neighborhoods: To address the long-term trend of more people living in the [Wildland Urban Interface] WUI, it is critical to increase vulnerable communities' resilience to uncontrolled wildfires. As described in OPR's Fire Hazard Planning Technical Advisory, developments in the WUI increase the number of ignitions, the likelihood that wildfires become urban conflagrations, putting many homes and structures at risk of being damaged or destroyed by a wildfire, and constrain fuel-management activities*[36].

5.2 AUXILIARY WATER SUPPLY SYSTEM

The SWRWD Plan proposes a non-potable dual distribution system conceptually described in Section 4 above as a high-pressure Auxiliary Water Supply System (AWSS) for fire suppression and wildfire defense in anticipation of a potential wildfire recurrence equal in severity to the 2018 Camp Fire.

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5.2.1 San Francisco AWSS

In operation for over a century, the San Francisco AWSS is an integral part of its emergency fire suppression system. The San Francisco AWSS is conceptually described as follows.

> *The Auxiliary Water Supply System (AWSS) is a non-potable fire-suppression water system that was built the decade following the catastrophic 1906 San Francisco earthquake. The purpose of the AWSS is to provide the San Francisco Fire Department (SFFD) with a high-pressure fire suppression water system that can be utilized during large fires. The system is vital for protection against the loss of life, homes, and businesses from fire following an earthquake and non-earthquake multiple-alarm fires[37].*

A map of the San Francisco AWSS is presented as Figure 9.

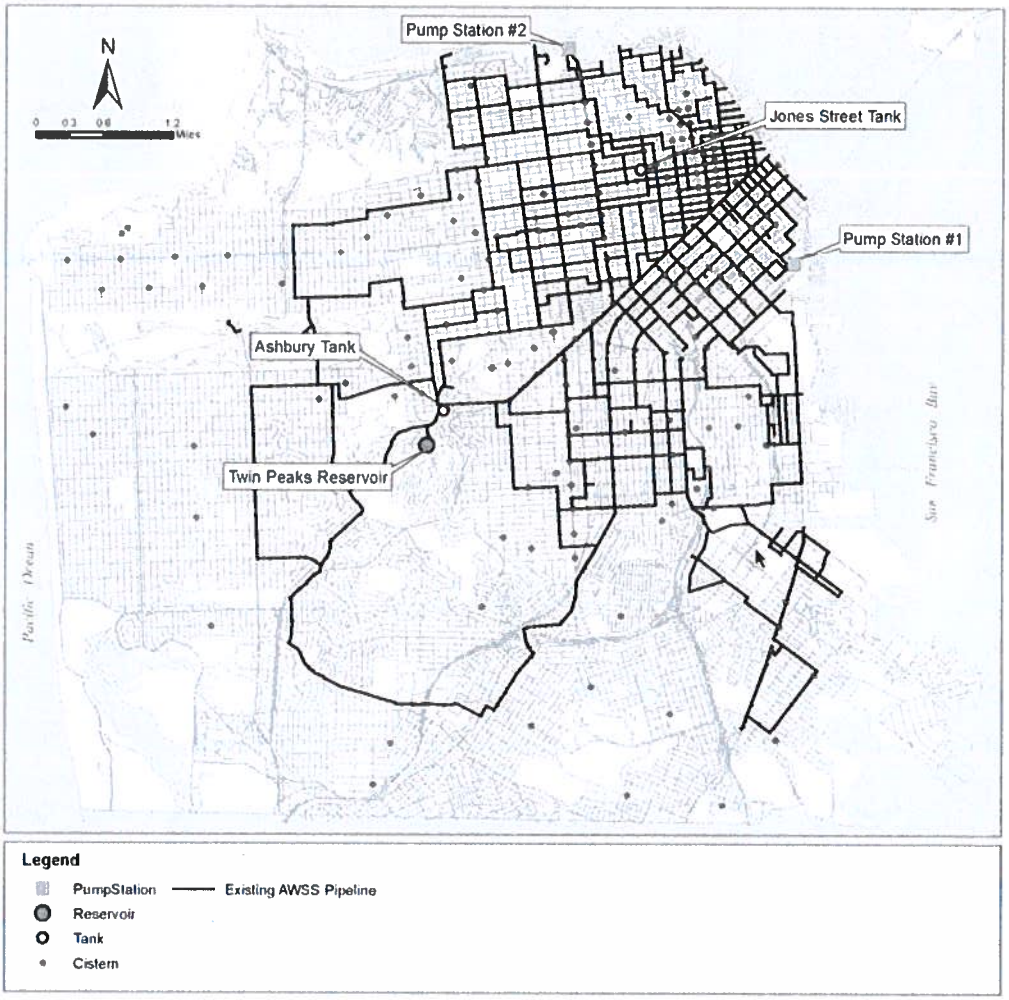

Figure 9 Map of San Francisco AWSS

The overriding objectives of the San Francisco AWSS after the 1906 earthquake were **volume and pressure**. The City had previously burned 5 times over six decades, and insurance rates soared, and, in some areas, coverage was unobtainable. *Strongly influenced by insurance companies of the period, the AWSS is dedicated to the principle that the City will never again be destroyed by fire, at least not for the lack of water for fire-fighting purposes[38].*

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The San Francisco AWSS is supplied by three non-potable water storage facilities at elevations of 758 feet, 495 feet, and 369 feet above sea level. The system is designed to utilize elevation (without pumps required) to provide high pressure to three separate zones in the AWSS distribution system. Specially designed high-capacity high-pressure dry barrel hydrants are equipped with three threaded outlets that can be independently valved. The hydrant bonnets are color-coded for firefighters' quick recognition of the pressure zone at any particular point in the system. Black hydrants are supplied by the Twin Peaks reservoir, red hydrants by the Ashbury Tank, and blue hydrants by the Jones Steet Tank (see Figure 9 for reservoir and tank locations). Figure 10 presents examples of color-coded hydrants at various locations with the AWSS distribution system. Note the cast label on the blue bonnet *"SF AWS 1909."*

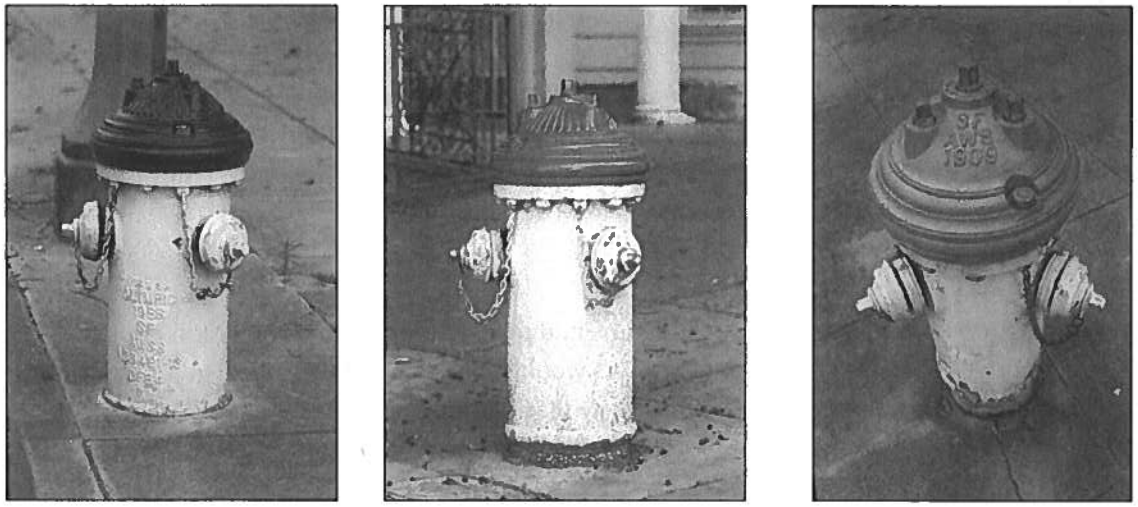

Figure 10 Color-coded SF AWSS hydrants

As a non-potable water system, the AWSS can be supplemented with supplies that do not meet drinking water standards. Figure 11 presents a fireboat manifold currently under construction at Embarcadero Fire Station No. 35 in San Francisco. In the event a large fire, fireboats can connect to the manifold and supply bay saltwater under pressure to the AWSS in the event water supply in tank storage is insufficient for whatever reason including pipe rupture caused by earthquake. The fireboat Phoenix has a pumping capacity of 9,600 gallons per minutes (gpm) and the fireboat Guardian has a pumping capacity of 24,000 gpm which provide backup supply if ever needed. A total of 5 of fireboat manifolds are located along the waterfront that were originally installed in about 1912[39].

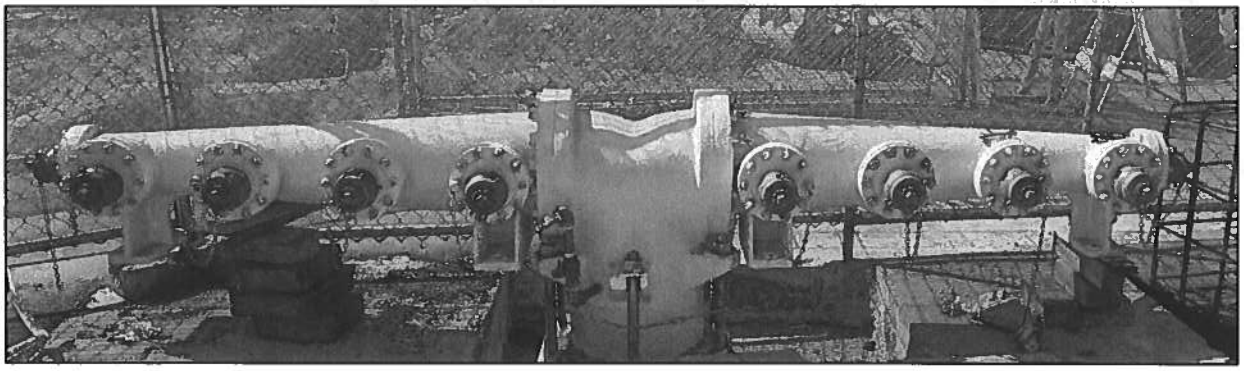

Figure 11 Fireboat manifold under construction at SF Fire Station No. 35, October 7, 2021

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5.2.2 Paradise AWSS

The SWRWD Plan includes a high pressure non-potable distribution system similar in concept to the San Francisco AWSS. The source of supply would include recycled water supplemented as needed with well water and/or raw untreated reservoir water. The design criteria for tank storage, pressure zones, static and operating pressures, delivery capacities, pipeline alignments, pipeline diameters, would be developed in close coordination with local water supply and fire professionals including PID and Cal Fire-Butte County. Fire and water distribution professionals at San Francisco Public Utilities Commission (SFPUC) would also be consulted for best practices on how to best implement and operate a similar AWSS in TOP. While the San Francisco AWSS is designed for urban high-density and high-rise fires, there are likely many lessons learned on design, construction, and operation that would apply equally to a AWSS given TOP's low-density development pattern.

The overriding objective of the Paradise AWSS would be **volume and pressure** just as the case in San Francisco today 115 years after it was originally conceived. With a well-designed AWSS, Paradise would be much more resilient by being much better prepared to defend against an uncontrolled wildfire preventing a repeat of the devastation that occurred in November 2018.

5.3 Public and Private Fire Hydrants

AWSS hydrants in San Francisco supply enough volume and pressure for direct connection of attack hoses without the pressure assist of a fire engine. This would allow, for instance, local volunteer fire fighters to have sufficient flow and pressure available without assist from Cal Fire engines. Image in Figure 12 shows an AWSS hydrant supplying sufficient pressure and volume for six attack hoses simultaneously.

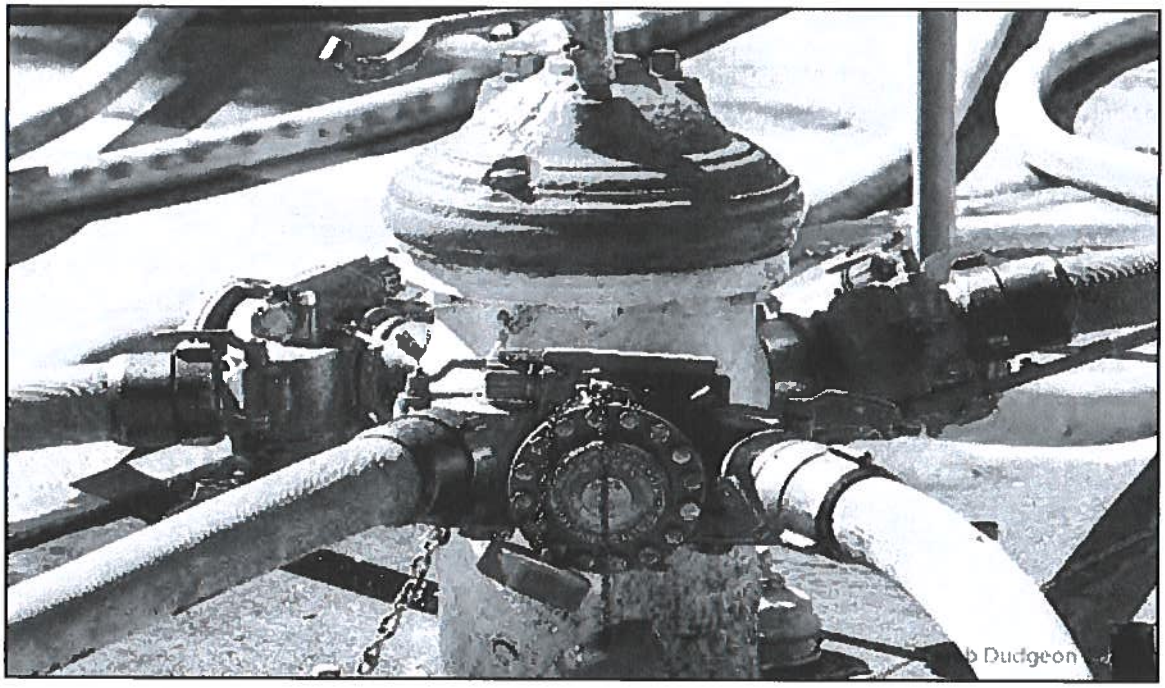

Figure 12 San Francisco AWSS hydrant direct connection of six attack hoses

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The AWSS could potentially supply private hydrants and fire hoses on residential or commercial properties within the service area that may be distant from the larger public hydrants in the public right-of-way. If appropriate, a plan for private hydrants and/or private firehoses would need to be a coordinated effort by Cal Fire, PID, and TOP. Images of a private hydrant and a private fire hose reel at a California rural residential property is presented in Figure 13.

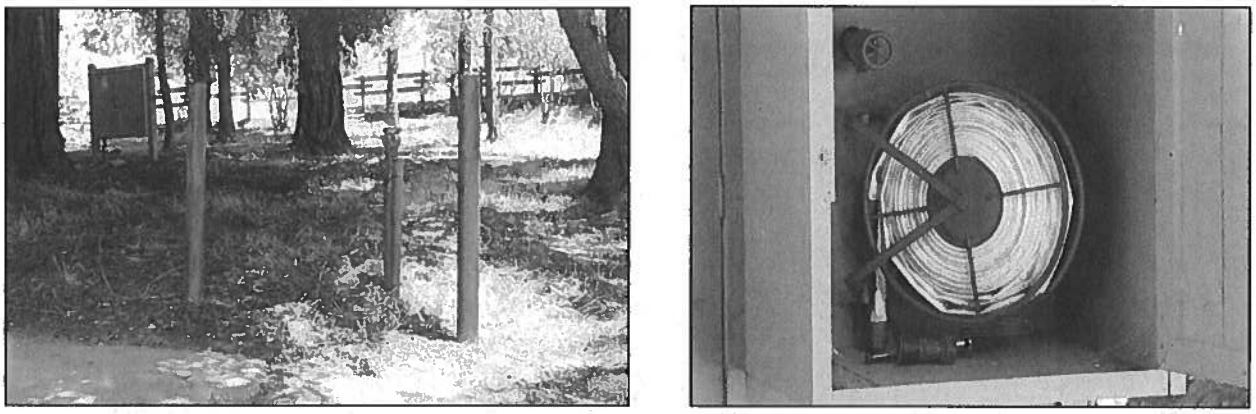

Figure 13 Private Hydrant and Fire Hose, Alameda County, CA

5.4 Strategic Placement of Water Cannons

High-capacity water cannons are widely used for agricultural irrigation, dust suppression, and wildfire defense[40]. These water cannons have a throw radius of up to 310 feet and can be used to preemptively add moisture content to a large area in response to high-risk red alert weather forecasts. An example of a water cannon irrigating a corn field is presented as Figure 14.

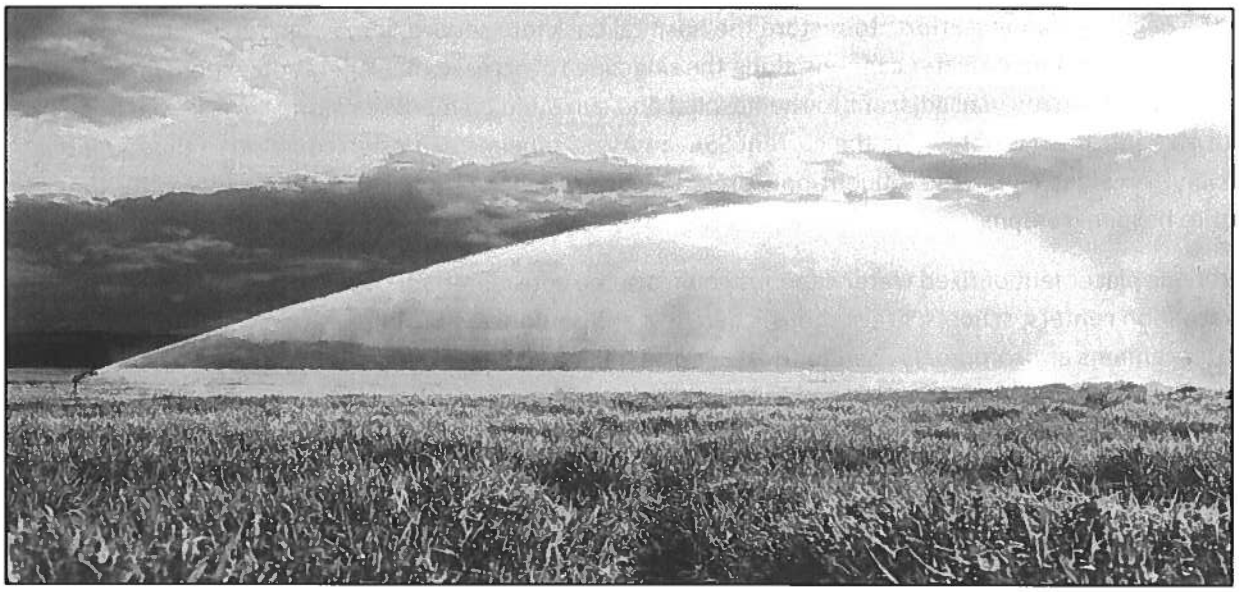

Figure 14 High-Capacity Irrigation Sprinkler (Water Cannon)

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The Feather River Hospital on Pentz Road is located adjacent to the steep Feather River canyon on its east side as indicated in Figure 15. The Camp Fire northeast winds against the steep canyon wall in combination with dry vegetation created a chimney effect resulting in an intense inferno at the ridgeline. Hospital and medical support buildings near or adjacent to the ridgeline were severely damaged.

Figure 15 Feather River Hospital Campus (left), Feather River Canyon (right), December 11, 2018[41]

In the ongoing planning efforts to restore the hospital back into service, it may be prudent to consider strategic placement of water cannons along the ridgeline to increase the vegetation water content on the high-risk canyon wall adjacent to the hospital and surrounding medical campus. While the hospital site on Pentz Road is not within the current SSA, an AWSS pipeline extension could serve this essential facility. An extension of the effluent-only pressure sewer pipeline should also be considered for the entire hospital campus.

Strategic placement of fixed water cannons could also be considered for other essential facilities such as evacuation centers, schools, fire stations, churches, and senior care facilities. Strategically placed fixed water cannons are commonly used for dust suppression at mining facilities[42] and this same concept could be employed for protection of essential facilities both preemptively and during a wildfire incident.

For planning of a new rebuilt downtown core on Skyway, it may also be prudent planning to consider water cannons to preemptively increase water content of landscapes, hardscapes, and rooftops for the four city blocks included in the downtown planning zone.

5.5 Rooftop Sprinklers

The Paradise AWSS could also supply rooftop sprinklers for wildfire defense on government, commercial, institutional and residential buildings. An example of a rooftop sprinkler system on a rural residential building is presented in Figure 16.

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Figure 16 Rooftop Sprinklers on Residential Building

5.6 Use of Satellites and Artificial Intelligence to Prioritize Water Allocation

Preemptive use of water cannons, rooftop sprinklers, and turf/landscape sprinklers in the event of wildfire threat could increase ground and hardscape water content at a community scale. Satellite imagery and artificial intelligence technology is now being adopted by Cal Fire and local fire agencies to predict wildfire spread and risk to communities, described as follows.

> *What's the information used for? The images help commanders make decisions on how to best deploy their resources, keep firefighters safe, predict a fire's spread and identify structures in its path. It can aid municipalities and others who are calling for evacuations of people in harm's way[43].*

The AWSS would be controlled by a Supervisory Control and Data Acquisition (SCADA) system where Cal Fire, PID, and incident command would have real-time information on status of water supply in tank storage and distribution system operating pressures during a wildfire emergency. *With SCADA control of the AWSS, incident command could prioritize immediate water allocations to the highest risk areas of the community to conserve available water supply if necessary. This prioritization would be guided by real-time wildfire intelligence software platforms that are now being deployed by Cal Fire, power utilities and local emergency response agencies.*

5.7 Depressurization of Potable System

PID's potable water pipe network experienced rapid depressurization during the Camp Fire, described as follows.

> *Several hours into the duration of the Camp Fire, PID's pipe network experienced a significant depressurization in a majority of its water mains. Though the WTP continued to produce water during the fire, demands from fire sprinklers, firefighting activities, and free-flowing service connections where structures once stood drained significant portions of the system. This depressurization event resulted in negative pressure in many areas throughout the main network, which caused an indeterminate amount of damage in the system. Volatile organic compounds (VOCs) were also introduced into the system as smoke, debris, and other contaminants were*

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drawn in through damaged system appurtenances and exposed service connections of destroyed structures[44].

This depressurization phenomenon is not unique to PID resulting from the 2018 Camp Fire - it has happened recently to numerous other communities devastated by wildfires[45]. By separating the potable water system from the fire suppression water supply, the risk of depressurization of the potable system is substantially reduced since the underlying cause is the abrupt increase in water demand from residential yard sprinklers and fire-fighting activities. That demand could otherwise be on the AWSS. If depressurization were to occur on the AWSS, it is a non-potable system so any chemical contamination, if ever to occur, would not impact the community drinking water supply. The integrity and water quality of the potable system would remain intact.

In order to further ensure that the potable system does not experience negative pressures that would contaminate the distribution pipelines, backflow prevention devices are recommended for all potable service connections going forward. As an added safety precaution for the AWSS, backflow prevention devices are also recommended for all recycled water service connections.

A recycled water backflow prevention device serving a large commercial property is presented as Figure 17. Recycled water for this retail property is used for landscape irrigation, exterior hydrants, and interior fire sprinklers. A gas station is also equipped with overhead canopy recycled water sprinklers.

Figure 17 Backflow Protection on Recycled Water System, Livermore, CA

5.8 PID Inability to Deliver Sufficient Water Supply in Wildfire Incident

Key design criteria in the planning and design of any water supply system include peak demand in normal operations and duration of peak demand during a firefighting incident. When the 2018 wildfire threatened, PID's ability to deliver water was constrained, described as follows.

Wildfires in or near the PID service area in the Town of Paradise provide a significant impact to the District's ability to deliver water. The 2008 fires showed that further education in the community is needed to stop the use of yard sprinklers during evacuations. The water is not beneficial and takes water away from firefighting efforts[46].

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With the AWSS, PID would be able to supplement the non-potable water storage tanks with untreated Magalia surface water and/or groundwater from wells located near each storage tank. This could greatly improve the ability to supply sufficient water to the AWSS when recycled water in tank storage may be insufficient to meet the immediate incident demand. With sufficient tank storage plus immediately available supplemental supply, the water cannons, rooftop sprinklers, yard sprinklers, private hydrants, private fire hoses, etc. could be utilized to increase ground, landscape, and rooftop water content, preemptively, when wildfire warnings are issued. If evacuation orders are issued rooftop and yard sprinklers could be left on, while the large water cannons could be operated remotely to conserve supply.

Increasing water content of ground, hardscape, and building roof/siding could be an effective defense against wind-driven ember storms generated by wildfires miles upwind. This would be an added protection over and above creating defensible space around structures. Wind-driven embers were the major source of ignitions in Paradise during the 2018 Camp Fire[47]. Incident command, with the SCADA system, would have the ability to prioritize available AWSS supply to zoned areas of the community at highest immediate risk. Reducing or eliminating AWSS supply in specific zones of the community would not impact the health and safety of non-evacuated residents since the potable supply would not be affected by any localized zone area shutdown.

Incident command, through the SCADA system, could also selectively activate biodegradable surfactant foam injection systems strategically located throughout the AWSS. Surfactant foams increase the effectiveness of the water that is available for fire suppression, and thereby reduce the volume of water required for any specific incident. Since the AWSS is separate from the potable water system, injection of biodegradable surfactant foam would not impact water quality of the drinking water supply. Figure 18 presents a water cannon creating a fine mist with a foam and wetting agent mixture.

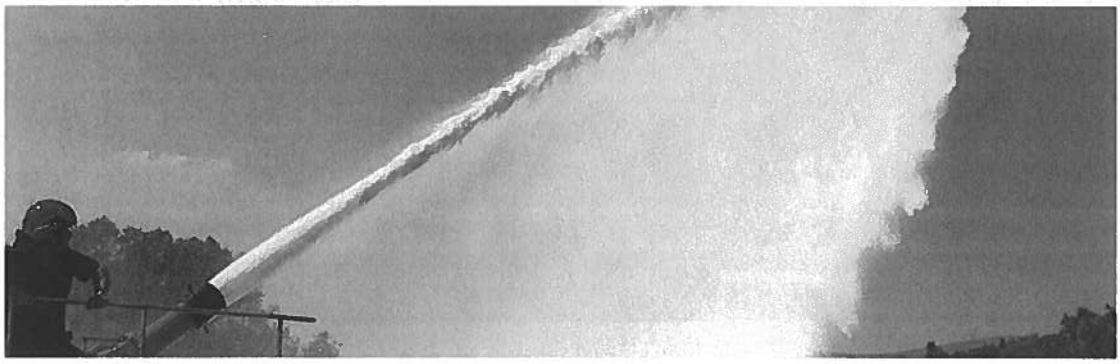

Figure 18 Firefighting Water Cannon Using Surfactant Foam

[Note: Class A foams are a mixture of foaming and wetting agents in a non-flammable solvent and are non-hazardous, non-corrosive, non-flammable, and readily biodegradeable. The foam extinguishes fire by isolating the fuel, reducing the fuel temperature, and separating the supply of oxygen. Class A foam solution, containing 0.1 to 1.0% foam, reduces the tendency of water to "bead up" by lowering surface tension. This in turn allows the water to penetrate the burning surface, absorb the heat and cool the fire much more rapidly, with less water. Class A foams provide quicker control and increased penetrating power for deep seated fires [48]]

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5.9 Use of Snow Machines at 2021 Caldor Fire

The Caldor Fire has burned approximately 222,000 acres in El Dorado and Alpine Counties CA and Douglas County NV since ignition on August 14th. Full containment was achieved on October 25th. A total of approximately 900 structures were damaged or destroyed by this fire. Of interest to the proposed SWRWD Plan, snow cannons typically used in the winter and spring months to supplement snowpack on ski slopes, were used on an emergency basis during the Caldor Fire to increase water content of groundcover, vegetation, trees, hardscapes, and buildings at ski resorts described as follows.

> *Heavenly, whose slopes most years are filled with fluffy white snow and downhill skiers as the Labor Day holiday approaches, is now eerily dry and abandoned, and forced to use its snow cannons to blast streams of water to hydrate surrounding mountainside vegetation. Susan Whitman, a spokesperson for Heavenly, Northstar and Kirkwood resorts, told the paper that their hydrants pumped "significant water" onto the resort and that everyone is "laser focused on safety and mitigation at this point but we do want to be a helpful resource." Similarly, Sierra at Tahoe employed their water cannons to mitigate wildfire impact, misting nearby buildings and trees[49].*

A nighttime image of a portable snow machine used as a wildfire mitigation is presented as Figure 19.

Figure 19 Portable snow cannon at Sierra-at-Tahoe, Twin Bridges, CA on August 30, 2021

Part of the detailed design development of the SWRWD Plan would be an investigation as the relative benefit of utilizing the air-assisted snow cannon versus the typical water cannon used in agriculture and dust suppression. The air-assisted snow cannons have the benefit of using less water and are efficient at increasing humidity particularly in the nighttime hours. Portable snow cannons also can be deployed when and where needed in anticipation of wildfire risks. A plan for strategic fixed and portable placement of water cannons and/or snow cannons will be based on an engineering study by fire suppression and wildfire mitigation experts in consultation with Cal Fire – Butte County.

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6 EXPANSION OF SEWER SERVICE AREA

This section will address the Sewer Service Area (SSA) as presently proposed in the Export Plan.

6.1 CURRENT PROPOSED SSA

The proposed SSA is presented graphically in Figure 20 and is described as follows.

> The SSA contains 1,469 parcels. As of April 2020, there were 300 parcels with habitable structures within the SSA. The Project is estimated to come on-line by 2027, at which time there will be an estimated 357 occupied parcels within the SSA generating an average wastewater flow of 109,000 gallons per day (gpd; see Figure 2). It is estimated that it could take 30 years for all 1,469 parcels to be occupied, at which time the average wastewater flow would be 448,000 gpd[50].

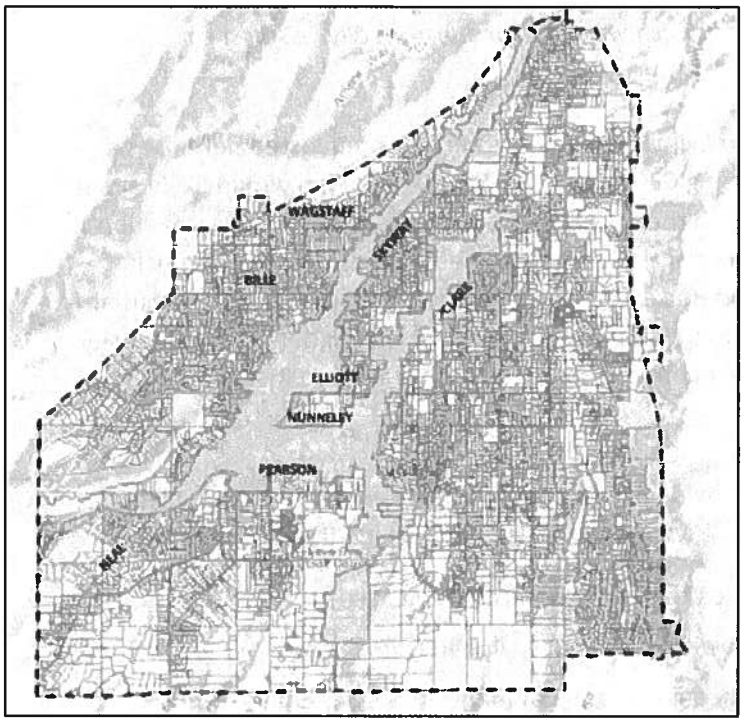

Figure 20 Proposed Sewer Service Area

The total number is existing TOP parcels is approximately 11,800[51]. Therefore, the current proposed SSA includes about 12.5% of the total number of existing TOP parcels. For the Export Plan as presented, the local gravity collection pipelines, local pump stations, local forcemains, regional pump stations, and regional forcemains would likely limit the system to 448,000 gallons per day (gpd) average dry weather flow. The land uses for the 1,469 parcels included in the SSA would forever collectively be limited to that design capacity. There would also be no potential connection of existing TOP parcels outside of the SSA. This would be particularly problematic for many commercial, high density multi-family or small lot single-family properties located adjacent or proximate to the SSA boundary.

6.2 SWRWD PHASED EXPANSION BEYOND SSA

Contrary to the Export Plan, the SWRWD Plan could be expanded in logical phases to include any number of TOP parcels. The increase in wastewater flows collected would generally balance seasonally with the recycled water irrigation demand and subsurface dispersal capacity on a lot-by-lot basis since wastewater collection and non-potable distribution would be installed concurrently. The treatment facility could be expanded ultimately to serve all 11,800 parcels at any one of the three alternative treatment sites presented in Section 3.2 above. If a large discharger, such as a brewery, were proposed in the SSA the Export Plan as proposed would likely preclude that use from being permitted by TOP. The SWRWD Plan, conversely, could easily accommodate that discharger in the SSA, or anywhere within TOP, with an appropriate phased expansion plan.

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7 PERMITTING

This section briefly addresses state and Butte County permitting considerations for the either the Export Plan or the SWRWD Plan.

7.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) states:

> *The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.*[52]

It would require an affirmative decision by TOP to include the SWRWD Plan, as requested herein, as a feasible alternative to the Export Plan in the ongoing CEQA review. The SWRWD Plan would likely avoid a number of environmental impacts associated with the Export Plan such as deep hardrock excavation for the local collection system, increased risk of damage to existing buried utilities with deep trench excavation, 18-miles of pipeline in unincorporated Butte County (largely undeveloped lands), potential growth inducement of connected future development along pipeline alignment, higher energy intensity relative to local reuse, and increased secondary effluent discharge to the Sacramento River.

7.2 BUTTE COUNTY LOCAL AGENCY FORMATION COMMISSION

The Butte Local Agency Formation Commission provided TOP with comments on the Paradise Sewer Project EIR Notice of Preparation. Key points of the May 20, 2021 letter[53] include the following.

- An extension of service application requires review and approval by LAFco
- Plan needed for sewer service for parcels within TOP but excluded from SSA
- Growth inducing impact of potential connection of development properties along 18-mile export pipe route seeking sewer service
- Loss of potential beneficial use of recycled water
- Increased wildfire hazard caused by reconstruction in a severe fire zone

Since the SWRWD Plan does not extend any service outside of the existing TOP boundary, LAFCo jurisdiction would not apply therefore a LAFCo application/review would not be necessary.

7.3 STATE WATER RESOURCES CONTROL BOARD

The California State Water Resources Control Board (SWRCB) regulates effluent discharge and water reuse projects in Butte County through the Region 5 Central Valley Regional Water Quality Control Board (R5). A brief discussion of SWRCB and R5 policies follows.

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7.3.1 Water Quality Control Policy for Recycled Water

The Water Quality Control Policy for Recycled Water was adopted by the SWRCB on December 11, 2018. Selected excerpts from that policy[54] are presented as follows.

- *The purpose of the Policy for Water Quality Control for Recycled Water (Recycled Water Policy, hereafter Policy) is to encourage the safe use of recycled water from wastewater sources that meets the definition in California Water Code (Water Code) section 13050(n), in a manner that implements state and federal water quality laws and protects public health and the environment.*
- *When used in compliance with this Policy, California Code of Regulations, title 22 and all applicable state and federal water quality laws, the State Water Board finds that recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to fresh water or potable water for such approved uses.*
- *The State Water Board supports the use of recycled water to diversify community water supplies and mitigate the impacts of climate change.*
- *Increase the use of recycled water from 714,000 acre-feet per year (afy) in 2015 to 1.5 million afy by 2020 and to 2.5 million afy by 2030.*

7.3.2 Water Reclamation Requirements for Recycled Water Use

The SWRCB adopted statewide Water Reclamation Requirements for Recycled Water Use on June 7, 2016. Selected excerpts from that Order[55] are presented as follows.

- *Recycled water use can help to reduce local water scarcity. It is not the only option for bringing supply and demand into a better balance, but it is a viable cost-effective solution that is appropriate in many cases. The feasibility of recycled water use depends on local circumstances, which affect the balance of costs and benefits. In drought conditions, recycled water can be particularly valuable, given the scarcity of alternative supplies. In normal precipitation years recycled water use may reduce groundwater extraction.*
- *The California Legislature has declared that a substantial portion of the future water requirements of the state may be economically met by beneficial use of recycled water. (Wat. Code, § 13511.) The Legislature also expressed its intent that the state undertakes all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state. (Wat. Code, § 13512.*
- *Recycled Water Policy promotes the use of recycled water to achieve sustainable local water supplies and reduce greenhouse gas emissions.*
- *Water recycling is an essential part of an overall program to manage local and regional water resources. Many local governing bodies have adopted resolutions establishing their intent to proceed with planning, permitting, and implementation of recycled water projects. These projects will provide water supply and municipal wastewater disposal benefits for communities, and will provide water supply benefits to agriculture.*

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7.3.3 Policy in Support of Regionalization, Reclamation, Recycling, and Conservation for Wastewater Treatment Plants

R5 adopted a Resolution No. R5-2009-0028 in Support of Regionalization, Reclamation, Recycling and Conservation for Wastewater Treatment Plants on April 23, 2009. Selected excerpts from that Resolution[56] are presented as follows.

- *Evaluating regionalization, reclamation, recycling and/or conservation opportunities requires a balancing of these and many other considerations, including impacts to water quality, costs, authority to implement and other factors necessary to determine if regionalization, reclamation, recycling and/or conservation are feasible and practicable for the specific facility(ies).*
- *In evaluating the feasibility of regionalization, reclamation, recycling and conservation projects, the interrelationship of regionalization, reclamation, recycling, and conservation should be considered.*

R5 realized in 2009 that the interests of "regionalization" and "recycling" might require an evaluation of interrelationships – recognizing that the stated objectives might in cases be in conflict or mutually exclusive. In the case of the TOP Export Plan versus SWRWD Plan, the two alternatives are in fact mutually exclusive – TOP cannot proceed with both.

The perceived benefits in 2009 of "regionalization" (such as economy of scale and operational efficiency) may be overridden in current times by the benefits of water reuse given recurring California droughts and statewide wildfire hazards. Water reuse is the primary component of the SWRWD Plan and the dual distribution system required for wildfire defense could not be justified on its own independent of water reuse.

The SWRCB encouragement of water reuse in the 2018 Recycled Water Policy and the 2016 Water Reclamation Order, and likely encouragement of the wildfire defense plan, would probably supersede the R5 "Regionalization" Policy if ever brought to the Board's attention for a determination. Encouragement from the SWRCB for the Paradise SWRWD Plan could also be anticipated since it has a comparable capital cost and greater grant funding opportunities (see Section 8 below) in addition to beneficial local water reuse and offers a robust wildfire defense strategy.

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8 Capital Cost and Funding Considerations

This section will discuss capital cost estimates of the two plans as well a grant funding opportunities.

8.1 Export Plan Cost Estimate

Prior capital estimates of the Export Plan are summarized in Table 3.

The total estimated capital cost presented in HDR 2020 is $184.7 million, however this figure did not include a local septage plant. Since the Export Plan only includes about 12.5% of the TOP parcels, there will remain about 9,000 septic tanks that will require periodic pump-out service. Therefore, it is assumed that a septage plant will be required with either the Export Plan or SWRWD Plan.

Table 3 Export Plan Cost Estimate

Plan Components	Estimate Source	Capital Cost
Local Gravity Collection	HDR 2020[57]	119,511,000
18-mile Export Pipeline	HDR 2020[58]	52,174,000
Chico WPCP Connection	HDR 2020[59]	12,990,000
Local Septage Plant	HDR 2020[60]	10,095,000
Total Export Plan		**$194,770,000**

8.2 SWRWD Plan Cost Estimate

Capital cost estimates for the SWRWD Plan are summarized in Table 4.

Table 4 SWRWD Plan Cost Estimate

Plan Components	Estimate Source	Capital Cost
Local Pressure Collection	Bennett 2017[61]	47,428,000
Local T22 Tertiary Treatment	Bennett 2017[62]	25,099,000
Non-Potable AWSS Distribution	Ripley 2021[63]	80,000,000
Non-Potable AWSS Tank Storage	Ripley 2021[64]	10,000,000
Appurtenances, Wildfire Defense	Ripley 2021[65]	15,000,000
Local Septage Plant	HDR 2020[66]	10,095,000
Total SWRWD Plan		**$187,622,000**

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8.3 Grant Funding Opportunities

This section will briefly present a list of six potential grant funding sources available to the SWRWD Plan that likely would not be available to the Export Plan.

8.3.1 Governor Newsom's $15 Billion Climate Crisis and Vulnerable Communities Package

Governor Newsom signed a package of 24 bills on September 22, 2021 described as follows.

> *Governor signs 24 bills focused on climate and clean energy efforts, drought and wildfire preparedness The largest climate package in state history, Governor Newsom highlights over $15 billion in funding to tackle wildfire and drought challenges, build climate resilience in communities, promote sustainable agriculture and advance nation-leading climate agenda.*[67]

At the signing ceremony, the Governor stated:

> *"California is doubling down on our nation-leading policies to confront the climate crisis head-on while protecting the hardest-hit communities," said Governor Newsom. "We're deploying a comprehensive approach to meet the sobering challenges of the extreme weather patterns that imperil our way of life and the Golden State as we know it, including the largest investment in state history to bolster wildfire resilience, funding to tackle the drought emergency while building long-term water resilience, and strategic investments across the spectrum to protect communities from extreme heat, sea level rise and other climate risks that endanger the most vulnerable among us."*[68]

The SWRWD Plan as presented herein could be considered a strategic investment to protect Paradise from future wildfire as well as long-term water resilience.

8.3.2 Governor Newsom's $5.1 Billion Plan for Water Infrastructure

This plan includes *$1.3 Billion for Drinking Water/Wastewater Infrastructure especially for small and disadvantaged communities and $150 Million for Groundwater Cleanup and water recycling to improve climate resilience*[69]. This could be a potential funding source for the sewer and water reuse components of the SWRWD Plan.

8.3.3 California Senate Bill 63

This legislation proposes to fund Projects to reduce the flammability of structures and communities to prevent their ignition from wind-driven embers. The department may consider the fire risk of an area, the geographic balance of projects, and whether the project is complementary to other fire prevention or forest health activities when awarding local assistance grants[70].

This could be a potential funding source for the wildfire defense component of the SWRWD Plan.

8.3.4 California Assembly Bill 52

This bill would require the Air Resources Board to include recommendations for achieving the maximum technologically feasible and cost-effective reductions of emissions of greenhouse gases and black carbon from wildfires. The bill would also express the intent of the Legislature to appropriate an amount from the Greenhouse Gas Reduction Fund for wildfire mitigation and prevention[71].

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8.3.5 Water Reuse and Resiliency Act of 2021

This proposed federal legislation is described generally as follows.

> *But instead of new dams or desalination plants, Senators Dianne Feinstein and Alex Padilla want the state to take a more innovative approach in prepping for future megadroughts experts predict will only worsen due to global warming. In new legislation introduced Friday, the lawmakers are seeking $1 billion to boost stormwater capture, groundwater recharge and water recycling efforts in the Golden State and throughout the U.S.*[72]

This could be a funding source for the water reuse/aquifer recharge components of the SWRWD Plan.

8.3.6 US Bureau of Reclamation Water SMART Funding

This USBR program includes funding for drought resiliency projects that decrease vulnerabilities and costs of drought, as follows.

> *Reclamation will provide funding for projects that build long-term resilience to drought and reduce the need for emergency response actions through this Drought Resiliency Projects Grants funding opportunity. Drought resiliency can be defined as the capacity of a community to cope with and respond to drought. Under this funding opportunity, Reclamation will fund projects that will build resiliency to drought by increasing the reliability of water supplies and improving water management*[73]

This could be a potential funding source for the water reuse and aquifer recharge components of the SWRWD Plan.

8.3.7 US House Bill 1352

This legislation proposes to increase technical assistance to rural and small municipalities and tribal governments from $25 million/year to $175 million/year through to 2026. The bill includes the following text.

> *SEC. 222. RESIDENTIAL ONSITE SEWAGE DISPOSAL SYSTEMS. "Not later than the date that is 1 year after the date of the enactment of this section, the Administrator shall establish a grant program to make grants to users of a septic tank and drainage field for costs associated with repairing, replacing, or upgrading such tank and such field.".*[74]

This could be a potential federal funding source for the effluent-only pressure sewer component of the SWRWD Plan since each parcel would require an upgraded on-site interceptor tank to replace each existing septic tank. Drain fields may also require upgrading since they are integral to the aquifer recharge component of the SWRWD Plan.

8.3.8 US House Bill 3684

The $1.2 trillion Infrastructure Investment & Jobs Act recently passed the U.S. Senate and will likely reach President Biden's desk in mid-August. In that proposed legislation, there is almost $55 billion in water infrastructure funding[75]. In this funding package there are significant funding opportunities for Clean Water Infrastructure Resiliency and Sustainability, connection of homes and communities to Publicly Owned Treatment Works, and Wastewater Energy Efficiency Grants – where the SWRWD Plan may have higher eligibility rankings relative to the Export Plan.

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9 PROPERTY/WILDFIRE INSURANCE

This section will address how the SWRWD Plan might assist TOP residents and businesses obtain property/ fire insurance coverage at affordable rates.

9.1 AVAILABILITY AND COST OF FIRE COVERAGE

Property owners in the VHFDSZ are facing the prospect of losing property insurance coverage due to property insurers' multi-billion dollar losses caused by widespread destruction of properties over the last four years in the western U.S. For Butte County victims of the Camp Fire, the insurance coverage crisis is summarized by State Assemblyman Gallagher, as follows.

> *Assemblymember James Gallagher, a Republican whose district includes Paradise, said his constituents' biggest concern is access to coverage. They want to avoid the California FAIR Plan, which is the state's insurer of last resort that comes with a hefty premium and only covers fire damage. Critics add that the plan was never created to be a permanent solution for California homeowners seeking fire insurance. "I think that most of my constituents acknowledge that they live in high-risk areas and we are willing to pay," Gallagher said. "But it has to be a reasonable premium, and I don't think the government is going to be able to provide that on its own. You need the private insurance market to be part of that solution."*[76]

From the private insurance perspective, *ember generation is the primary driver of structure ignition from wildfires, and there are ways to minimize the risk with proper planning through the creation of defensible space. Ensuring that wildfire risk is considered when planning new developments and enforcing appropriate building codes in those areas will be important moving forward*[77].

9.2 COMMUNITY HARDENING ESSENTIAL

In June 2019, the California Commission on Catastrophic Wildfire Cost and Recovery concluded the following.

> *Widespread home hardening upgrades are an important strategy to reducing wildfire risks to homeowners. A McClatchy analysis of impact of the post-2008 wildfire building codes in the Camp Fire footprint shows that homes meeting these more stringent defensibility codes had much higher survivability rates than those without. This was true even where ember cast was a major driver of fire and setbacks were sometimes relatively tight. Meeting the higher standard appeared to matter a great deal in Paradise. The Insurance Institute for Business and Home Safety (IBHS)'s empirical tests of home meeting the post-2008 wildfire building code standard also indicates higher survivability. On the other hand, many homes meeting post-2008 code burned in the Tubbs Fire, indicating that more than home hardening is essential to defensibility during a fire with high ember cast.*[78]

For defense against ember casts generated from wildfires that may be miles upwind, the Commission recognized that **more than home hardening is essential to defensibility**. Since ember casts respect no parcel or jurisdictional boundaries only community-scale hardening can protect against ember cast that can ignite spot fires miles downwind of a wildfire. Community-scale hardening would create a layer of defense otherwise could not exist with home or parcel-level hardening.

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9.3 AWSS AS A COMMUNITY-SCALE WILDFIRE MITIGATION

The impetus for design and installation of the AWSS following the 1906 earthquake in San Francisco was from the insurance industry of the period. The insurance underwriters promoted the AWSS as a means to prevent a repeat occurrence of the devastation from fire due to a failed water supply system, as described below.

> *The AWSS remains the only high-pressure network of its type in the United States, and was the only public project funded by the citizenry following the Great Earthquake of 1906. The system was developed with a $5.2 million bond issue approved by the people of San Francisco in 1908. Strongly influenced by the insurance companies of the period, the AWSS is dedicated to the principle that the City will never again be destroyed by fire, at least not for lack of water for firefighting purposes. It is capable of covering a city block (100,000 square feet) with water to a depth of 25 feet in one day*[79].

There may be parallels between the San Francisco devastation from fire in 1906 and the Camp Fire in 2018. The parallels may not be just in the extent of devastation, but in how the insurance industry played/will play in ensuring that a robust firefighting AWSS is in place as a means to provide better fire defense and suppression capability – with the end result being affordable property insurance coverage on a long-term basis.

The insurance industry needs to quantify risk in order to provide equitable premiums – and that quantification is the product today of state-of-the-art proprietary computer modeling. The models consider a myriad of factors that include community risk mitigation as well as property mitigation as described below.

> *By recognizing mitigation features in the modeling process, insurers can calculate discounts for homeowners who mitigate risk. For wildfire, this includes features such as fire-resistive siding, specific roofing materials, and landscaping mitigation. For example, CoreLogic and AIR explicitly reflect community and homeowner mitigation characteristics in their models*
>
> *As data availability improves mitigation discounts could be a catalysis to a beneficial feedback loop, not only for data collection but also for wildfire resilience. As more companies offer discounts for risk mitigation, customers will have a greater incentive to install features to reduce their homes. As mitigation features become more prevalent, more insurers may be forced to offer these discounts in order to remain competitive*[80].

9.4 INSURANCE IMPACT ON REBUILD EFFORTS

The high cost of property insurance could potentially have negative impact on TOP resident and business's ability to rebuild and remain in Paradise. Recent comments from state Senator Dodd regarding his constituency in Napa County shed light on the issue of property insurance in high wildfire risk areas.

> *In hard-hit Napa Valley, which has burned multiple times this last decade, successful winemakers and longtime residents are weighing their options to rebuild or move out entirely simply by looking at their property insurance policies. "They just can't get insurance," said Democratic state Sen. Bill Dodd, whose district spans the region's celebrated vineyards. "Or the insurance is so expensive that there is no way they could ever afford that kind of coverage."*

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Dodd said he supports allowing private insurers to factor in future disasters if it means residents in his districts can avoid exorbitant pricing offered by the FAIR plan. "So many people right now are going naked with no insurance or paying seven or eight times the annual premium they did before," the senator said. "If they raised the rates 50%, that would be a blessing.[81]"

Paradise Mayor Steve Crowder affirmed in September 2021 a similar insurance coverage and affordability crisis in Paradise. Hardening individual homes and buildings is a means to becoming a fire safe community, with the desired impact of lower insurance rates, indicated as follows.

Crowder also referenced his hopes for insurance affordability in Paradise. He said the town is always looking for grants to do a variety of things, including replacing its emergency sirens and grants to help standing homes get hardened. Crowder said this includes roofing, windows or whatever else is needed. . . . . "We want to be a fire safe community and we want to let the insurance industry know, 'Don't sit in an ivory tower and set our rates. Come look through our town, see what we're doing and then set our rates accordingly,'" Crowder said[82].

9.5 Path Forward: Robust Parcel-Scale and Community-Scale Wildfire Mitigations

The wildfire defense component of the SWRWD Plan would bolster the overall objective of a fire safe community by including a robust community-scale mitigation plan over and above individual home/parcel mitigations. As a path forward, the California Office of Planning and Research Commission on Catastrophic Wildfire Cost and Recovery included the following 5 recommendations for both property-scale and community-scale mitigations in its June 2019 final report.

- ***Recommendation 11.****Set home fire risk reduction and community risk reduction standards with input from insurers and require insurers to write insurance where home owner and community both meet standards.*
- ***Recommendation 12.****Require insurers to implement a tiered mitigation credit based on the level of home hardening. This is presented as an alternative to Recommendation 11, but the Commission believes it would be far less effective than Recommendation 11 because it does not address the unavailability of insurance.*
- ***Recommendation 19.****Provide significant state investments in prevention and mitigation efforts, whether funded by a state tax and a specific fund in the state budget for direct mitigation or small grants for home hardening.*
- ***Recommendation 21.****The commission recommends that the state require that any municipality or government body that approves new development, including new construction on vacant land, is able to provide firefighting service to that property within a certain maximum time*[83].

The Insurance Institute for Business & Home Safety in its April 2021 report makes similar recommendations as follows.

- *Homeowners need to both reduce the presence of fuel surrounding their home and leverage advice from the likes of IBHS to harden their structure against flames and embers. While the analysis presented in this study shows a material reduction in risk by reducing fuels, ~40% of properties that had low fuel density were still destroyed in a wildfire demonstrating the importance of other factors beyond the fuel immediately surrounding the property.*

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- *Community leaders need to spearhead and organize with local and national organizations that promote wildfire preparedness, because wildfire protection does not stop at the boundaries of a single property. Creating firebreaks by removing debris including dead leaves in alleyways is an example of impactful community effort.*
- *Governments and regulators need to promote good homeowner behavior and disseminate information to their communities on the risks of uncontrolled wildfires. Wildfires will not go away, and it is also possible for wildfires to re-occur at the same location, since many underlying risk factors (including topography and wind direction) do not tend to change over time.*
- *Insurance carriers need to focus on pathways to understand the specific risk and mitigation activities of individual properties. The scientific and modeling communities will continue to expand the analytical tools related to neighborhood-scale risk and other wildfire mitigation appropriately price the risk* [84].

9.6 Role of Global Reinsurance Underwriters

John Norwood, an insurance industry lobbyist representing insurance agents, wholesalers, and carriers in Sacramento, stated in a July 2021 Insurance Journal viewpoint that:

> *The availability and affordability of property insurance in California are not likely to change until the worldwide reinsurance market believes California is serious about addressing its wildfire risks and there are demonstrable results in reducing the number and severity of wildfires in the state. Without the reinsurance market backing California property/casualty insurance companies, there will continue to be an availability crisis in the state for property insurance and prices for such coverage will continue to increase to the detriment of California's homeowners and businesses.* [85]

Implementation of the wildfire defense component of the SWRWD Plan would likely provide definitive evidence to the global reinsurance underwriters that Paradise is indeed serious about addressing its wildfire risks.

Figure 21 Paradise neighborhood destroyed by Camp Fire, image date November 15, 2018 [86]

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10 Design-Build Procurement and Operations

This section will discuss use of the design-build (DB) procurement process for the SWRWD Plan.

10.1 Assembly Bill 36 (Gallagher)

The proposed AB 36 legislation includes the following language.

> *The bill would authorize the Town of Paradise to use the design-build contracting process to provide for the provision of sewer treatment to the Town of Paradise, including for infrastructure connecting the Town of Paradise to an existing treatment facility*[87].

The SRWRWD plan would include a new local treatment facility, it is therefore uncertain whether AB 36 could apply to this alternative. However, there is nothing in existing state public bidding procurement law precluding TOP from including the SWRWD Plan in the DB public bidding procurement process as an "or equal" or "alternatively designed system." In fact, procurement statutes encourage competition in all forms in the selection process and that would include alternative design concepts using the DB format.

In order for an "or equal" bid opportunity for the SWRWD Plan, the SWRWD must be included in the alternatives section of the CEQA environmental review currently in process. In this manner, the Export Plan and the SWRWD Plan could compete in a fair and equitable manner based on proposed design features, team qualifications, financial capability, and contractor ability to deliver on an established schedule.

10.2 Coordination with Other Right-of-Way Underground Construction

The successful SWRWD DB contractor could offer cost-saving coordination with other underground utility contractors with HDD installation of the effluent-only pressure sewer pipelines. Underground conduit installation that might be coordinated and constructed concurrently include:

- DB contractor effluent-only pressure sewer
- DB contractor non-potable water distribution
- PID potable water distribution reconstruction
- PG&E underground electrical distribution
- Fiber optic internet cable installation

Recognizing that PG&E undergrounding of electrical distribution and PID replacement of potable water lines are both in progress, time is of the essence in developing a sewer collection design and construction schedule so the coordination can begin as soon as possible.

With the Export Plan, the gravity collection planning and design could take 2 years or more once the DB contract has been awarded. The deep trenches required for the gravity sewer pipelines would likely cause significant conflicts and risks of damage to existing utilities including underground electrical conduits and potable water pipelines. In addition, road restoration costs for gravity collection pipelines, manholes and lift stations would be significantly greater than for the HDD installation of effluent-only pressure sewer lines that require no manholes or lift stations in the right-of-way.

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Assuming that PID pipeline repair/reconstruction, PG&E underground electrical distribution, fiber optic broadband, SWRWD effluent collection, SWRWD non-potable distribution, AWSS hydrants and water cannons and turnouts can all be coordinated – then road restoration would be required only once instead of multiple times in a relative short period. The end product for TOP would be far superior – new state-of-the-art infrastructure for all underground utilities combined with newly reconstructed road surfaces, sidewalks, and storm drainage.

10.3 Ownership/Operations

The ownership and operation of the SWRWD system could be by either TOP or PID, or a contracted private owner/operator. A recommendation for owner/operator will be made as part of the DB bid proposal. A likely scenario would be for the DB contractor to assume operational responsibility for a startup period followed by a multi-year operation contract. Once that contract has expired, it could be renewed, rebid, or assumed by PID or TOP.

Infrastructure components located on private parcels will be maintained by whatever operating entity operates the complete system. Property owners will not be responsible for responding to alerts, routine inspections or septage pumpouts. Three "permissions" will be necessary for on-lot infrastructure design, construction and operation, summarized as follows.

1. A right of entry to allow the utility engineering contractors to visit property in order to effectively design interceptor tank system to serve the property in an acceptable manner.
2. A temporary construction easement on the property to allow a contractor to construct the new interceptor tank and abandon the existing septic tank.
3. A permanent easement will be required for the area around the tank and control panel to allow utility personnel to maintain the system in perpetuity.

Voluntary right-of-entry agreements allowing property access by utility personnel for the three permissions listed above have been successfully used elsewhere where property owner participation rates have exceeded 99%[88].

Operation of the entire SWRWD system, including the collection system, water recycling facility and non-potable dual distribution system would require nearly the same operator and managerial skillsets already available with PID's existing staff. There could be significant ongoing operational cost savings with PID operating water supply, water reuse and wildfire defense systems.

A case study in a historic California agricultural water district with pre-1914 water rights assuming operation of a state-of-the-art municipal water recycling system, is El Dorado Irrigation District (EID) in El Dorado County, CA. The district is responsible for water supply, wastewater management, water recycling, recreation, and hydropower. *Since the late 1970's, EID has maintained a recycled water system in El Dorado Hills. In 1989, EID reached an agreement with the Serrano Partners to develop a system to provide recycled water to irrigate the master planned community's front yards, backyards, parks, common areas, and golf course. In 2004, the EID Board of Directors mandated the use of recycled water for all new subdivisions and developments in the recycled water service area*[89].

EID was the first district in California to deliver T22 recycled water to individual residential lots for both front and back yard landscaping.

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11 COMMUNITY RECOVERY PLAN

In April 2019, TOP developed a Community Recovery Plan[90] with extensive community outreach and resident input. The Plan includes the following recovery objectives.

STRONGER: Rebuild Paradise's Economy

- *Improve utilities — underground gas and electric lines and improve fiber optic internet, cell service, etc.*
- *Install a sewer system*
- *Improve access to medical services and facilities; rebuild Feather River Hospital*

GREENER: Make Paradise Greener

- *Invest in sustainable design and infrastructure strategies, such as solar and innovative buildings*
- *Rebuilding in a more resilient way — become an example to the world and other rural communities*

Figure 22 presents an illustrative plan of the proposed new Paradise civic center, with the irrigated Paradise Community Park on the southeastern side.

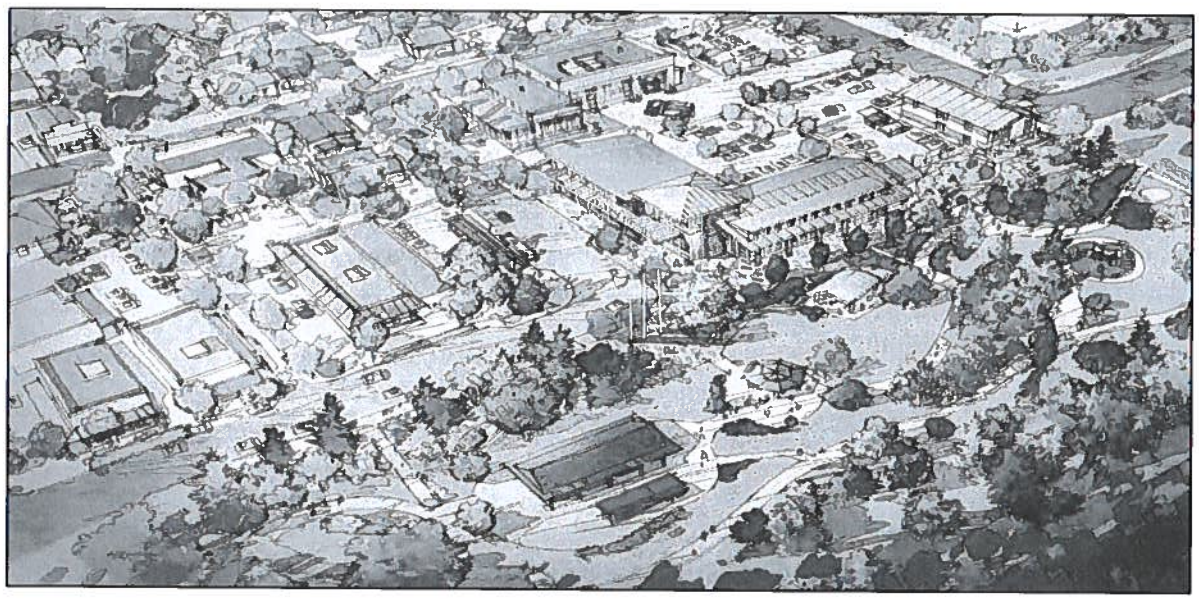

Figure 22 Paradise Recovery Plan, New Civic Center, Illustrative Plan

Wildfire defense planning should consider irrigated linear buffer strips, like the community park, on all sides surrounding the civic center. The AWSS would supply irrigation in the summer season, and strategically located water cannons would stand guard over the high-density civic center commercial and office buildings ready to provide protection from wind-driven embers cast from any direction. Rooftop sprinklers supplied by the AWSS could be installed on all civic center buildings for an added layer of protection.

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This robust wildfire defense strategy could also be developed for emergency evacuation centers. As experienced in the Camp Fire, it is impossible to evacuate an entire town in a very short time frame despite evacuation planning that may already be in place. Road capacity is limited and therefore all residents may not have the time or wherewithal to escape the wildfire. Evacuation centers, such as big box retail stores, school gymnasiums, recreation centers, etc. could be strategically located around the community that could be outfitted with strategic water cannons and rooftop sprinklers supplied by the AWSS.

One foam surfactant injection system serving the entire civic center AWSS could be remotely activated so that rooftop sprinklers and water cannons would have the added fire suppression capability available with fire-retarding biodegradeable foam. This foam injection concept could easily be applied to each evacuation center for an added layer of protection.

Beyond the typical turf and landscape irrigation that would be supplied by the AWSS, additional sprinklers could be installed to irrigate the hardscapes along the evacuation routes – roadway, bike lane, and sidewalks. This would ensure that evacuations would remain safe and the AWSS would suppress landed embers from blowing further and igniting downwind. Sprinklers could be activated preemptively, for instance, with the issue of a wildfire red alert or on declaration of an evacuation order.

Figure 23 presents an illustrative plan of an evacuation route included in the Community Recovery Plan.

Figure 23 Paradise Recovery Plan Vision for the Future, Evacuation Route

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12 TIME IS OF THE ESSENCE

TOP is anxious to provide sewer service to the SSA in as short a timeframe as indicated below.

> *Timing is everything. AB 36 allows the use of design-build for these projects pursuant to existing law's authority for local agencies to use this contract methodology. This authority sunsets on January 1, 2025. According to the Town of Paradise, it plans to contract for the design of the sewer project in 2022*[91]

The December 2020 project delivery schedule for the Export Plan is presented in Figure 24. *Recognizing the* potential jurisdictional, environmental, regulatory and funding issues associated with the 18-mile export pipeline, TOP has more recently indicated that the sewer project could take 5 to 10 years to complete[92].

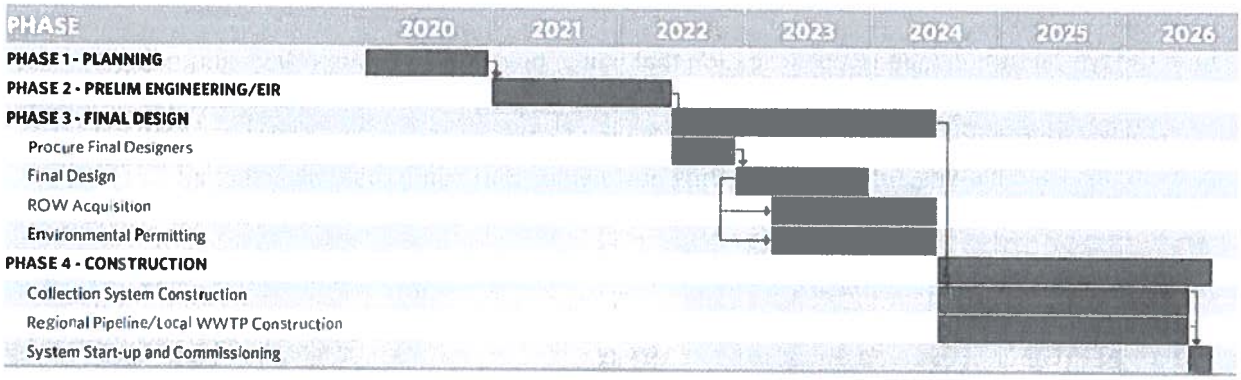

Figure 24 Export Plan Delivery Schedule[93]

As indicated in Section 10.2 above, coordination of all underground utility construction could represent a significant time and cost savings, but only if done concurrently. In this regard, time is of the essence since PID and PG&E underground construction is in progress and ongoing.

12.1 IMPORTANCE TO REBUILD EFFORTS

The SWRWD Plan could potentially provide first flush sewer service within the SSA within 18 to 24 months of DB award. This is a fraction of the amount of design and construction time needed for the Export Plan.

Even though the Feather River Hospital on Pence Road is not in the current SSA, pressure effluent collection and an AWSS extension could be expedited in an early phase to serve this essential facility in the near term. This could be critically important to the rebuild efforts to have the hospital reopen without fear of a repeated evacuation and destruction caused by wildfire.

Recent images of the Feather River Hospital are presented in Figure 25.

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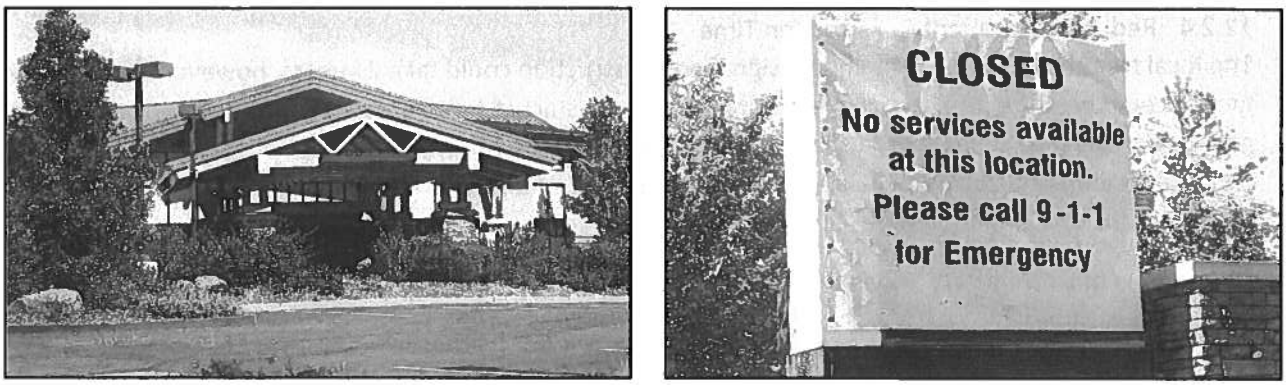

Figure 25 Feather River Hospital, May 28, 2021

Award of the SWRWD Plan could also initiate the process of insurance underwriters' work on mitigation modeling to determine premium discounts for a robust AWSS coupled with a robust wildfire defense system. Without reasonably priced insurance premiums, rebuild efforts may become constrained as construction loans and mortgages could be unavailable without reasonably priced property insurance premiums on a long-term basis.

12.2 Expedited Project Delivery

The estimated time required from award of DB contract to first flush within the SSA is 18 to 24 months, based on the following expediting factors.

12.2.1 Reduced Permitting Time

The CEQA review requirements for the SWRWD Plan are significantly less that for the Export Plan, since all construction activities are within TOP existing right-of-way and on existing parcels. There are no environmental issues associated with pipeline alignments on undeveloped lands, sensitive wetlands, creek crossings, highway crossing, increased surface discharge to the Sacramento River, etc.

As for a SWRCB/R5 water recycling permit, SWRCB Order WQ 2016-0068-DDW[94] coupled with Title 22 regulations would establish the water quality standards required for the proposed uses of recycled water and aquifer recharge. The required Engineer's Report submitted to R5 would be prepared concurrent with design of the collection and treatment systems.

12.2.2 Reduced Engineering Time

Compared with deep excavation required for gravity pipelines, manholes, and pump stations, the shallow HDD installation is as low in impact as the installation of underground electrical power distribution or fiber optic cable. The amount of engineering required for HDD is minimal, with the main design issue being avoidance of conflicts with existing buried utilities.

12.2.3 Reduced Collection Construction Time

Construction of the effluent-only pressure sewer can be constructed in phases allowing certain zones within the SAA to connect sequentially in a relatively rapid fashion. The commercial cores along Skyway and Clark Roads would be the priority, and installation of on-site interceptor tanks and controls could proceed at owners' discretion. Extensions of effluent-only sewer pipelines and AWSS pipelines could be extended to areas outside of the SSA, such as to the Feather River Hospital campus, based on priorities established by TOP.

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12.2.4 Reduced Treatment Construction Time

The local treatment facility planning, design, and construction could take 2+ years, however a temporary facility could be place into service on a rental basis since startup flows are estimated to be only 100,000 gallons per day (gpd). Small capacities could be added incrementally if needed. Delivery of a temporary package treatment facility would likely take less than three months from date of order plus an estimated three months of installation time.

An example of a temporary 3-increment 150,000 gpd facility permitted on a temporary basis by R5 is presented in Figure 26.

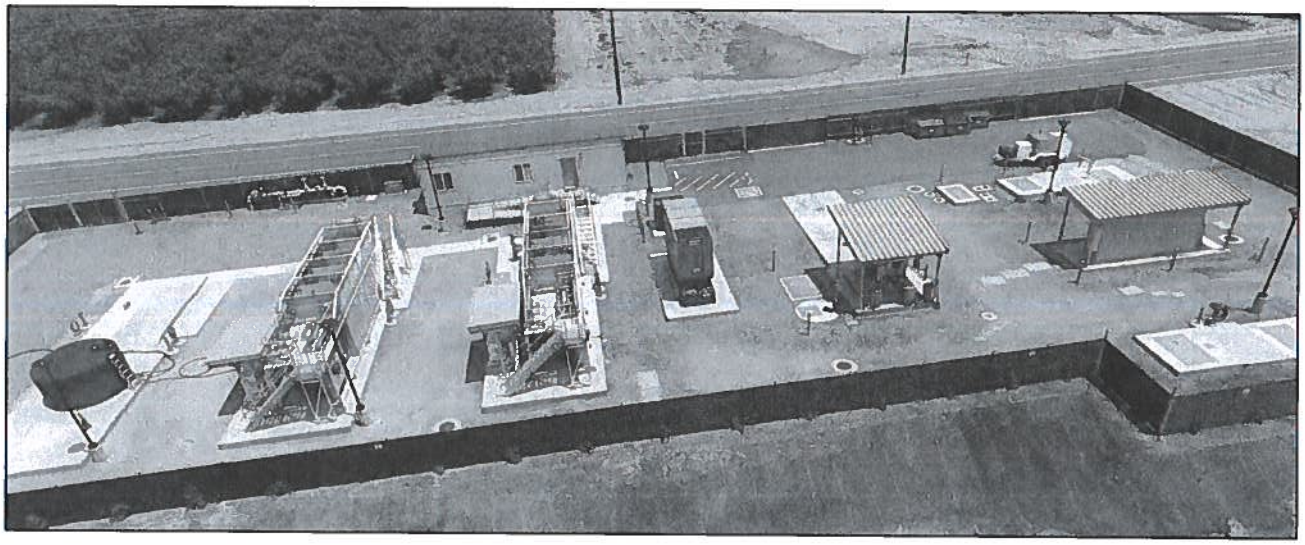

Figure 26 Temporary Package Wastewater Treatment Facility, Madera County, CA

12.2.5 Reduced Effluent Reuse Construction Time

The dual distribution piping would generally occur concurrent with the HDD collection piping installation. There may be a temporary imbalance in effluent demand relative to effluent generated on an annual or seasonal basis. In the event of an imbalance, temporary irrigation sites and/or temporary dispersal sites could be needed on an interim basis.

One site that might be considered for a temporary and/or permanent recycled water irrigation system is the Lava Creek Golf Course located on Old Clark Road. This facility was extensively damaged in the Camp Fire and has not reopened. TOP may want to consider options for Lava Creek in its rebuild campaign perhaps as municipal facility. The vineyard immediately to the north could also be a beneficial reuse site for tertiary effluent on a temporary and/or permanent basis.

This site is within TOP jurisdictional boundary and is immediately adjacent to the proposed SSA boundary. A local golf facility using recycled water could be an attractive community amenity as TOP plans it's rebuild future. Recent images of Lava Creek Golf Course are presented as Figure 27.

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Figure 27 Lava Creek Golf Course, May 28, 2021

13 SUMMARY

The SWRWD Plan described in this report is much more than just a sewer system. It is an integrated plan addressing not only the long-standing and pressing sewer needs of TOP but also beneficial water reuse and a robust wildfire defense strategy. Highlights are summarized below.

1. Effluent-only pressure sewer collection within the Sewer Service Area (SSA)
2. Local water recycling facility sited within or adjacent to TOP
3. High pressure non-potable auxiliary water supply system (AWSS)
4. Non-potable AWSS distribution to all parcels within SSA
5. Non-potable water irrigation supply for all parcels within SSA including parks, irrigated buffers, evacuation routes, high-risk slopes
6. California Title 22 disinfected tertiary recycled water for seasonal aquifer recharge
7. Non-potable water tank storage within TOP serving multiple pressure zones
8. Supplemental raw water supply for AWSS bypassing PID treatment plant in emergencies, if necessary
9. Supplemental groundwater supply for AWSS in emergencies, if necessary
10. Strategic wildfire defense capabilities including rooftop sprinklers, water cannons, water misters protecting essential and high value assets from wind-driven ember cast
11. Separation of potable and non-potable distribution to prevent depressurization of potable system and chemical contamination that can ensue during a wildfire event

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12. Robust community-scale wildfire mitigation strategy to reduce underwriters' risk profile and lower property insurance premiums

13. Septage receiving facility to accommodate biosolids from all TOP septic tanks

14. Expedited system delivery of 18-24 months from award of design-build contract to first flush relative to 5-10 years for the Export Plan

15. Significant opportunity for state and federal grant funding sources otherwise not available to the Export Plan

16. Ability to ultimately expand system to include all residential and commercial parcels within TOP

The major advantages of the SWRWD Plan relative to the Export Plan, are summarized below.

13.1 Water Reuse

Reuse of wastewater otherwise discharged to the Sacramento River and ultimately to the Pacific Ocean is the primary benefit of the SWRWD Plan. The value of keeping a water resource available locally is summarized by Assemblyman Gallagher in August 2021, as follows.

> *"Two years ago this lake [Lake Oroville] was full," Gallagher said. "Yes, we've had a drought. Yes, we have less run-off this year due to climate change. But you shouldn't see a lake this low after two years into a drought. "It's because of bad management. Water that continues to flow out this reservoir, down the river, into the Delta, into the ocean; water that is not usable for farms, for your families, for our cities — and we're the ones that are asked to cut back."*[95]

The total potential benefit of recycling 0.45 mgd of collected wastewater from the SSA would equal approximately 160 million gallons per year (mgy). If all of the 11,500 parcels within TOP are ultimately collected and effluent reused for irrigation and aquifer recharge, the total potential benefit would be approximately 900 mgy.

13.2 Protection of Potable Water Distribution

Depressurization of water distribution systems is a largely unrecognized risk of wildfire devastation on communities in the Wildland Urban Interface. Separation of the potable distribution from the fire suppression water supply would prevent the underlying cause – the rapid increase in demand caused by residential yard sprinklers and fire hydrants occurring simultaneously. A robust AWSS coupled with SCADA controls and real time weather and incident data could intelligently manage water resources in the distribution system so that limited supply is directed to where it is needed most while at the same time preventing depressurization of the potable system. The potable system would forever be protected from rapid depressurization and the potential for chemical contamination that can ensue.

13.3 Wildfire Risk Mitigation

Wildfire risk mitigation, whether recognized or not, will likely be an overarching reality of any rebuild plan going forward. Without mitigation, private property insurance may be either be unobtainable or unaffordable. Home hardening required with recently updated building codes coupled with property owner diligence in landscape and building maintenance can provide protection, but that is limited to

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parcel-scale mitigation. This provides limited protection in dry weather high-wind conditions where ember casts can travel miles downwind of active wildfires.

What is missing, is community-scale hardening. Design of a robust AWSS including its potential as an automated state-of-the-art wildfire defense system ready to activate upon any threat of high-risk weather conditions. With community-scale hardening coupled with parcel-scale hardening, the insurance industry will likely recognize those robust mitigations in their rate models which would quantify risk reduction and ultimately credits in their premium rate structures. Without robust mitigations, insurance underwriters may refuse to renew policies with property owners facing the prospect of going without insurance coverage.

Unfortunately, Butte County has experienced another devastating wildfire whose ignition occurred in very close proximity to the original ignition of the 2018 Camp Fire. Both ignitions appear to have been caused by electrical transmission equipment in the Feather River Canyon. An image of the Dixie Fire smoke plume, as seen from Skyway Road in Paradise, is presented in Figure 28.

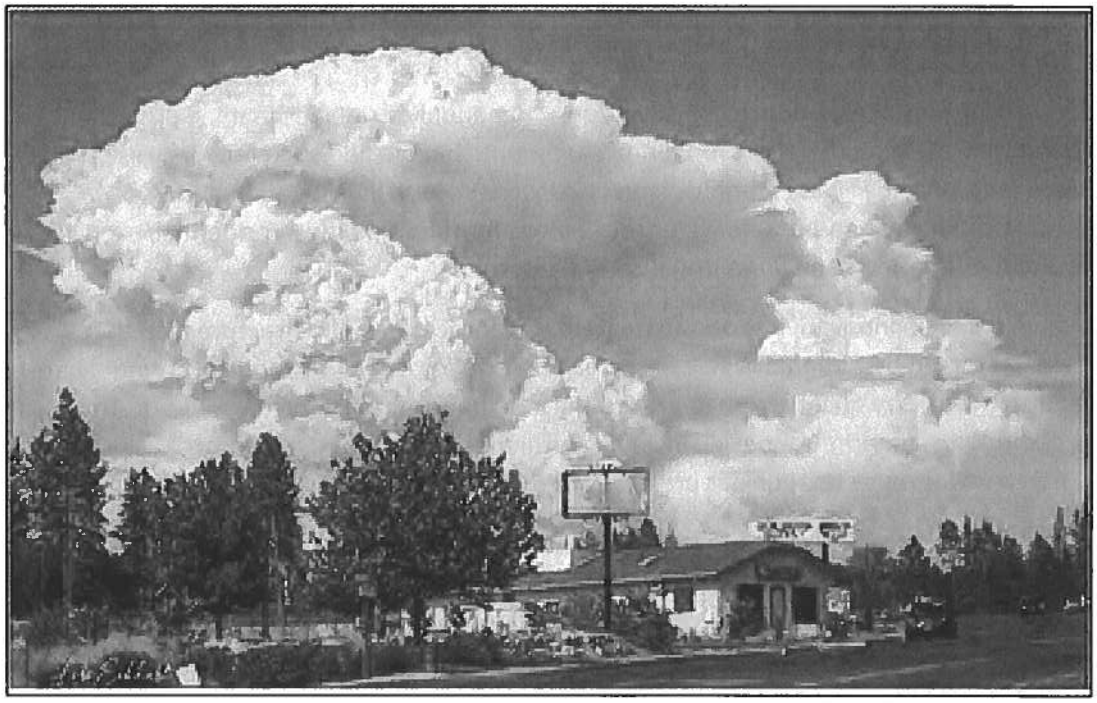

Figure 28 Dixie Fire plume of Smoke as seen July 19, 2021 from Skyway Road, Paradise[96]

As demonstrated by the Camp Fire and now Dixie Fire, TOP is in a high-risk wildfire setting. Robust mitigations will be required not only for obtaining affordable property insurance, but for the most basic need to protect life and property. Without those basic protections and assurances, TOP rebuild efforts may be constrained going forward.

13.4 Time to First Flush

The SWRWD Plan could be expedited at numerous levels – environmental review, design, construction, startup, etc. to provide first flush service to properties within the SSA in as little as 18 months from DB award. This compares with 5 to 10 years for the Export Plan.

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13.5 Grant Opportunities

There are likely to be numerous state and federal grant funding opportunities available to the SWRWD Plan beyond the normal EPA/SRF and USBR wastewater programs. Due to the heightened awareness of the western U.S. drought and extended wildfire seasons, many legislative proposals have been introduced in 2020 and 2021 that could potentially support the SWRWD Plan in the near term. Seven of those grant funding programs are listed in Section 8.3 above.

13.6 Concurrent CEQA Review Requested

Similar to the Export Plan, the SWRWD Plan requires CEQA environmental review prior to any DB award. TOP would have to take an affirmative action to reissue an amended NOP to include the SWRWD Plan and then incorporate it in its draft Environmental Impact Report for certification. With a certified EIR including both the Export Plan and the SWRWD Plan, TOP could then competitively bid the two options in a fair, open and transparent DB procurement process.

14 About the Author

Dana Ripley has four decades of experience consulting on water supply strategic planning projects engaging collaboration with team members, upper management, and outside stakeholders. His project development experience includes water supply planning associated with investigation and implementation of potable and non-potable water reuse plans for municipalities, residential/ commercial development projects and large irrigators in California.

He is noted for developing an innovative septic abatement water recycling infrastructure plan that was peer-reviewed and endorsed by National Water Research Institute for its ability to protect groundwater, surface water and saltwater bay quality from degradation from domestic wastewater sources. This comprehensive community water reuse design including effluent-only pressure collection was published in a widely acclaimed water reuse textbook as presented in Figure 29[97].

Dana's water master planning portfolio includes preparation of a California SB 610 water supply assessment for a large master-planned community in the San Joaquin Valley which was approved as part of the project's CEQA entitlement. Dana also won a grant award from Metropolitan Water District of Southern California Innovative Water Supply Program to develop a template for decentralized non-potable water reuse in urban settings.

Dana has a strong interest in energy-efficient decentralized wastewater reuse treatment facilities that can be located in sensitive urban settings which produce an effluent quality consistent with California standards for unrestricted irrigation, fire suppression and other municipal/industrial non-potable water uses. Recent designs include hourly shutdown features that are compatible with renewable power sources, microgrids, and real-time utility pricing structures.

Dana holds a Bachelor of Science degree from the University of California at Davis, a MBA from the University of Santa Clara, and is a Registered Consulting Civil Engineer in California.

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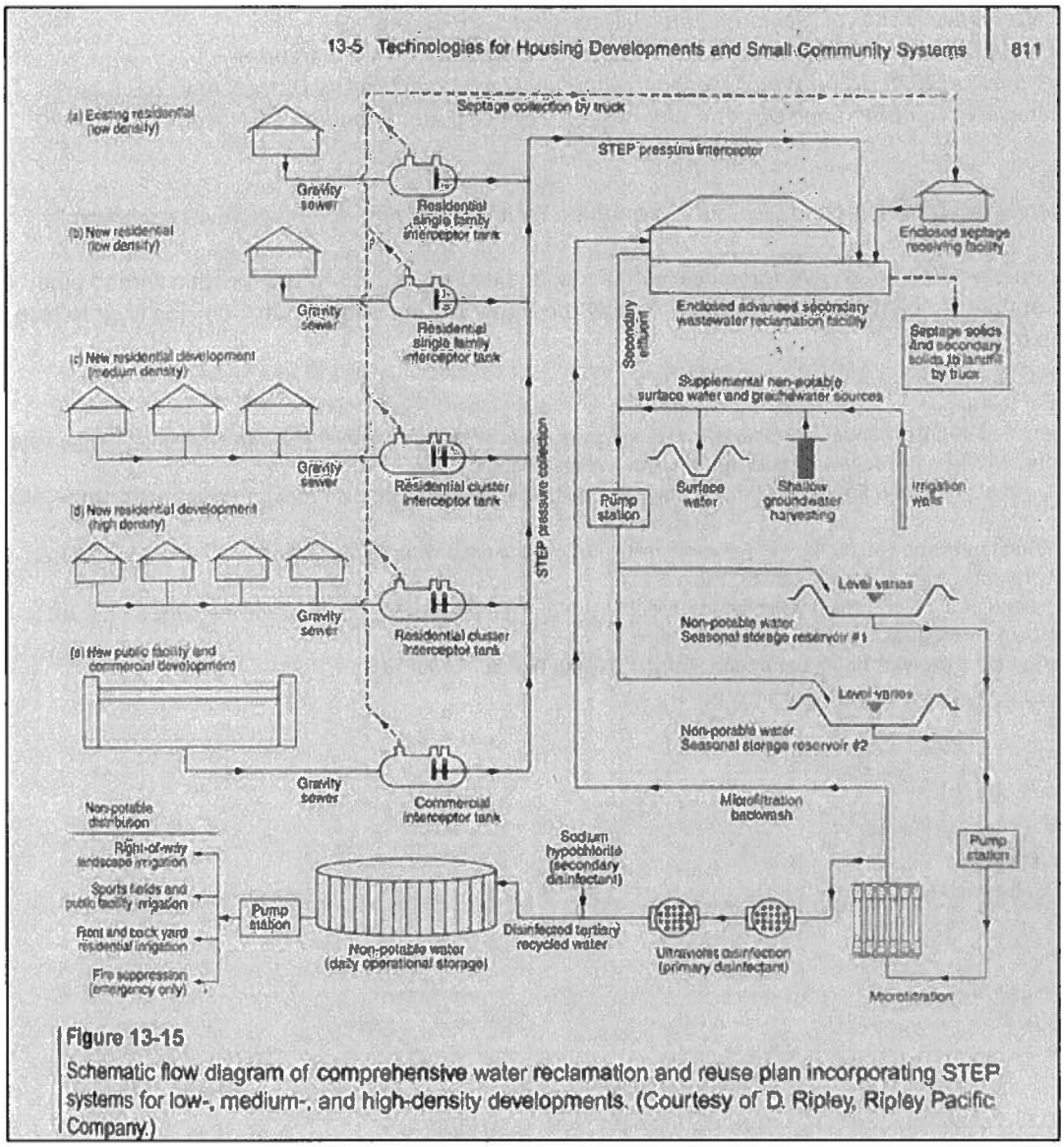

Figure 13-15
Schematic flow diagram of comprehensive water reclamation and reuse plan incorporating STEP systems for low-, medium-, and high-density developments. (Courtesy of D. Ripley, Ripley Pacific Company.)

Figure 29 Flow Diagram from Figure 13-15 Water Reuse Textbook prepared by Dana Ripley

15 ENDNOTES

[1] For definition see White Paper | Definition of White Paper by Merriam-Webster
[2] See Appendix A-1.
[3] See Appendix B-24
[4] See Appendix C
[5] See Appendix D
[6] See Appendix D, p.58
[7] See Appendix D, p.17
[8] See Appendix B, p.2
[9] See Appendix D, p.54

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[10] HDR, *Regional Alternative Technical Memorandum #5,* December 1, 2020, Table 9.
[11] Source: Chico Enterprise Record dated October 12, 2021 (contributed by Town of Paradise)
[12] California Water Service, *2020 Urban Water Management Plan, Chico Hamilton City District,* June 2021, p.61
[13] HDR, *Local Wastewater Treatment and Disposal Alternatives, Technical Memorandum #4,* November 11, 2020.
[14] Appendix D, p.117
[15] See Appendix B
[16] HDR, *Local Wastewater Treatment and Disposal Alternatives, Technical Memorandum #4,* Nov. 11, 2020, p.22
[17] Ibid.
[18] Calculation assumes 54,700 lf of 6" PVC forcemain with a friction headloss of 1.35 ft/100 ft with a wire to pipe efficiency of 38% at flowrate of 400 gallons per minute using the highly efficient, heavy duty non-clog Flygt N-Tech wastewater pump model 3301.
[19] See One of America's Toughest CEO Jobs: Fixing PG&E - WSJ
[20] See Appendix E
[21] Water Environment Federation, Manual of Practice No.32, *Energy in Water Resource Recovery Facilities,* Second edition, June 2021, Table B.0. Note: MWh/mg = Megawatt hours per million gallons treated
[22] Tchobanoglous, G., et al, Metcalf & Eddy|AECOM, *Wastewater Engineering, Treatment and Resource Recovery,* McGraw-Hill 2014, Table 17-3.
[23] Water Research Foundation and Electric Power Research Institute, *Electricity Use and Management in the Municipal Water Supply and Wastewater Industries,* November 2013, Table 5-2.
[24] Pennsylvania Department of Environmental Protection, *Electric Use at Pennsylvania Sewage Treatment Plants,* March 2011, Figure 6. Note: MWh/mg = Megawatt hours per million gallons.
[25] *Ibid.* Note: kWh/lb BOD = kilowatt hours per pound Biologic Oxygen Demand reduced.
[26] See State Water Resources Control Board (ca.gov)
[27] See Appendix F
[28] See Appendix F-5.
[29] Alameda County Zone 7
[30] See Appendix G
[31] Source: Google Earth
[32] Appendix H, p. 6-7.
[33] See Appendix F
[34] See Appendix H
[35] See FHSZ Viewer (ca.gov)
[36] See Appendix I, p. 30.
[37] See Appendix J
[38] Ibid.
[39] See The Science of Firefighting: Cisterns | Exploratorium Video
[40] See Appendix K
[41] Source: Google Earth
[42] See Mining Solutions From Nelson Irrigation
[43] See Appendix L
[44] See Appendix H, p.3-3.
[45] See Appendix M
[46] See Appendix H, p.F-28.
[47] See Appendix N
[48] See Appendix N, p. 14
[49] See Tahoe resorts activate snow cannons to battle Caldor Fire (audacy.com)
[50] See Appendix C, p. 2
[51] Assumes TOP pre-fire population of 26,000 and residential occupancy of 2.19 persons/parcel per PID 2020 UWMP, Appendix H.
[52] See Codes Display Text (ca.gov)
[53] See Appendix P
[54] See Water Quality Control Policy for Recycled Water (ca.gov)

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[55] See wqo2016_0068_ddw (ca.gov)
[56] See Microsoft Word - Regionalization_res.doc (ca.gov)
[57] See Appendix B, Table 8, p.21
[58] *Ibid*
[59] *Ibid*
[60] HDR, Inc., *Local Wastewater Treatment and Disposal Alternatives, Technical Memorandum #4, Paradise Sewer Project,* November 11, 2020, Appendix E (last page)
[61] See Appendix D, Appendix A. Cost Estimates
[62] *Ibid*
[63] Assumes 180,000 lineal feet of 10" steel pipe @ $450/lf (all in)
[64] Assumes four 1 million gallon pre-stressed concrete circular tanks @ $2.50/gallon (all in)
[65] Preliminary planning estimate for AWSS hydrants, remote actuated isolation valves, meters, backflow prevention devices, PRV's, SCADA, fixed water cannons, fixed and/or portable water misters (all in). Wildfire defense costs subject to design criteria to be established by fire suppression experts in consultation with Cal Fire – Butte County.
[66] HDR, Inc., *Local Wastewater Treatment and Disposal Alternatives, Technical Memorandum #4, Paradise Sewer Project,* November 11, 2020, Appendix E (last page)
[67] See Appendix Y
[68] Ibid.
[69] See Drought Fact Sheet (ca.gov)
[70] See Bill Text - SB-63 Fire prevention: vegetation management: public education: grants: defensible space: fire hazard severity zones.
[71] See Bill Text - AB-52 California Global Warming Solutions Act of 2006: scoping plan updates: wildfires.
[72] See Appendix Q
[73] See WaterSMART | Bureau of Reclamation (usbr.gov)
[74] See H.R.1352 - 117th Congress (2021-2022): Water Affordability, Transparency, Equity, and Reliability Act of 2021 | Congress.gov | Library of Congress
[75] See U.S. Senate Near Final Vote to Pass Major Infrastructure Package
[76] See Appendix R
[77] See Appendix S
[78] See Appendix T, Appendix III p.13.
[79] See Appendix J, p.1
[80] See Appendix S
[81] See Appendix R
[82] See Appendix X
[83] See Appendix T
[84] See IBHS-Zesty-WildfireFuelMgmt.pdf
[85] See Appendix Z
[86] Photo credit: Josh Edelson/AFP via Getty Images
[87] See Appendix U
[88] See FAQ – Southern Kent Island Sewer (skisewer.com)
[89] See Recycled Water | El Dorado Irrigation District (eid.org)
[90] See Appendix V
[91] See Appendix U
[92] TOP Sewer Project YouTube meeting dated May 13, 2021
[93] Source: Appendix B, p.20
[94] See wqo2016_0068_ddw (ca.gov)
[95] See Appendix W
[96] Photo credit to Lori Eckhart, Chico ER.com, July 23, 2021 edition.
[97] Tchobanoglous, G., et al, *Water Reuse, Issues, Technologies, and Applications,* Metcalf & Eddy|AECOM, McGraw Hill, Inc., 2007, Figure 13-15.

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EXHIBIT B

Town of Paradise
Sewer Project Draft Program EIR

Rebuttal Responses to
Table 5.2-1
Local Alternative #3 Infeasibility

Draft PEIR Table 5.2-1 Reason for Infeasibility	Policy and Technical Responses to Infeasibility Assertions
1. State and Regional Water Board Policies supporting regionalization	Any State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB) policy supporting "regionalization" is an out-of-date policy predicated on "disposal" of wastewater and not beneficial reuse. RWQCB Central Valley Region #5 (R5) Resolution R5-2009-0028 indicating support for "Regionalization" in the same resolution supports "Reclamation, Recycling, and Conservation." In the context of the Town of Paradise proposed 18-mile export pipe, the increased discharge of secondary effluent to the Sacramento River runs against California's long-standing strategy to minimize potable water demand and increase water recycling. The SWRCB encourages water recycling with more recent statewide policies and orders including the 2018 Water Quality Control Plan for Recycled Water and the 2016 General Order for Water Reclamation Requirements for Recycled Water Use. Further, Governor Newsom this month released California's Water Supply Strategy which establishes a plan for significant increases in urban water recycling by both coastal and inland communities. The plan targets an increase of 0.8 million acre-feet (MAF) by 2030 and 1.8 MAF by 2040 (see Figure 1). Based on the state's overwhelming need to reduce potable water demand and beneficially recycle water wherever feasible, it is the 18-mile export plan that would likely not be supported Governor's office and would likely not be supported by state and federal funding agencies. In the Town's case, "regionalization" assumes connection to Chico's water pollution control plant (WPCP) which discharges secondary effluent to the Sacramento River. In light of R5's intent to require Chico to remove nitrogen from its discharge[1], the draft PEIR should not overlook the cost and energy intensity required to nitrify and denitrify prior to discharge. As a related example, R5 required Sacramento Regional Sanitation District's WPCP in Elk Grove to remove nitrogen prior to discharge to the Sacramento River at a capital cost exceeding $2 billion[2]. Local reuse, conversely, would beneficially utilize nitrogen and other nutrients for agricultural, landscape, and turf fertilization.
2. Regional Board November 2020 letter supporting regionalization	The November 2020 R5 letter fails to compare local urban water reuse with river discharge and "*recycled water for waterfowl habitat uses*". Nor does the letter consider the multi-benefits of a dual distribution system within the Town that would include 1) non-potable recycled water for landscape, park, turf and agricultural irrigation, 2) seasonal aquifer recharge dispersed throughout the service area, 3) state-of-the-art community-scale wildfire defense, 4) high pressure supplemental water supply for fire suppression, 5) protection against any future depressurization of PID's potable distribution system and 6) beneficial use of nutrients inherent in wastewater. Upgrades to the Chico water WPCP for river discharge and/or agricultural reuse could easily exceed $300 million[3] for nutrient removal and other treatment process improvements over the next decade. The Town would be responsible for it's proportionate share of costs and its

Draft PEIR Table 5.2-1 Reason for Infeasibility	Policy and Technical Responses to Infeasibility Assertions
	contribution would offer zero benefit to Paradise Irrigation District's (PID) water supply portfolio and zero benefit for the Town's fire suppression capability. The R5 letter indicates that [the] "*Pipeline to Chico can be cost-effectively sized to accommodate a large range of flows.*" This indicates that the pipeline can likely accommodate significant wastewater flows over and above the needs of the Town for planned developments within Chico's southeast sphere of influence and rural Butte County along the pipeline route. Table 1 presents pipeline capacities for the proposed 10.5 mile 12" export pipe force main[4] based on a range of flow velocities. Table 3 presents the carrying capacity of plastic pipe from an engineering manual which indicates velocities for 12" pipe within the range of 1.3 to 10.12 feet per second (fps). The 7 fps maximum figure presented in Table 1 is well within the range presented in the engineering manual. At that flow velocity, the export pipe capacity is about 2,400 gallons per minute (gpm), or about 1.7 million gallons per day (MGD) on an average day flow (ADF) basis and 3.4 mgd on a peak hour flow (PHF) basis[5]. At 1.7 mgd ADF, the lost opportunity for local water recycling in the Town, southeast Chico and rural Butte County could be about 2,000 acre-feet per year (afy) as indicated in Table 2. "Regionalization" as a primary justification for the 18-mile export project is clearly in conflict with the Governor's *California's Water Supply Strategy* since it forecloses on a potential 2,000 afy of urban water recycling in the Town and southeast Chico. Based on current drought and wildfire threat conditions, the Governor's office would likely strongly support the local reuse alternative over the export alternative. In that same light, the grant funding opportunities for local water reuse would likely be significantly greater than for the 18-mile export based on the Governor's strong emphasis on urban reuse projects anywhere in the state. The R5 letter fails to acknowledge that Butte LAFCo cannot approve an 18-mile extension of sewer service absent an *existing or impending public health and safety threat*[6]. The 0.1 mgd post-fire subsurface dispersal in the sewer service area (SSA) that had a pre-fire permitted subsurface dispersal capacity of about 0.5 mgd cannot be considered an *existing or impending health threat*. Absent such a threat, Butte LAFCo cannot approve the extension *as it is the only legally permissible justification available to LAFCo to approve a service extension request outside of an agency's (Chico) Sphere of Influence*[7]. The only path forward with the extension request therefore would likely be a waiver approved by the state legislature and the Governor, similar procedurally to Assembly Bill 36 (Gallagher, 2021). The R5 November 2020 letter did not confirm the presence of *an existing or impending public health and safety threat* in Paradise of which it has the technical and regulatory authority to determine. Even if R5 made such a determination, the proposed export project serving only 14% of the Town would not alleviate

Draft PEIR Table 5.2-1 Reason for Infeasibility	Policy and Technical Responses to Infeasibility Assertions
	most of the threat since there is ample high density residential, commercial, health care and institutional development outside of the proposed SSA which could also have subsurface dispersal issues. Absent an existing or impending health and safety threat, the 18-mile export project as indicated above is *legally impermissible*[8]. In its alternative analysis of the regionalization versus local reuse options available to the Town, R5 erred in not considering Government Code restrictions on any extension of utility service from one jurisdiction to another in California.
3. Siting local wastewater facility within residential and business areas	Figure 2 presents an image of a California Title 22 water reclamation facility sited in a residential setting in southern California. This facility was permitted by R8 (Santa Ana Region) under Title 22 criteria and had operated continuously between 1981 and 2006 when the facility was decommissioned with the arrival of an Inland Empire Utilities Agency (IEUA) purple pipe extension to two adjoining golf courses. During its 25-year operation, this author was not aware of a single odor or noise complaint from residents adjacent to the facility. This image was included in the *Water Reuse* textbook[9] as an example of a satellite treatment plant located in a housing development. Figure 3 presents a 2021 satellite image of the decommissioned facility indicating its close proximity to numerous residences and a swimming pool.
4. Lack of sufficient recycled water users in area	Table 3 indicates PID's pre-fire estimate of total water demand in 2040 of 7,817 afy[10]. This compares with 3,576 afy of PID's pre-fire estimate of 2040 wastewater dispersal as indicated in Table 4[11]. These two values indicate that, on an annual basis, the total service area pre-fire potable and raw water demand is roughly 2.2 times the wastewater generation. On a seasonal basis, the non-potable exterior irrigation demand could be as high as 4 times the interior potable demand on peak summer days. Clearly, with dual distribution to all served parcels, the annual average non-potable demand exceeds the potential recycled water supply.
5. Large effluent storage facility needed for winter flows	Based on information provided by Town engineers[12], the heat of the Camp Fire at the ground surface did damage some septic tanks, particularly those constructed of plastic or fiberglass. However, of the 11,000+ leachfields – there has been no reported damage. With that context, the Sewer, Water Reuse, and Wildfire Defense (SWRWD) Plan proposes to utilize the existing 11,000+ leachfields for shallow aquifer recharge in the winter months eliminating the need for a seasonal effluent storage facility. The dual distribution will be in place, and individual irrigation controllers will be used to control and meter delivery of tertiary effluent to existing leachfields in the winter months as/when needed. Ultimately, the pre-fire 2040 estimate 3,576 afy dispersal of septic tank effluent would be reduced to about 980 afy[13] dispersal of tertiary effluent meeting strict Title 22 unrestricted irrigation standards. These values assume the long-term objective of the SWRWD

Draft PEIR Table 5.2-1 Reason for Infeasibility	Policy and Technical Responses to Infeasibility Assertions
	Plan to serve most if not all of PID's 10,600 service connections and not just the 1,500 connections in the proposed SSA.
6. Land for storage environmentally sensitive	Land for seasonal storage unnecessary. See response #5 above.
7. Local WWTP construction would be a lengthy process	The 2016 General Order for Water Reclamation Requirements for Recycled Water Use provides an expedited path for recycle permits, since most non-potable recycled water projects rely on the same regulatory framework provided in Title 22. With low-pressure effluent collection and temporary treatment facilities at say, the abandoned Lava Creek golf course, time to first-flush would likely be less than 18 months, perhaps as little as 12 months from authorization to proceed. This compares with estimates of the gravity collection and 18-mile export project taking as much as a decade to first-flush. There is ample precedent in R5 for satellite water reuse facilities permitted under Title 22 criteria for disinfected tertiary recycled water. In combination with the 2016 General Order, the R5 approval process could be concurrent with the facility design thereby expediting the project delivery schedule.
8. Auxiliary water system would for fire suppression would be a separate pipeline system	Yes, a separate pipeline system would be required modeled after El Dorado Irrigation District's dual distribution system (in operation for over four decades) and San Francisco's auxiliary water supply system (in operation for over a century). In addition, the dual distribution provides access to individual leachfields for winter subsurface dispersal and would provide assurance that, in the event of a repeat of an extreme wildfire event, that PID's potable system would be protected from depressurization caused by the abrupt increased demand from residential sprinklers and fire-fighting activity[14].
9. Inefficient oversizing of treatment facility in early years	Inefficient oversizing of infrastructure is not unique to wastewater treatment facilities – it is a given on any infrastructure project – water import and treatment facilities, power generation and transmission, highways, airports, rail facilities, ports, etc. etc. Utilization is never near optimum in the early years, and full utilization may come decades after construction is complete. For context, how efficient is a $184 million export project when the initial flow estimate is only about 0.1 mgd serving a 2026 connected population of 1,391[15]? Since the $184 million figure is only a Class 5 estimate (- 30% to +50%) coupled with the recent inflation spike, the actual construction bid cost could easily exceed $300 million – with no possible opportunity for interim temporary facilities or phasing. Where's the early year efficiency in that?

10. O&M for a full-scale treatment facility would be supported by a small initial ratepayer base	Figure 4 presents a satellite water reclamation facility owned and operated by Fresno County Special Districts, County Service Area #34. This facility was permitted by R5 under Title 22 criteria in 2005. Table 6 presents the 2022-2023 projected operating budget for operation and maintenance (O&M) of this facility. Compare that Fresno County CSA #34 O&M value with estimates for the export project O&M: $254,000/yr for the regional pipeline[16], $1,022,000 for the gravity collection system[17], and the $491,000 contribution to Chico WPCP O&M[18]. These annual costs total $1,767,000/year starting at first-flush. How can the Town afford this when most of the SSA parcels are currently vacant? Add to this annual O&M cost the annual cost of the local share of loan debt repayment since it is unlikely that the project will achieve 100% grant funding for capital costs. If interior residential water use is reduced to 42 gallons per person per day (gpcd) by 2040 in accordance with recommendations by the California Department of Water Resources[19], the Town connected population served by a similar Title 22 facility (CSA #34 plant) could potentially be about 4,700, equal to the estimated population in the SSA at Year 2050[20].
11. Treatment processes not easily scalable	The export plan has zero potential for phasing and cannot be scaled up ever once capacity is reached in the collected area of the SSA. The local treatment collection system and local water reuse plant, however, can be scaled up to ultimately serve all 10,600 connections and be designed to operate efficiently even at low initial flows.
12. Extensive ongoing monitoring required for local recycling	Table #6 does not call out monitoring costs since Fresno County operators conduct in-house lab tests as part of their normal daily and weekly routines. Monitoring costs are included in the "Professional and Specialized Services" line item. Monitoring reports are submitted by the operators to R5 on a quarterly and annual basis. All operators are state-certified and are employees of Fresno County.

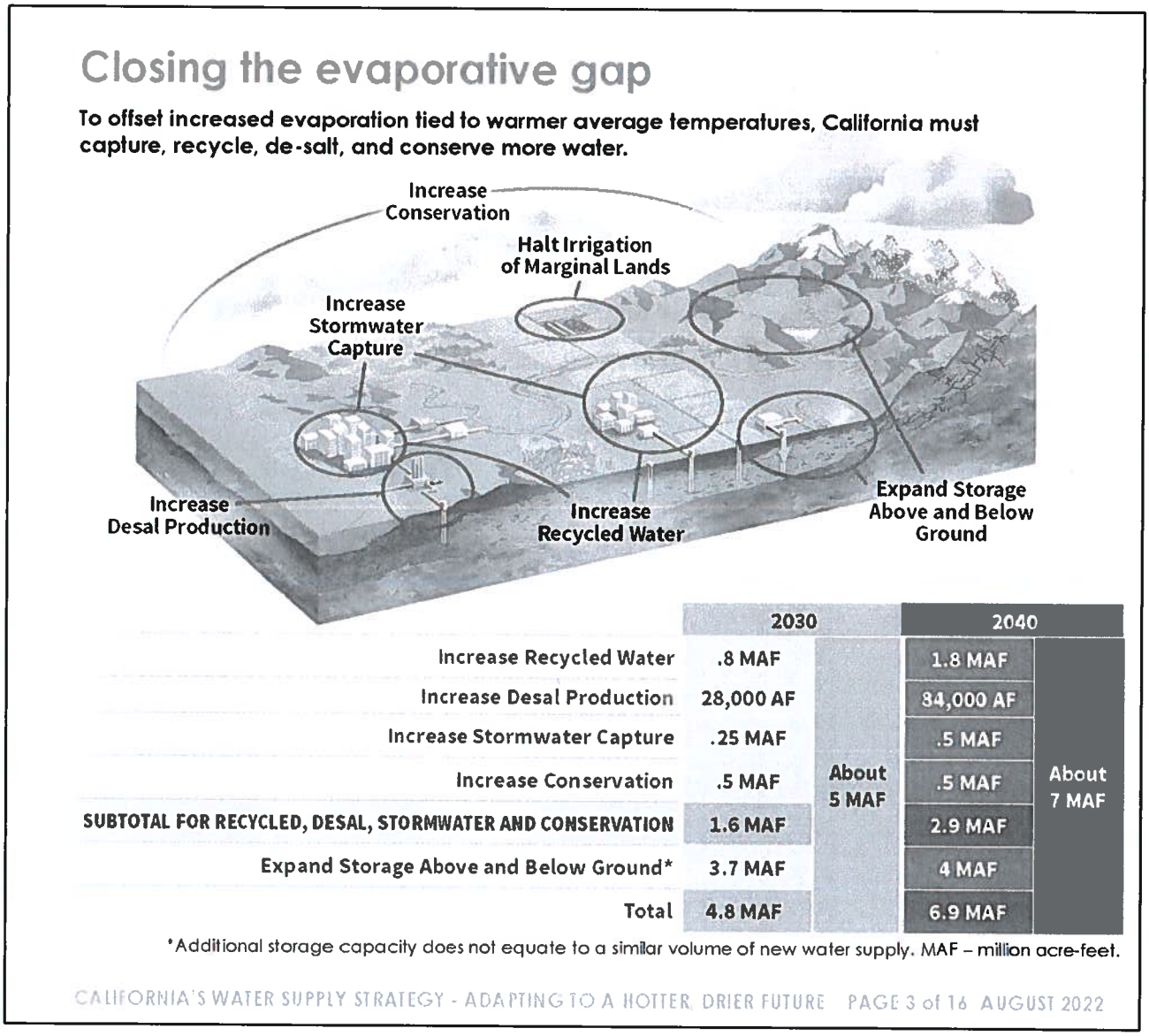


Figure 1 Closing the evaporative gap (from California Water Supply Strategy – Adapting to a Hotter, Drier Future, p.3)

Table 1 Carrying Capacity Tabulation for 12" Pressure Pipe Flowing Full

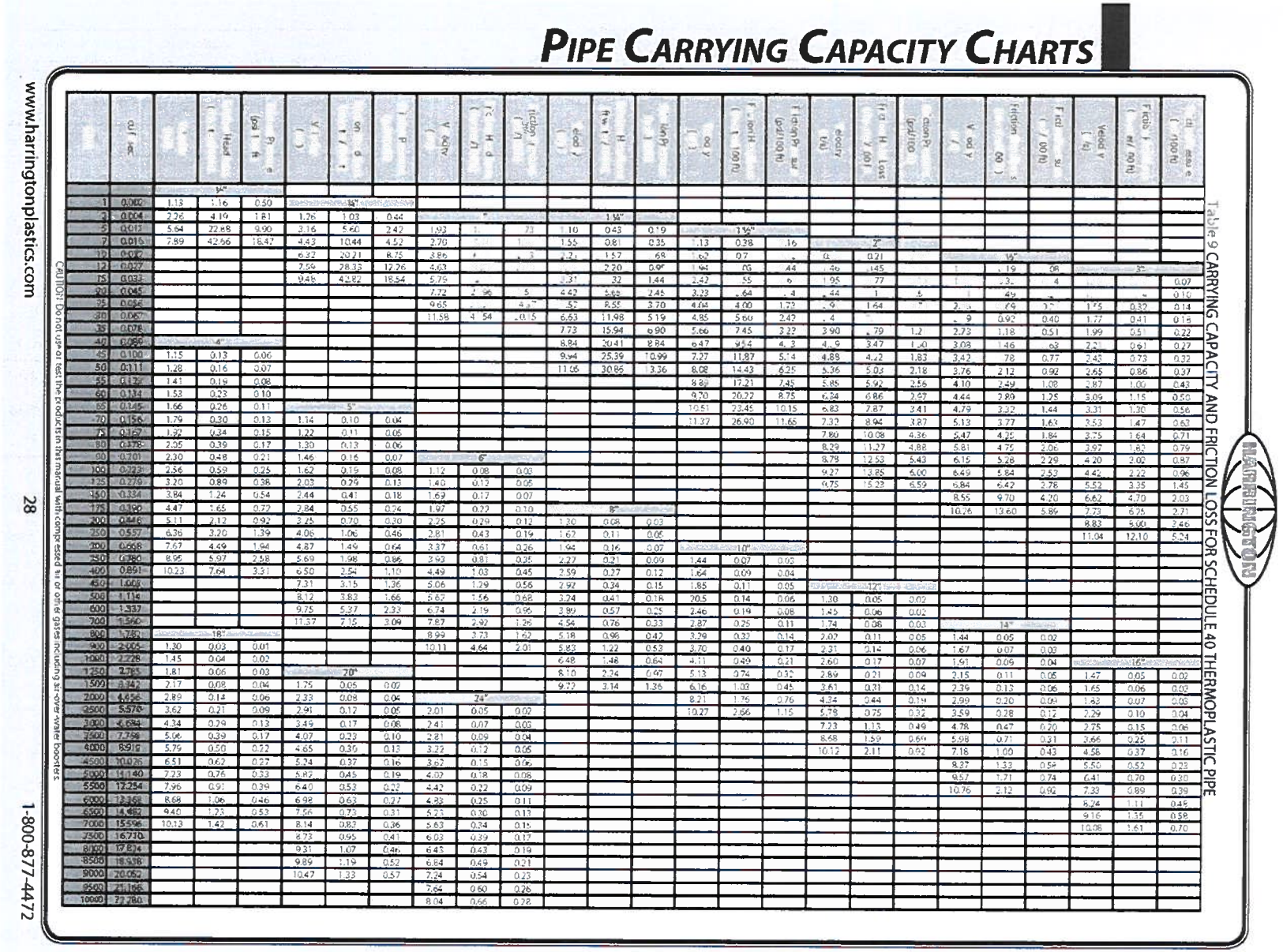
Input Parameters	Unit	Value
Pipe nominal size	in	12.000
Pipe outside diameter	in	12.750
Pipe wall thickness	in	0.406
Pipe inside diameter	in	11.938
pi	-	3.1416
Pipe inside area	sq in	111.932
Pipe inside area	sq ft	0.777

		Flow Velocity (feet per second)				
Parameter	**Unit**	**3.0**	**4.0**	**5.0**	**6.0**	**7.0**
Flow volume	cu ft/sec	2.33	3.11	3.89	4.66	5.44
Flow volume	gal/sec	17.44	23.26	29.07	34.89	40.70
Flow volume	gal/min	1,047	1,395	1,744	2,093	2,442
Average daily flow (ADF)	mgd	0.754	1.005	1.256	1.507	1.758
Peak diurnal flow (PDF)	mgd	1.130	1.507	1.884	2.261	2.637
Peak hourly flow (PHF)	mgd	1.507	2.009	2.512	3.014	3.516
TOP capacity limit (ADF)	mgd	0.464	0.464	0.464	0.464	0.464
Chico capacity limit (ADF)	mgd	0.290	0.541	0.792	1.043	1.294

Table 2 Annual Recycled Water Lost Opportunity with Export (acre-feet per year)

		Flow Velocity (feet per second)				
Parameter	**Unit**	**3.0**	**4.0**	**5.0**	**6.0**	**7.0**
TOP RW lost opportunity	afy	520	520	520	520	520
Chico RW lost opportunity	afy	324	605	887	1,168	1,449
Total RW lost opportunity	afy	844	1,125	1,406	1,687	1,969

Table 3 Harrington Plastics Pipe Carrying Capacity Chart



PIPE CARRYING CAPACITY CHARTS

Table 9 CARRYING CAPACITY AND FRICTION LOSS FOR SCHEDULE 40 THERMOPLASTIC PIPE

HARRINGTON

www.harringtonplastics.com

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1-800-877-4472

CAUTION: Do not use air test the products in this manual with compressed air or other gases including air-over-water boosters

Figure 2 Satellite Water Reclamation Plant, San Bernardino County, CA, image circa 1981

Figure 3 Satellite Water Reclamation Plant, San Bernardino County, CA, Google Earth image August 2021

Table 4 Paradise Irrigation District Total Water Demands, PID 2015 Urban Water Management Plan, p. 18

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040
Potable and Raw Water *From Tables 4-1 and 4-2*	4,282	6,623	6,940	7,298	7,620	7,817
Recycled Water Demand*	0	0	0	0	0	0
TOTAL WATER DEMAND	4,282	6,623	6,940	7,298	7,620	7,817
NOTES: *Not applicable. Recycled water is not available from Paradise Irrigation District.						

Table 5 Paradise Irrigation District Disposal of Wastewater, PID 2015 Urban Water Management Plan, p. 30

Table 6-A Disposal of wastewater (non-recycled) AF Year								
Method of disposal	2005	2010	2015	2020	2025	2030	2035	2040
On-site septic systems	2,707	2,868	2,250	3,030	3,175	3,339	3,487	3,576
Total	2,707	2,868	2,250	3,030	3,175	3,339	3,487	3,576

Figure 4 County Service Area #34 Satellite Water Reclamation Plant, Fresno County, CA, image July 2019.

Table 6 Fresno County CSA 34 WWTF Project Budget Expenditures 2022-2023

CSA 34WWTF
COUNTY OF FRESNO SPECIAL DISTRICTS
PROJECTED BUDGET EXPENDITURES 2022 - 2023

ORG: 9320
FUND: 0830
AUDITOR CODE:
SUBCLASS: 16202

ACCOUNT	BUDGET FY 2021-2022	ESTIMATED EXPENSES FY 2021 2022	PROPOSED BUDGET FY 2022 2023
Services & Supplies			
07101 General Liability Insurance	$6,764	$7,850	$8,085
07205 MAINTENANCE EQUIPMENT	$50,000	$71,000	$74,828
07220 MAINTENANCE BUILIDNG & GRO	$51,830	$96,736	$117,462
07265 OFFICE EXPENSE	$50	$50	$50
07268 POSTAGE	$50	$0	$0
07287 PEOPLESOFT FINANCIAL CHARGE	$3,900	$1,498	$2,700
07295 PROFESSIONAL & SPECIALIZED S	$366,682	$341,254	$281,619
07430 UTILITIES	$164,573	$118,863	$132,729
07565 COUNTYWIDE COST ALLOCATION	$76,644	$76,644	$0
Services & Supplies Subtotals	$720,493	$713,895	$617,473
TOTAL EXPENDITURES:	$720,493	$713,895	$617,473

Increase to Reserves	$0
Total Budget (Total Expenditures + New Reserves)	$617,473
Revenues	$617,473
Ending Reserves/Designations 6/30/23	$0

Drafted By _____ Approved By _____

References

[1] Carollo, *Regionalization Planning Report for the Paradise Sewer Project*, Final, May 2020, Section 5.4.1.2, p. 5-9
[2] See EchoWater Fast Facts
[3] Carollo, *Regionalization Planning Report for the Paradise Sewer Project*, Final, May 2020, Table 1.4 - $216 million escalated by 1.5 to account for Class 5 (-30% to +50%) estimate upper limit.
[4] HDR, Inc., *Paradise Sewer Project Draft Program Environmental Impact Report*, July 14, 2022, Section 2.5.2.1, p.39
[5] HDR, Inc., *Export Pipeline Analysis Technical Memorandum #8,* March 31, 2022, Table 1 (ADF, PDF, and PHF peaking factors of 1.0, 1.5, and 2.0, respectively, extracted from mgd flow values presented).
[6] See California Government Code §56133
[7] Butte LAFCo letter by Executive Officer Steven Lucas, May 20, 2021
[8] *Ibid*.
[9] Tchobanoglous, G., et al, *Water Reuse, Technologies, and Applications,* McGraw Hill, 2007, Figure 12-17.
[10] Paradise Irrigation District 2015 Urban Water Management Plan, Table 4.3.
[11] Paradise Irrigation District 2015 Urban Water Management Plan, Table 6-A.
[12] Town of Paradise, City offices, in-person meeting, November29, 2021
[13] Assuming fully rebuilt and occupied Town
[14] Paradise Irrigation District 2020 Urban Water Management Plan, June 2021, Section 3.1.4, p.3-3
[15] Carollo, *Regionalization Planning Report for the Paradise Sewer Project*, Final, May 2020, Table 2.6
[16] HDR, Inc. *Regional Alternative Technical Memorandum #5*, December 1, 2020, Table 3
[17] HDR, Inc., Evaluation of Collection System, Technical Memorandum #3, Table 3
[18] HDR, Inc. *Regional Alternative Technical Memorandum #5*, December 1, 2020, Table 8
[19] See Results of the Indoor Residential Water Use Study
[20] Carollo, *Regionalization Planning Report for the Paradise Sewer Project*, Final, May 2020, Table 2.6

L11

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Email: richardharrimanattorney@gmail.com

August 30, 2022

SUBMITTED VIA EMAIL TRANSMISSION
mmattox@townofparadise.com

Marc Mattox
Department of Public Works
Town of Paradise
5555 Skyway
Paradise, CA 95969

Re: Town of Paradise Sewer Pipeline Project
Comments re Draft Program EIR (DPEIR)

Dear Mr.Mattox:

Thank you for granting my request for a one-day extension of time within which to submit the following Comments regarding the Draft Program EIR (DPEIR) for the above-referenced Project.

I am submitting the following comments regarding the above-referenced proposed project on behalf of myself, as a resident of the City of Chico and the County of Butte, a taxpayer and rate payer of the City of Chico and the County of Butte, and as a member of the Butte Environmental Council and in the public interest of other residents of the City of Chico and the County of Butte.

1. I join in the Comments submitted, by the Butte County Local Agency Formation Commission and the County of Butte, regarding the DPEIR.

2. I also join in the Comments submitted by Dana Ripley, regarding the DPEIR.

3. I am requesting that the Final PEIR include a copy of my letter comments, dated June 3, 2021, regarding the Notice of Preparation which were submitted on that date and that they be included in the Response to Comments on the DPEIR for the proposed sewer line project, including the article that I prepared which analyzes the public policy, legal, and environmental benefits to be gained by reconsidering the "Preferred Project."

4. The issues raised in my letter of June 3, 2021 have not been addressed, analyzed, or considered in the DPEIR and that they be analyzed and considered in the "Project Alternatives" section of the EIR prepared for the proposed project. The benefits for prevention of significant adverse environmental effects from recurrent wildfires on the Ridge that could be provided by the alternative recommended by Dana Ripley in his comments regarding the true "Preferred Alternative" were not considered in the previous Study relied upon in the DPEIR. The previous Study and Analysis needs to be updated in light of advantages of the locally owned and controlled specially engineered Treatment Facility on the Ridge. The reason for this request is that the previous analysis relied upon in the DPEIR was prepared before the Paradise Camp Fire and needs to be updated, due to the elevated risk of recurrent wildfire, which can be mitigated by the re-use of treated effluent to irrigate and enhance the defensive open space needed to protect new urban development in the Town of Paradise and in the County of Butte.

5. Although I have made this comment at public meetings regarding the proposed project, it should be noted that the DPEIR does not address, analyze, or consider the environmental, planning, and economic impacts of not requiring the preparation of the updated General Plans and Environmental Impact Reports for Town of Paradise and the City of Chico as part of the "Preferred Project" analysis, although the Butte County LAFCo has been requesting the Town of Paradise to do so, since 1985. The DEIR should require a Condition to require such updates to be prepared and approved, prior to the commencement of construction of the proposed project or as a condition of approval by LAFCo..

6. The Project Description is not stable, finite, and accurate. Draft Program EIR should be revised, amended, corrected, and re-circulated and the public comment period be re-opened and new public Scoping Meetings held by the lead agencies, including both the City of Chico and the Town of Paradise. The reason for require the requested action is that because the purported rationale for the proposed project [expedited redevelopment of the Town of Paradise] will not be achieved by the development and construction of the proposed project, as defined. In fact, the construction of the Project Alternative advocated by Civil Engineer Dana Ripley could be expedited and achieved much more rapidly than the construction of the "Preferred Alternative" recommended for adoption in the DPEIR.

7. The DPEIR fails to disclose, analyze, discuss and address the potential significant impacts to the environment which may occur, depending on what changes are made to the "Final Project" pursuant to the "Design Build" legislation adopted in AB 36 (Gallagher). The adoption of AB 36 by the State Legislature has rendered the DPEIR's analyses legally inadequate, because the proposed Preferred Alternative may bear little or no resemblance to the proposed Preferred Project Alternative, due to currently unknown changes made to the final design prior to and/or during construction of the project. Further, due to the preparation of a Draft "Program" EIR, the actual project may be significantly changed during construction by circumventing the project description in the Final PEIR through the use of multiple Project Addendums that do not require notice to the public or public review during the course of construction of the Final Project design, whatever it may be.

8. However, the most egregious legal inadequacy of the DPEIR is that it is barely readable and understandable, due to the lack of a Table of Contents and inadequate organization and disclosure of the Comments made during the Notice of Preparation process. The DPEIR glosses over the numerous comments and objections that were made in the Notice of Preparation process. Specifically, without having the Town General Plan updated since 1980, the changes in density requirements and other legislation that has been adopted by the State Legislature to provide for more dense residential dwelling units and reduction of Green House Gasses are barely even mentioned in the DPEIR, which results in accelerated "urban sprawl" within the Town's Sphere of Influence. Instead of focusing on dense multi-story and affordable multi-family housing in the Town's previously developed urban footprint, the "Preferred Alterative" supports and incentivizes accelerated inefficient sprawl in the Town and into the County's Jurisdiction.

9. Finally, the DPEIR's failure to adequately disclose, analyze, discuss, consider, and compare and contrast the expense of the Preferred Alternative to the more efficient and expandable specially engineered waste treatment facilities discussed in great length in the Comments submitted by Dana Ripley in his Comments and "White Paper" demonstrates the legal inadequacy of the DPEIR and the failure to proceed in the manner required by law, pursuant to Public Resources Code sections 21168 and 21168.5.

10 Please include this letter and Comments in the Record of Proceedings and include all of the Comments made regarding the Notice of Preparation previously relied upon by the public to review this very expensive and unnecessary public project in a Revised and Amended Draft EIR for the Preferred Project, instead of Program EIR for this vague, inadequately described, and expensive "Preferred Project". In addition, please remand the review of this proposed project back to the Public Works Department Staff for the preparation of an updated Project Review and Analysis, based on **current** water resource conditions and Wildland Urban Interface (WUI) environmental setting and background on the Town of Paradise, in the light of the Governor's Water Resiliency Portfolio and recently adopted Water Policy focusing on more efficient use of our water and energy resources. Finally, the Town of Paradise should be required to conduct the updated Study while contemporaneously updating the Town's General Plan,

11 Thank you for the opportunity to comment on the DPEIR. Please put me on your circulation list for the this Draft EIR and/or any changes in the process, including recirculation of a revised or amended NOP, Project Description, and/or revised or amended Draft EIR for this amorphous project. .

Very truly yours,

Richard L. Harriman

RICHARD L. HARRIMAN

cc: Steve Lucas, Butte LAFCo
Brad Stephens, County Counsel
Butte Environmental Council
Sierra Club of California
Smart Growth Advocates
RLH/hr

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June 3, 2021

SUBMITTED VIA WEBSITE
ccurtis@townofparadise.org

Collette Curtis, PIO
Town of Paradise
5555 Skyway
Paradise, CA 95969

Re: Town of Paradise Sewer Pipeline Project
Comments re Notice of Preparation of Project EIR

Dear Ms. Curtis:

I am submitting the following comments regarding the above-referenced proposed project on behalf of myself, as a resident of the City of Chico, a taxpayer and rate payer of the City of Chico, and on behalf of the Northern California Environmental Defense Center in the public interest of other residents of the City of Chico and the County of Butte.

1. I join in the comments, dated May 20, 2021, submitted by Stephen Lucas, the Executive Officer of the Butte County Local Agency Formation Commission. [A true copy is attached hereto and is incorporated by reference herein.

2. Attached please find a copy of an article that I prepared which analyzes the public policy, legal, and environmental benefits to be gained by re-considering the "Preferred Project," and request that the issues set forth therein be analyzed and considered in the "Project Alternatives" section of the EIR prepared for the proposed project, especially the benefits for prevention of significant adverse environmental effects from recurrent wildfires on the Ridge.

3. Although I have already made this comment at public meetings regarding the proposed project, I want to reiterate my request that the EIR analyze the environmental, planning, and economic impacts of not including the preparation of the updated General Plans and Environmental Impact Reports for Town of Paradise and the City of Chico as part of the "Preferred Project" analysis, because the proposed project will require such updates to be prepared and approved, prior to consideration of the proposed project or as a condition of approval by LAFCo.

4. The proposed Project Description is not stable, finite, and accurate, so that it is my request that the Notice of Preparation of the EIR be revised, amended, corrected, and re-circulated and the public comment period be re-opened and new public Scoping Meetings held by the lead agencies, including both the City of Chico and the Town of Paradise, because the purported rationale for the proposed project [expedited redevelopment of the Town of Paradise] will not be achieved by the development and construction of the proposed project, as defined.

5. The EIR should also disclose, analyze, discuss and address the potential significant impacts to the environment which may occur, depending on what changes are made to the final project under the "Design Build" legislation pursuant to AB 36 (Gallagher), if enacted by the State Legislature.

Thank you for the opportunity to comment on the Notice of Preparation of the EIR. Please put me on your circulation list for the Draft EIR and/or any changes in the process, including recirculation of a revised or amended NOP or Project Description.

Very truly yours,

RICHARD L. HARRIMAN
General Counsel
Northern California Environmental
Defense Center

cc: Clients

RLH/hr

Attachment 2

BUTTE LOCAL AGENCY FORMATION COMMISSION

1453 Downer Street, Suite C • Oroville, California 95965-4950
(530)538-7784 • Fax (530)538-2847 • www.buttelafco.org

May 20, 2021

Collette Curtis, Public Information Officer
Town of Paradise
5555 Skyway
Paradise, CA 95969

Submitted Via Website: ccurtis@townofparadise.org

Re: Town of Paradise Sewer Project – Notice of Preparation of Environmental Impact Report

Dear Ms. Curtis:

The Butte Local Agency Formation Commission (LAFCo) appreciates the opportunity to provide input for the Town of Paradise Sewer Project – Notice of Preparation of Environmental Impact Report that will support the proposed sewer line extension from the City of Chico Water Pollution Control Plant (WPCP) to the Town of Paradise. This will also require the approval of an extension of services application by LAFCo as the service extension is proposed to be outside of the City's jurisdictional and Sphere of Influence boundaries.

The primary concern of LAFCo as a responsible agency with permitting authority is to ensure that the Commission is regularly consulted by affected agencies to avoid the matter *being presented to the Commission for action after important decisions and milestones have been locked in.* It is our understanding that coordination with LAFCo is identified as a Phase 2 implementation issue under the Preparation of an Environmental Impact Report (EIR) covering the selected alternative.

LAFCO's Role

Government Code Section 56133(a)(b)(c) mandates that A city or district may provide new or extended services by contract or agreement outside its jurisdictional boundary **only if it first requests and receives written approval from the commission.** The commission may authorize a city or district to provide new or extended services outside its jurisdictional boundary outside its jurisdictional boundary and outside its sphere of influence to respond to an existing or impending threat to the health or safety of the public or the residents of the affected territory, if the entity applying for approval has provided the commission with documentation of a threat to the health and safety of the public or the affected residents.

The proposal for the City to extend its sewage collection and/or wastewater treatment facilities to the Town falls under the purview of Section 56133 and therefore, LAFCo. Should the sewer service extension be approved by LAFCo for the proposed sewer service area boundary identified by the Town, any future adjustments to that boundary or additional sewer connections will require the consent the City as the contracted provider and LAFCo as the approving authority for the service extension request.

Provisions for extension of service requests are found in Government Code §56133 and in Section 4.5 of the Commission Policies and Procedures. Service extensions outside of an agency's Sphere of Influence may only be approved by LAFCo if there is "an existing or impending threat to the health or safety of the public or the residents of the affected territory. (§56133(c))

Support Documents

The City/Town will need to provide documentation/justification of the existing or impending public health and safety threat the extension of services would address. This is a critical prerequisite to the project as it is the only legally permissible justification available to the LAFCo to approve a service extension request outside of an agency's (Chico) Sphere of Influence.

Additionally, the City will have to demonstrate how such an arrangement will not impact its current residents or its responsibility to serve the existing parcels within its jurisdictional boundaries/service area who are not currently sewered and utilize on-site septic systems. This would include the remaining approximately 3,000 parcels that are not currently connected to the City's sewer infrastructure but fall under are under the Chico Urban Area Nitrate Compliance Plan which calls for the termination of on-site septic systems as a contributor to ground water nitrate contamination. It is fundamentally critical that the City ensure that it retains adequate WCPP capacity for future service demands from it residents.

Along with a determination of capacity, LAFCo will also have to review the fiscal viability of the proposed extension, particularly the projected cost to Paradise residents of such service and the assurances that City residents do not in any way subsidize the proposed service.

EIR-NOP Observations/Comments:

1. **Project Description** - The proposed project for the purposes of the EIR, should be adequately described to include not only the sewer infrastructure analysis, but the necessary Extension of Services Application that is expected to be initiated by the City of Chico and considered for approval by LAFCo. It is vitally important to recognize that limiting the "project description" to only the sewer infrastructure project will make associated regulatory agency approvals such as LAFCo's more complicated. This raises the important question of just what type of governance is anticipated now by the Town and what type of governance oversight may be useful in the future such a special district or subsidiary district? For the EIR to be of the greatest value, it should consider all alternatives that may be desired now or in the future.

2 **Proposed Sewer Service Area** – The proposal describes the intended Sewer Service Area, which is limited primarily to the commercial and industrial land uses along Skyway, Pearson and Clark Roads. How would future sewer connection requests *within* the Town Sewer Service Area (not along the pipe to Chico) be addressed?

   There are small lot residential neighborhoods immediately adjacent to the proposed Town Sewer Service area. It seems reasonable based on early public comments to anticipate that landowners *contiguous* to the Town's Sewer Service Area/collection system with a developed use and failing septic system would desire to connect rather than repair an existing system. This is a different scenario from new development. Butte County Environmental Health Division regulations require a landowner with a failed septic system to connect to a public sewer if the access is within 250 feet of the affected parcel. How will additional requests for access to sewer services be addressed?

3. **Post Treatment (Recycled) Water** – The Town will be sending significant quantities of effluent to the City's WPCP, which will be treated, and under current conditions, discharged to the Sacramento River. Given the extreme focus on drought planning, the reuse of treated effluent is an ever more important source of scarce water supplies. At some point, the City of Chico may determine that moving to tertiary treatment and reusing this valuable resource is a priority. The question is: Who will retain the rights to treated water discharged from the Chico WPCP? Will the Town receive credit/compensation for its share of the treated effluent?

4. **WPCP Concerns** – How will the City and Town address future WPCP issues such as plant expansions, conversion to tertiary treatment and violations at the WPCP be addressed.

5. **Administration** - Who will provide overall administration of the proposed sewer extension to the Town? How will customer relations such as billing, maintenance, and new connections be accomplished?

6. **Governance Alternatives** – Should the sewer service extension be found unworkable, or if LAFCo cannot determine a legally supportable exemption from the requirements found in GC56133, what other alternatives would be considered (such as the creation of a separate subsidiary district to provide sewer service to both cities)? Such a reorganization would make 56133 no longer applicable, as the new district will have its own sphere.

7. **Growth Inducement** - Depending on the design capacity of the pipeline, its location, and its potential users, it is likely that additional development within the Town could become possible. Current on-site wastewater treatment systems greatly limit development potential. Once sewer becomes available, those growth limitations no longer apply. This analysis may be difficult to accurately assess given the age of the Town General Plan adopted in 1994. Ideally, the 1994 General Plan would be updated based on current conditions prior to estimating future sewerage flows. Additionally, other landowners outside the City boundaries in proximity to such a sewer line may request or expect that the development of those lands be permitted to utilize the new sewer line. The potential environmental impacts of such development needs to be analyzed in the EIR unless a firm prohibition on such connections is included in the project, if not, LAFCo may consider conditions of approval that would restrict access to the sewer line to parcels only within the Town's defined sewer service area.

8. **Chico Urban Area Nitrate Compliance Plan** – The Nitrate Compliance Plan was adopted in 2000 as a result of the Central Valley Regional Water Quality Control Board Prohibition Orders No. 90-126 and 905-024 which addressed the nitrate contamination in the groundwater linked to on-site septic systems in the Chico Urban Area. The orders called for existing septic systems be discontinued and connections to the City sewer system be required. Much effort and resources were spent on this program and the City has installed significant new sewage collection infrastructure over the past decade to allow all affected parcels to connect. How will the City ensure that the WPCP maintains/reserves the capacity to accommodate these remaining approximately 3,000 uses on septic systems?

9. **Increased Exposure to Severe Fire Hazard.** Development of the project is intended to encourage the growth and redevelopment of the Town of Paradise. While this has many desirable benefits, the EIR cannot ignore the serious adverse fire risk impact of the project. As the fire demonstrated, Paradise is clearly located in a severe fire zone with limited access for evacuation. Encouraging redevelopment and growth in that area will inevitably result in increased exposure of the new structures and residents to the severe fire risk. This impact is

likely to be significant over the long run. It must be analyzed and mitigation measures explored to mitigate the risk. For example, is an additional evacuation route feasible?

LAFCo is eager to be cooperative partner in the effort to bring sewer service to the Town as the project is likely to greatly assist the Town to address a serious long-term problem and augment the Town's ability to rebuild a sustainable and viable commercial district. However, we are all bound to comply with the law, even where it may hinder achievement of a desirable objective. We look forward to working with the City and Town and its partners in development of this proposal in order to determine if a legally permissible path forward can be found for LAFCo to approve the extension of services. Please do not hesitate to contact me should you have any questions

Sincerely,

Steve Lucas

Stephen Lucas
Executive Officer

cc: LAFCO

URBAN WATER CONSERVATION: ANOTHER ALTERNATIVE

By Richard L. Harriman*

The recent coordinated "roll out" of the proposed Paradise Sewage Pipeline to the City of Chico's waste water treatment facility on River Road calls for a renewed focus on "improved urban water conservation" referred to by Lester Snow, a well-respected former member of Governor Jerry Brown's administration in 2015.

California statutes mandate re-use of tertiary *treated* wastewater by urban communities within their jurisdictions. Re-use of tertiary treated wastewater from de-centralized treatment facilities for purposes that do not require potable water is defined as a "beneficial use" of water.

Civil engineering consultants have the knowledge, technology, and experience necessary to design and construct specially engineered tertiary wastewater treatment systems to serve new development or retro-fit infill development. If implemented, this technology can reduce the demand for potable urban water *by almost 90%*. Currently, facilities have been permitted by the Central Valley Regional Water Quality Control Board and are successfully operating in the cities of Fresno, Clovis, and in Madera County (and, also, in Monterey County).

Similarly, financing for de-centralized tertiary wastewater systems is available. Community Facility District (CFD) financing for public police, fire safety services, and infrastructure for public utilities is commonly utilized throughout the state. Public finance consultants are familiar with this financing; and, following the repeal of redevelopment agency statutes, other new financing options were created and are available for new systems.

The financial and environmental benefits of specially engineered de-centralized community wastewater treatment facilities are numerous. First, using small-scale wastewater treatment systems allows a local government to avoid excess treatment capacity and debt service for treatment facilities that are *over-sized* to anticipate future growth. Second, the use of small-scale community wastewater treatment facilities avoids having to *speculate* about the rate of future growth and allows the local governments to respond more accurately to *real growth*, rather than to speculate on the rate of *future* growth during *uncertain* future market conditions.

The failure to use small-scale wastewater facilities imposes an unnecessary burden on the existing local taxpayers and water users. Currently, they pay for excess unused capacity that does not benefit these rate payers---who do *not need it, and may never use it.* Using tertiary treated

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wastewater from small-scale de-centralized facilities avoids the cost of having to construct and operate additional unnecessary water conveyance facilities to *return the tertiary treated waste water* to the users for re-use on site, sell it to agricultural users, or discharge for in-stream uses.

Finally, the environmental benefits of small-scale wastewater treatment facilities include re-use of urban tertiary treated wastewater closer to the original user, as required by Water Code section 53353, which will reduce the total amount of groundwater used. Second, the use of this technology allows local governments to "fine tune" the rate and amount of new growth planned for the local community. Third, these systems may be used for both new development and retro-fitting in-fill growth, without expanding or surcharging the existing centralized wastewater treatment facilities. Fourth, charging the residents of the new growth and/or infill development for the cost of their own wastewater treatment facilities and operating expenses will make these residents more aware of their own water use, so they may reduce their use of potable water supplies as much as possible. Fifth, the re-use of recycled water from such facilities will reduce demand *per capita* on groundwater supplies for potable water and the cost of water for non-potable uses.

Therefore, the current paradigm of hugely expensive "design-build" large-scale centralized wastewater treatment facilities and conveyance systems should be re-examined in the light of currently available wastewater treatment technology, solar energy systems, and financing. Governor Newsom's administration should aggressively pursue "improved urban conservation" by permitting local agencies and developers to use state-of-the-art small-scale de-centralized tertiary wastewater systems for new development. This alternative can be implemented quickly and expedited by updating local general plans, general plan implementation action plans, and Subdivision Map conditions of approval. If adopted, this strategy will: 1) reduce costs for both developers and local rate payers; 2) reduce energy costs, 3) protect and enhance environmental resources; and 4) implement the mandatory "beneficial use" of recycled tertiary treated wastewater. In light of the fact that the stated Project Description is focused on the expedited re-development of the Town of Paradise and other unincorporated communities on the Ridge, the enormous cost of the proposed project, the 5-10 year time frame identified by the project consultants for the completion of the "Preferred" project, and the potential ability of recycled waste water to be used for fire control and irrigated defensible space require a re-

examination of the de-centralized specially engineered waste water treatment facilities for this project.

*Mr. Harriman is an environmental and land use attorney in Chico, who has practiced in the Central Valley for over 45 years and is a member of the Butte County Water Commission.

Gmail Richard Harriiman <richardharrimanattorney@gmail.com>

Re: Paradise Pipeline Project; Comments re Notice of Preparation/Scoping of EIR

5 messages

Richard Harriman <richardharrimanattorney@gmail.com> Fri, Jun 4, 2021 at 12:46 PM
To: rsilva@chicoer.com
Cc: Mike Wolcott <mwolcott@chicoer.com>, Natalie Hanson <nhanson@chicoer.com>
Bcc: Debra Lucero <debra@debralucero.us>, tkimmelshue@buttecounty.net, tamiritter2012@gmail.com, Dana Ripley <dana@ripleypacific.com>, aimee@planinmotion.com, Richard Harriiman <richardharrimanattorney@gmail.com>

Dear Rick:

Since I know that you are the direct contact for the Paradise Post and the Town of Paradise community,
I am reaching out to you toward the end that you and I might have a telephone conversation
regarding this project.

The purpose of my request is to communicate that my clients and others in Chico and the County want you,
the Town of Paradise (TOP) City Council, the Ridge community in the County, and the development community
to know and understand that my clients and other members of the Chico and Butte County community support the
expedited redevelopment of Paradise and the unincorporated community on the Ridge.

I would like to share with you the basis for our position that the quickest, most efficient,and most cost-effective
way to jump start and fast-track the redevelopment of Paradise and the Ridge and to protect the reconstructed
community on the Ridge from future wildfire events and damage to life and property is by the use of de-centralized
specially engineered and designed wastewater treatment facilities on the Ridge and to retain the treated/recyled
water and re-use it on the Ridge for non-potable uses, such as the creation and maintenance of green/defensible
open space to protect hardened structures buffered by defensible open space. Also, I would like to have an
opportunity to discuss why the TOP should initiate the update of its General Plan, including the Transportation/

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Circulation/Infrastructure Element which will be required before the sewer pipeline can be approved and
constructed.

We are asking you to reconsider the option originally considered and, then, rejected by the Town Council,
because of the amount of time and the huge expense of constucting and maintaining the proposed sewer
pipeline project---and the fact that the proposed pipeline will NOT come on line for at least 5-10 years,
as estimated by the project consultants in an open meeting.

Please let me know when it would be a good time for you to discuss with you on the phone after
Mike returns to the office.

Thank you for your time and consideration of this request. If you have any questions, please
contact me at my office phone or cell phone or text me (24/7) Hope you have a great warm summer
weekend.

Respectfully yours,

Richard Harriman
Telephone: 530) 343-1386
Cell/text: (559) 999-7953

FedEx Scan 2021-06-03_17-00-50.pdf
1690K

Mail Delivery Subsystem <mailer-daemon@googlemail.com> Fri, Jun 4, 2021 at 12:46 PM
To: richardharrimanattorney@gmail.com

Address not found

Your message wasn't delivered to **rsilva@chicoer.com**
because the address couldn't be found, or is unable to receive

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From: Kalaskar, Tanya
To: richardharrimanattorney@gmail.com
Subject: Paradise Sewer Project Draft PEIR is Available!
Date: Thursday, July 14, 2022 2:45:00 PM
Attachments: Paradise Sewer Project_Notice of Availability.pdf

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Hi,

Please find attached the notice for the release of the Paradise Sewer Project Draft Program Environmental Impact Report (PEIR). The Draft PEIR is available at the following websites: Town of Paradise or Town of Paradise Sewer Project. Refer to the attached notice for information about document availability, public review period, submitting comments, and public meetings. Please reach out to me at tanya.kalaskar@hdrinc.com if you have trouble accessing the attached notice.

Thank you,
Tanya

Tanya Kalaskar
Environmental Planner

HDR
100 Pringle Avenue, Suite 400
Walnut Creek, CA 94596
D 925.974.2652 **M** 213.477.3824
Tanya.Kalaskar@hdrinc.com

hdrinc.com/follow-us

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Jul 17, 2022	W1/1	Alice	Patterson	Good morning-- I am inquiring for my partner, who lost his home in the fire... How do I find out if his property would be affected by an Easement should this sewer project be approved? This could impact how/when he rebuilds. Property address is 5975 N. Libby. Is there a list of locations where the easements would be going? Thank you. Alice
Jul 25, 2022	W2/1	Linda	Barton	I am about to choose a builder to finally rebuild in Paradise. At this moment, it appears the sewer project for Paradise will help those businesses on Skyway. Which means 99%+ of the residents won't benefit from this undertaking. Who is going to pay for this very expensive but necessary project? I am not interested in seeing it listed when I get my property tax bill.
Jul 28, 2022	W3/1	Kat	Carlisle	Hello, Can you tell me when the final design and right of way acquisition phases will begin for the Paradise Sewer Project please? I saw on the project schedule that these phases are anticipated to begin in Summer 2022, but I wasn't sure if that meant they have already started or not. Thank you!
Aug 1, 2022	W4/1	Earl	Eckert	Will the agreement with Chico permit all pumped septic loads to be disposed of in paradise rather than continuing to be disposed of at the County land fill lagoon. Own property at 2199 De Mille Rd.
Aug 2, 2022	W5/1	Pam	Galloway	I think it is a stupid waste of money that could be used for a different project. The cost of the project, the amount of time necessary to complete the sewer project and the number of people who would benefit from it should make it a non starter.

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Aug 3, 2022	W6/7	brian		Questions of concern from a 29 year licensed wastewater career in California: 1) Who will handle the collection system and pump stations daily operations? 2) What type(s) of odor control systems will be used? And projected annual cost? 3) Where will biosolids and sewage debris be removed to? 4) How many full time employees will be hired to operate and maintain Paradise Wastewater Collection and Transportation? 5) Under what jurisdiction/license will Paradise Wastewater be in compliance with State Water Resources Control Board? 6) What city department will oversee Paradise wastewater operations? Yours, Brian Anderson
Aug 5, 2022	W7/1	Ivan	Garcia	Good luck on the project. Would like to encourage and support the paving of a multi-use path on top of your sewer line with the ability to connect this new path to the intersection of Honey run/Skyway near Skyway golf park on the west and to the Paradise Memorial Trail in Paradise. I would suggest paving so that you can send emergency equipment up the hill to fully utilize the Skyway for emergency evacuations. Thank you.
Aug 5, 2022	W8/1	Joe	Rees	Hi, As natural disasters increase in frequency and severity, climate change is becoming harder and harder to ignore. The rise in these disasters along with an overall growing sense of crisis when it comes to the environment is causing an increase in climate anxiety. In fact, a recent Yale survey ound that 70 percent of Americans are now “very or somewhat worried about global warming.” I thought this would be an interesting topic to cover in a guest article for your website. I would address the increase in climate anxiety and what your site visitors can do to relieve their stress while also helping the environment. What do you think? Thanks so much for your time, Joe Rees joe@catastrophes.info

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Aug 8, 2022	W9/4	Rick	Hoddinott	1. Along the proposed alignment for the export pipeline on Entler Avenue, what is the pipe constructed of and where will it be located along the roadway? 2. How will the project address nearby wells which may be located near the proposed alignment? 3. Was the old railroad (Old Sacramento Northern) right of way considered for the pipe alignment in lieu of Entler Avenue? 4. During construction, how will the project address temporary traffic control along Entler Avenue, considering CHP uses the roadway as direct access.
Aug 10, 2022	W10/1	Ronald	Lassonde	I am very impressed with the due diligence that the Paradise Town Staff has put into the Sewer EIR. The Sewer is absolutely necessary for businesses to rebuild in our Down Town. A rebuilt Down Town is critical to the overall recovery of our town. We need the PEIR approved as soon as possible so we can move forward and rebuild our Town
Aug 10, 2022	W11/1	Mandi	McKa7	Hello- Chico Velo supports the Town of Paradise and the Sewer Project and encourages the project or project sponsor to include the paving of a multi-use path for bicycles and pedestrians on top of the proposed project. Currently, Skyway is not a safe route for bicyclists or pedestrians traveling to or from Paradise. This project provides a unique opportunity to solve dual challenges of meeting the need for wastewater infrastructure and also providing a safer, more direct route between Chico and Paradise for bicyclists and pedestrians. If the new multi-use path followed the sewer line all the way to Southgate Lane on the East side of Hwy 99, it would connect users to the existing Midway bike path on the West side of 99. Additionally, a multi-use path could enable emergency equipment to drive up the path and allow Skyway to be fully utilized as an emergency evacuation route. Thank you for the consideration- please let us know if you have questions or if Chico Velo can provide additional support. Thank you.
Aug 11, 2022	W12/1	Andrew	D'Lugos	Currently, Skyway is not a safe route for bicyclists or pedestrians traveling to or from Paradise. This project provides a unique opportunity to solve dual challenges of meeting the need for wastewater infrastructure and also providing a safer, more direct route between Chico and Paradise for bicyclists and pedestrians. I fully support the plan of paving a multi-use path for bicyclists and pedestrians.

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Aug 11, 2022	W13/1	Kirk	Monfort	This would be a great opportunity to build a bike path to Paradise that would tie into the current Paradise Bike Path that goes from the Paradise Park up through Magalia. We be never had a link from Chico to that Bike path although the right of way has been preserved from the Midway by Hagen Lane. It would also provide for service and inspection of the eventual sewer line. A Dual Use facility. There might also be transportation dollars available to do this.
Aug 15, 2022	W14/1	Richard	Stone	JUST PAVED ALL OF SKYWAY, IT'S REALLY A NICE ROAD. I HOPE THAT THE NEW ROAD WILL NOT BE DUG UP FOR THE SEWER PIPE AND JUST PATCHED UP TO LOOK LIKE CRAP AS THE UNDERGROUND PGE SUB COMPANYS HAVE DONE IN TOWN. SHOULD HAVE WAITED ON THE PAVING UNTILL THE SEWER WAS PUT IN. THEN PAVE THE SKYWAY.
Aug 16, 2022	W15/1	Joseph	Mount	I was informed that the treatment plant had treated water they wanted move . Would you please send me any test result on the treated water . Thank You Web site OkaVate.com
Aug 22, 2022	W16/6	brian	anderson	I have not read in the reporting the following: 1)What agency will have jurisdiction to provide collection services within the Town of Paradise? 2) Who holds the license to operate wastewater services within Paradise jurisdiction? 3)Who will maintain and operate the pump stations ? 4)What methods of odor control will be employed at each pump station, wet well and other areas where wastewater may come in contact with atmosphere? As a retired SWRCB licensed WWTP operator of 29 years in the Bay Area the question above are very relevant. Odor mitigation is of critical importance to our community. 24 hour response to spills and overflows is critical. An 18 mile pipeline with about a 1500 ft elevation loss, gravity flow management is critical and demands highly skilled personnel.

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Aug 22, 2022	W17/8	Steven	Cismowski	I am writing in opposition to the proposed Paradise Sewer Project. Given the increase of ground water concerns in the north state, coupled with the impacts the current and projected drought cycle is having on our groundwater resources, this project is perilously flawed. In my review of the PEIR, I could not find any information addressing the following items: 1) Information is needed regarding the projected increase in size of the current Chico Wastewater Treatment Plant in order to accommodate this increase in treatment. Keeping in mind Chico's current growth-rate and several other LARGE development projects that will also increase demand on this facility - Valley's Edge and Barber Yard, this facility will need to expand, but to what extent? 2) Information and analysis are needed to fully understand the impacts of removing the equivalent of 1/8th of Big Chico Creek's average annual flow out of the current hydrological cycle based on projected peak flow at sewer build out. The long-term impacts of effectively pumping that much water out of the hydrological cycle helping feed local aquifers and creeks (chiefly, Butte Creek, the last viable salmon run off the Delta river system) is unconscionable. Paradise, pre-Camp Fire, was renowned for its forest, largely of Ponderosa pine, growing at lower altitudes than commonly encountered. The additional ground water these trees received from leach lines, not to mention additional nutrients, helped support this rich forest. Taking that life support away will certainly forever change the forest of Paradise's future canopy. Property owners wishing to replicate that forest will need to pump even more ground water to use in their landscapes further exacerbating the drying of downstream aquifers. 3) The proposed path crosses three surface flow creeks (Butte, Comanche and Little Chico) that countless wildlife (and residents) relies on for sustenance and recreation. While the current engineered solution for these crossings may provide sufficient cover, over time, erosion will continue to drop current creek elevations eventually exposing these lines making them vulnerable to damage and leakage.

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
				4) The system will require frequent clean out and regular servicing in order to remain functional. To fail to do so could result in calamitous disaster and contamination of numerous entities (rivers, creeks, farmland, etc.). Encumbering future municipal operations with this laborious task over such a long pipeline will certainly result in failure and/or increased costs to the consumer. There is simply no way to guarantee that funding for this team of pipeline workers and equipment will be sustainable. 5) Paradise's septic waste system served to provide a governor to check unbridled growth. Removing that check, will certainly further increase Paradise's growth potential resulting in an escalating list of long-term impacts for future Butte County residents. The increase growth potential will make future fire suppression impossible, trigger roadway expansion, increase sprawl and further tax our limited natural resources, most acutely, our water resources. This country has a rich history of failed environmental engineered solutions to current challenges. Measures like this start out seemingly a "good idea at the time" only to create unforeseen impacts for future generations to solve. I encourage you to reconsider grandfathering in previous property-owner's septic systems to allow our neighbors who have suffered so much to return to their homes and preserve the future of Paradise by ensuring large developers a toehold to urbanize our beloved mountain communities.
Aug 22, 2022	W18/1	Ryan	Duncanwood	ITS GOOD
Aug 22, 2022	W19/1	Bud	Linggi	I lived behind the Optimo Lodge from o/a 1948 until I went into the Service, 1960. Of course, along the way of those years, my dad went to Chico, down Neal Road, for the Crocker Bank and I might have accompanied him and used a restroom after he made the deposit. By this time, local dogs wiped out our chickens and after the Crocker Bank, we went to a Chico outfit that gave us the number of cleaned chickens we needed. The following week our destination was some place in Oroville for the steaks we needed for the next week, a long trip down Clark Road was used. So when talk of sewers for Paradise comes up, I remember the leech fields where I got my fishing worms... Bud
Aug 22, 2022	W20/1	Diane	Pajouh	I would like to request that we do not damage our new Skyway Roads that have just been installed/updated. Thank You.
Aug 22, 2022	W21/1	Mike	Petersen	Has the town looked into putting turbines inside the 18 mile pipeline to generate electricity? I believe this has been done in other cities and might give Paradise a chance to control our own energy independence.
Aug 22, 2022	W22/1	Michael	Schwartz	Not the best idea they have. For too many reasons. I vote no.

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Aug 22, 2022	W23/4	Gary	Wolt	What policy is in place to control cost increases in the future? Will the town of Paradise be subsidizing Chico's wastewater system , with no control on whatever increase they want or need. The ability to justify any price increase seems to be a normal phenomena. Are they incorporating Any valving in the design for emergency use in the event that the pipeline or Chico's waste water facility experiences a catastrophic failure? Would valving be in place to allow Paradise to construct there own wastewater facility, or have a load out facility at a future point in time?
Aug 23, 2022	W24/1	Matthew	Carlson	I support the sewer project and along with it believe a multi use path would be an invaluable asset to the community. It would encourage community health and growth. Paradise lacks safe routes currently so this is needed.
Aug 23, 2022	W25/1	Tony	Catalano	Please include a bike lane!
Aug 23, 2022	W26/1	Rob	Williams	Caltrans funded a bike riding tourism study and our Final Report identified several Signature Bikeway Routes ie East Bay Mud Pipeline. The report has an economic analysis of adding bike/walking paths to a local economy. See, BikeValleytoSierra.com
Aug 24, 2022	W27/1	Kevin	Baxter	I would like to mention my support for the addition of a multi use path along the Skyway during construction of the sewer line. This path would be of historic interest as it would continue the "line" used by trains in the past as well as provide a safer route for non motorized travel to and from Paradise via the Skyway. The path would also be a viable option as an alternative route for emergency vehicles or as an additional route of evacuation, should the need arise. Thank you in advance. Kevin Baxter
Aug 24, 2022	W28/1	Steve	DePue	It would be an ideal time to put in a wide paved bike trail up to Paradise on the skyway corridor. You could also put in fiber optical cable for internet use along the same right of way with the sewer project. Take advantage of multiple uses for the construction project on the sewer system. Also, the paved bike path provides superior access to the fiber optical cable and sewer lines when repairs or access is needed. Perhaps power could also be delivered from the Chico area to Paradise in an underground line rather than on poles! Planning makes for a better future!
Aug 24, 2022	W29/1	Andrew	Keller	I support the project and encourage the project to include a multi use paved path for bikes and pedestrians on top of the sewer project. Such a path could be used by emergency equipment to drive up the hill even while Skyway itself is functioning as a one-way downhill evacuation route. This is a great opportunity to also include new regional multi-use non-motorized path to connect Chico and Paradise from the intersection at Honey Run and Skyway to the Paradise Memorial Path
Aug 24, 2022	W30/1	William	Llamas	Seems the Draft PEIR a done deal? So confusing. We need a more comprehensive review other than a commission and/or Board. A citywide meet up for face to face speaking is necessary. And are there any ideas on building UP in downtown. Apartment buildings may be most suitable for many residents. What about beautification projects with help of citizens? So many ideas and no leadership. Time is a wasting and we should have already planted thousands of trees.

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Aug 24, 2022	W31/1	Bruce	McLean	I live along the Little Chico Creek bike path and have cycled to Paradise up the Skyway at least once a month over the last 7 yrs. It was very disappointing not to see a dedicated two-way bike path installed when PG&E put their electrical infrastructure underground. Then it was extremely disappointing when a dedicated bike path was not installed when the Skyway was recently paved. Let's not strike out by not creating a dedicated bike path when the sever line is extended from Paradise to Chico.
Aug 24, 2022	W32/1	Jeri	Valdez	I decline the project in it's entirety! If it does not service ALL main roads as well as the WHOLE community. What is the point? Makes no sense at all.
Aug 25, 2022	W33/1	Kevin	Cook	I support the project and encourage the project to include a multi use paved path for bikes and pedestrians on top of the sewer project. This path could be used by emergency equipment to drive up the hill even while Skyway itself is functioning as a one-way downhill evacuation route. This is a great opportunity to also include new regional multi-use non-motorized path to connect Chico and Paradise from the intersection at Honey Run and Skyway to the Paradise Memorial Path. I am an avid local cycler and this would only encourage more cyclists to come visit and recreate in our community.
Aug 25, 2022	W34/1	Kim	Hunter	I am preparing comments on behalf of the Butte County Public Works Department. Is there an email address that can be used to send comments on Monday? Thank you, Kim Hunter, Project Manager Land Development Division Butte County Public Works Department
Aug 25, 2022	W35/1	Monica	Zukrow	I support the project and encourage the project to include a multi use paved path for bikes and pedestrians on top of the sewer project. Such a path could be used by emergency equipment to drive up the hill even while Skyway itself is functioning as a one-way downhill evacuation route. This is a great opportunity to also include new regional multi-use non-motorized path to connect Chico and Paradise from the intersection at Honey Run and Skyway to the Paradise Memorial Path. Thanks for your consideration!
Aug 26, 2022	W36/2	David	Copp	It seems as though the Draft PEIR has been reasonably well considered. We will never know all of the impacts in advance, but the benefits of the project seem to outweigh the impacts, and it needs to progress.
Aug 26, 2022	W36/2	David	Copp	We think the sewer coverage area should be expanded. We have a multifamily property at 5830 Greenthumb Lane, which is just outside of the coverage area, even though it covers the area essentially across the street (Elliott Rd). We would like to have our property included, please. Thank you
Aug 26, 2022	W37/1	Maurine	Hansen	I just finished paying off a $22,000.00 hookup bill in another address. We were not in the zone to be on the first to hook up from septic, to sewer, so were required to wait. We were not able to hook up, but years later we were required to and the price hugely increased. We were told the cost would be even more if we didnt do it "now". I now live in a zone that is not part of the first hook ups. Does that mean another huge financial cost to me, in the future?

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
Aug 28, 2022	W38/1	Roger	Cole	The proposal to hook Paradises new sewer system to an expanded Chico sewer water treatment system at the Sacramento River sounds good at first. It saves money and utilizes efficiently excess capacity of said water treatment facility. It also simplifies Paradise's process into a pipeline construction project. However, as we all have noted from the years of the long ongoing drought, the foothills need every drop of water they can get and /or save or reuse. This plan will export millions of gallons of water from Paradise, and therefore is not good. Instead the wastewater should be treated and returned as close as possible and feasible to the water area it comes from. The single best feature of the existing septic tank/reach line system has been retention of treated wastewater in the ecosystem. A similar goal can be accomplished by constructing a primary sewage treatment plant in Paradise followed by a final treatment in a constructed wetland polishing system. This will produce many local benefits. After the wetland the water can flow to another reservoir location or allowed to be absorbed into the ground or flow through a stream, other kind of recharge. The benefits of retaining water cannot be overestimated. Streams with added wastewater-effluent can improve water quality and support water re-use, while creating habitat and providing urban amenities The Cost–benefit analyses of stream-flow augmentation projects many times fail to account for the full value of ecosystem services provided, including renewed habitats and enhanced urban amenities. Sincerely, Roger Cole, Forest Ranch, CA

Submission Date	Letter Number/ # Comments	First Name	Last Name	Comment
				References: Constructed Treatment Wetlands (PDF) Phoenix Arizona Constructed wetland Project (EPA) In 1990, city managers in Phoenix, Arizona, needed to improve the performance of the 91st Avenue Wastewater Treatment Plant to meet new water quality standards issued by the Arizona Department of Environmental Quality. After learning that upgrading their treatment plant might cost as much as $635 million, the managers started to look for a more cost-effective way to polish the treatment plant's wastewater discharge into the Salt River. A preliminary study suggested that the city consider a constructed wetland system that would polish effluent, while supporting high-quality wetland habitat for migratory waterfowl and shorebirds, including endangered species, and protecting downstream residents from flooding at a lower cost than retrofitting their existing treatment plant. As a result, the 12-acre Tres Rios Demonstration Project began in 1993 with assistance from the U.S. Army Corps of Engineers, the Bureau of Reclamation and EPA's Environmental Technology Initiative and now receives about two million gallons of effluent per day. The demonstration project was so successful that the city and the Bureau of Reclamation asked EPA for help in expanding the project to a full-scale, 800-acre project. For more information on the Tres Rios Constructed Wetlands Project, visit, http://phoenix.gov/TRESRIOS/ Constructed Wetlands: Using Human Ingenuity, Natural Processes to Treat Water, Build Habitat March, 1997, Joe Gelt, Water Resources Research Center (WRRC), Pub. Arroyo, vol. 9, no. 4, Water Resources Research Center, Tucson, AZ, March, 1997 EPA Document: Guiding principles for siting, design, construction, operation, maintenance and monitoring of constructed treatment wetlands http://nepis.epa.gov/Exe/ZyPDF.cgi/2000536S.PDF?Dockey=2000536S.PDF STATE OF CALIFORNIA- REGIONAL WATER QUALITY CONTROL BOARD STAFF SUMMARY REPORT (Jessica Watkins) MEETING DATE: April 12, 2017 City of Pacifica, Calera Creek Water Recycling Plant and Wastewater Collection System, Pacifica, San Mateo County – Reissuance of NPDES Permit January 2012 – Permit reissued Wastewater-effluent-dominated streams as ecosystem-management tools in a drier climate Front Ecol Environ 2015; 13(9): 477–485, doi:10.1890/150038 Richard G Luthy1,2*, ET al., Summarized As the water requirements of human populations increase and stream flows diminish in water-stressed regions, the base flows of urban streams are becoming increasingly dependent on wastewater Ecosystem services in wastewater-effluent-dominated streams can improve water quality and support water re-use, while creating habitat and providing urban amenities Cost–benefit analyses of stream-flow augmentation projects often fail to account for the full value of ecosystem services provided, including renewed habitats and enhanced urban amenities
Aug 30, 2022	W39/1	Dannette	Barefield	I support the pier project
Aug 30, 2022	W40/1	Patty	Wilson	I only wanted to know how the sewer was going down the hill. After repaving the skyway, I would hope you would not have to dig it back up. I can not see where the town plans on digging.

Print Form

Notice of Determination

Appendix D

To:

☒ Office of Planning and Research

U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Rm 113, Sacramento, CA 95814

☒ County Clerk
County of: Butte
Address: 155 Nelson Avenue, Oroville, CA 95965

From:

Public Agency: Town of Paradise
Address: 5555 Skyway, Paradise, CA 95969

Contact: Marc Mattox
Phone: 530-872-6291

Lead Agency (if different from above):

Address:

Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2021050008

Project Title: Paradise Sewer Project

Project Applicant: Town of Paradise

Project Location (include county): Paradise, Chico, and Butte County

Project Description:

The Town of Paradise is proposing to construct, operate, and maintain a new sewer collection system within the Town limits that includes an 18-mile export pipeline from the Town to the Chico Wastewater Pollution Control Plant. The Proposed Project would consist of three primary components: Core Collection System, Export Pipeline System, and Extended Collection System.

This is to advise that the Town of Paradise (☒ Lead Agency or ☐ Responsible Agency) has approved the above

described project on November 7,2022 (date) and has made the following determinations regarding the above described project.

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☒ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

Town of Paradise, 5555 Skyway, Paradise, CA 95969

Signature (Public Agency): _____ Title: _____

Date: _____ Date Received for filing at OPR: _____

1782

Revised 2011

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Town of Paradise

Council Agenda Summary **Agenda Item: 6(a)**

Date: November 7, 2022

ORIGINATED BY:	Ashley Stanley, Engineering Division Manager
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	Paradise Sewer Project Division of Financial Assistance Authorizing Resolution for Funding Applications
LONG TERM RECOVERY PLAN:	Yes, Tier 1 "Sewer"

COUNCIL ACTION REQUESTED:

1. Consider adopting Resolution No. 2022-__, A Resolution of the Town Council of the Town of Paradise Authorizing A Financial Assistance Application To The State Water Resources Control Board For The Paradise Sewer Project And Designating The Town Manager Or Designee To Sign And Submit The Application

Background:
Since its incorporation in 1979, the Town has sought a formal wastewater treatment solution for the community, with service for commercial and densely populated residential areas being a priority. Failed and failing septic systems create public health and environmental concerns and have limited economic growth. Prior to the Camp Fire, which almost completely destroyed the town in 2018, Paradise was the largest unsewered community in California. The Town has prepared numerous studies to address its need for a centralized wastewater treatment solution, and in its most recent study, the Town identified a proposed sewer service area. The proposed sewer service area includes the Town's commercial corridors, and as described in the 2017 feasibility study, it represented the area that had the most septic systems that had failed or were projected to fail by 2022.

The Proposed Project would consist of three primary components: Core Collection System, Export Pipeline System, and Extended Collection System. The Core Collection System would support the centralized businesses and housing in Town, including approximately 1,500 parcels along the Skyway, Clark Road, and Pearson Road corridors. The proposed Export Pipeline System would start at the southern end of the Core Collection System as a gravity sewer line and would continue southwest approximately 18 miles to the City of Chico for connection to the Chico Water Pollution Control Plant. Other than the Town of Paradise flow, no other connections will be allowed to the export pipeline. The Extended Collection System would be an extension of the Core Collection System that would allow collection of sewage from parcels outside the Core Collection System, but within the Town limits.

The Town of Paradise is seeking construction funding concurrently to related environmental review procedures to maintain readiness

Analysis:

The Budget Act of 2021 (Senate Bill 129 and Senate Bill 170) appropriated $1.55 billion to the State Water Resources Control Board (SWRCB) in item 3940-106-0001 (the Infrastructure Appropriation). The budget bill specifies that $650 million (M) is for wastewater projects, with priority given to septic-to-sewer conversions.

The Town of Paradise is working with the State Water Resources Control Board to maximize potential funding which could contribute to the construction of the Paradise Sewer Project.

As a component of the application process for this funding opportunity, the Town is required to adopt a resolution designating authority to sign and submit the application.

Financial Impact:

There are no financial impacts associated with this specific action requested. Project funding is addressed separately through various Council Actions and various funding sources.

TOWN OF PARADISE
RESOLUTION NO. 2022-

A RESOLUTION AUTHORIZING A FINANCIAL ASSISTANCE APPLICATION TO THE STATE WATER RESOURCES CONTROL BOARD FOR THE PARADISE SEWER PROJECT AND DESIGNATING THE TOWN MANAGER OR DESIGNEE TO SIGN AND SUBMIT THE APPLICATION

WHEREAS, the Town desires to finance the costs of constructing and/or reconstructing certain public facilities and improvements relating to its wastewater system, including the **Paradise Sewer Project** ("Project"); and

WHEREAS, the Town intends to finance the construction and/or reconstruction of the Project or portions of the Project with moneys ("Project Funds") provided by the State of California, acting by and through the State Water Resources Control Board ("State Water Board"); and

WHEREAS, the State Water Board may fund the Project Funds with proceeds from the sale of obligations, the interest upon which is excluded from gross income for federal income tax purposes (the "Obligations"); and

WHEREAS, prior to either the issuance of the Obligations or the approval by the State Water Board of the Project Funds, the Town desires to incur certain capital expenditures (the "Expenditures") with respect to the Project from available moneys of the Town.

NOW, THEREFORE, BE IT resolved by the Town Council of the Town of Paradise, as follows that:

1. The above recitals are true and correct.
2. The TOWN MANAGER ("Authorized Representative") or designee is hereby authorized and directed to sign and file, for and on behalf of the Town, a Financial Assistance Application for a financing agreement from the State Water Resources Control Board for the planning, design, and construction of the **Paradise Sewer Project**.
3. This Authorized Representative, or designee, is designated to provide the assurances, certifications, and commitments required for the financial assistance application, including executing a financial assistance agreement from the State Water Board and any amendments or changes thereto.
4. The Authorized Representative, or designee, is designated to represent the Town in carrying out the Town's responsibilities under the financing agreement, including certifying disbursement requests on behalf of the Town and compliance with applicable state and federal laws.

PASSED, APPROVED AND ADOPTED at a Regular Meeting of the Town Council of the Town of Paradise on the 7th day of November, 2022, by the following vote, to with:

AYES:

NOES:

ABSENT:

NOT VOTING:

_____
Steve Crowder, Mayor

ATTEST:

_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

Town of Paradise

Council Agenda Summary **Agenda Item: 6(b)**

Date: November 7, 2022

ORIGINATED BY: Marc Mattox, Public Works Director/Town Engineer

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: CDBG-DR Infrastructure Authorizing Resolution

LONG TERM RECOVERY PLAN: Yes.

COUNCIL ACTION REQUESTED:

1. Consider adopting Resolution No. 2022-__ , "A Resolution of the Town Council of the Town of Paradise Authorizing and Approving Execution of a Grant Agreement to Receive an Allocation of Funding from the 2018 CDBG-DR Infrastructure Program and any Forthcoming Amendments, Thereto."

Background:

On January 27, 2020, United States Department of Housing and Urban Development (HUD) published Federal Register Notice 85 FR 4681 allocating $1,017,399,000 in CDBG-DR funding, related to the Federal Emergency Management Agency (FEMA) Major Disaster Declarations DR-4382 from July to September 2018 and DR-4407 in November 2018. The California Department of Housing and Community Development (HCD) is the grantee responsible for administering the CDBG-DR funds allocated to the State of California. CDBG-DR supports the State of California's unmet recovery needs related to the Federal Emergency Management Agency (FEMA) Major Disaster Declarations DR- 4382 from July to September 2018 and DR-4407 in November 2018.

Recognizing unmet infrastructure recovery needs, related to DR-4382 from July to September 2018 and DR-4407 in November 2018, HCD allocated $317,428,488 of the CDBG-DR funding to the Disaster Recovery Infrastructure Program (DR-Infrastructure). DR-Infrastructure projects are funded to assist with meeting the unmet infrastructure needs of local communities. This program provides funding for FEMA Public Assistance (PA) match projects, FEMA Hazard Mitigation Grant Program (HMGP) match projects, other non-FEMA match projects, and stand-alone projects identified by local communities impacted by DR-4382 or DR-4407.

On February 8, 2022, Paradise Town Council adopted Resolution No. 2022-12, a resolution of the Town Council of the Town of Paradise declaring certain projects critical to Camp Fire recovery with unfunded needs for consideration in the CDBG-DR Infrastructure Program (DR-4407).

On August 19, 2022, the Town of Paradise was formally notified by California Housing and Community Development that of the $317M made available for allocations, the Town would be recipients of $199,592,735.75 for implementation of identified projects in the program.

In addition, the Town of Paradise was formally notified by California Housing and Community Development than an additional $30,000,000 would be allocated to the Town of Paradise for the purposes of the design and engineering phase of the Paradise Sewer Project.

On September 15, 2022, The Town of Paradise Town Council approved a proposed Action Plan for the allocation of funding received through the CDBG-DR Infrastructure Program.

On October 11, 2022, the Town of Paradise adopted a specific resolution relating to the $199,592,735.75 allocation for various infrastructure projects.

Analysis:

As a component of the administration of CDBG-DR Infrastructure funding, the Town of Paradise is required to adopt a second resolution for specific items including designation of authorized staff to enter into, execute, and deliver agreements and any and all subsequent amendments, thereto, with the State of California – relating to the Paradise Sewer Project specific $30,000,000 allocation.

Financial Impact:

There are no new financial impacts associated with this action item.

TOWN OF PARADISE
RESOLUTION NO. 2022-_____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE AUTHORIZING AND APPROVING EXECUTION OF A GRANT AGREEMENT TO RECEIVE AN ALLOCATION OF FUNDING FROM THE 2018 CDBG-DR INFRASTRUCTURE PROGRAM AND ANY FORTHCOMING AMENDMENTS, THERETO

BE IT RESOLVED by the Town Council of the Town of Paradise as follows:

SECTION 1:

The Town Council of the Town of Paradise has reviewed the State of California's CDBG-DR Action Plan for 2018 disasters and, hereby, approves the execution of a Standard Agreement between Town of Paradise ("Subrecipient") and the California Department of Housing and Community Development ("HCD"), allocating to the Subrecipient the aggregate amount, not to exceed, $30,000,000 ("Grant") for design and engineering work relative to the Paradise Sewer Project, a new in-ground wastewater collection and export system to serve the Sewer Service Area of the Town of Paradise.

The Town Council agrees to perform infrastructure-development-related activities, as further detailed in the Standard Agreement and consistent with the applicable Disaster Recovery Infrastructure Program (DR-Infrastructure) Policies and Procedures, as the same may be amended from time to time.

SECTION 2:

The Town Council hereby authorizes and directs the Town Manager or designee, Public Works Director/Town Engineer, to enter into, execute, and deliver the Standard Agreement and any and all subsequent amendments, thereto, with the State of California for the purposes of the Grant.

SECTION 3:

The Town Manager or designee, Public Works Director/Town Engineer, is authorized to execute and deliver all project applications and any and all related documentation required to effectuate the terms of the Standard Agreement, and to act on the Town's behalf in all matters pertaining to all such applications and documentation, thereof.

SECTION 4:

If an application is approved, the Town Manager or designee, Public Works Director/Town Engineer, is authorized to enter into, execute, and deliver all Notice(s) to Proceed, and

any and all subsequent amendments, thereto, with the State of California for the purposes of the Grant.

SECTION 5:

If an application is approved, the Town Manager or designee, Public Works Director/Town Engineer, is authorized to sign and submit Funds Requests and all required reporting forms and other documentation as may be required by the State of California, from time to time, in connection with the Standard Agreement for purposes of the Grant.

PASSED AND ADOPTED at a regular meeting of the Town Council of the Town of Paradise held on November 7, 2022 by the following vote:

AYES:

NOES:

ABSENT:

NOT VOTING:

_____

Steve Crowder, Mayor

ATTEST:

_____

Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____

Scott E. Huber, Town Attorney

STATE OF CALIFORNIA
Town of Paradise

I, Dina Volenski, Town Clerk of the Town of Paradise, State of California, hereby certify the above and foregoing to be a full, true and correct copy of a resolution adopted at a duly noticed and convened meeting of said Town Council on November 7, 2022, and that such resolution has not been amended, modified, repealed or rescinded since its date of adoption and is in full force and effect as of the date hereof.

_____
Dina Volenski, Town Clerk of the Town of Paradise,
State of California

By: _____
Name and Title*

Town of Paradise

Council Agenda Summary **Agenda Item: 6(c)**

Date: November 7, 2022

ORIGINATED BY: Ross Gilb, Finance Director / Town Treasurer

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: FY 2022-23 Operating and Capital Budget Update

COUNCIL ACTION REQUESTED:

1. After presentation, review and file the financial information provided by staff concerning the FY 2022-23 operating and capital budgets; and
2. Approve staff recommended budget adjustments. (ROLL CALL VOTE)

Background:

The fiscal year (FY) 2022-23 operating and capital budgets were adopted July 12, 2022. The General Fund was adopted with a balanced budget, which was achieved through a transfer from the PG&E Settlement funds to compensate for revenue shortfalls resulting from the 2018 Camp Fire. During the September 13, September 15, and October 11, 2022 Town Council Meetings, Council approved additional expenditures relating to the restoration of dispatch services project (CIP #7324), the Category 4 Tree Removal program (CIP #7312), various capital projects relating to CDBG-DR Infrastructure funding, and additional public works department positions.

Currently, about four months of transactions have been recorded for the current fiscal year. Revenues and expenditures from the beginning of FY 2022-23 through the end of October 2022 have been recorded and reviewed in preparation of the analysis below. Staff will continue to closely monitor costs and prepare recommended budget updates regularly to keep the Town Council and community apprised of any significant changes.

Analysis:

A complete budget performance report is attached for detail review, which contains unaudited actual figures for FY 2021-22, the adopted budget for FY 2022-23, the currently amended budget for FY 2022-23 including amendments approved by Council during meetings from the beginning of the fiscal year through October 11, 2022, actual revenues and expenditures to date, proposed budget amendments by general ledger account, and the proposed amended budget for FY 2022-23. The most significant developments are described in detail for each major fund below. Additionally, all recommended budget adjustments have been summarized in the attached Adjustment Summary document as well as listed in detail for each fund affected in the attached Budget Worksheet Report.

General Fund (1010):

Revenues:

Property Tax and Sales Tax

Property tax and sales tax revenues make up the majority of the Town's General Fund revenue budget. The Town has yet to receive any significant property tax or sales tax revenue allocations for the current fiscal year as of the end of the October 2022. Initial allocations are expected to be received for analysis during the mid-year budget review.

Transient Occupancy Tax

The total budgeted amount of Transient Occupancy Taxes expected to be received during FY 2022-23 is $200,000. This budget is based on actual receipts of $225,000 during the prior fiscal year. Currently, there are two facilities remitting transient occupancy taxes within the Town limits.

USDA Revenues

During the first quarter of FY 2022/23, the Town was notified of the availability of grant funding through the United States Department of Agriculture (USDA) that would provide up to 60% of the total purchase price of much needed vehicles and equipment for the Town of Paradise. Town staff worked with the USDA to apply for funding to be applied toward the purchase of a new Street Sweeper (estimated purchase price of $300,000), a Community Services Officer truck and related upfit (estimated purchase price of $75,000), and three Ford Rangers (estimated purchase price of $37,000 each) for the Fire Inspector, Code Enforcement Officer, and Construction Inspector positions. The Town was subsequently awarded a grant of $260,000 based on 60% of the originally estimated purchase price of these vehicles and equipment.

The local share of $144,000 for the Street Sweeper is recommended to be funded through the use of Measure V reserves, as described in the applicable expenditure section of the agenda summary below. The cost of the local share of the other vehicles included under this grant were included in the originally adopted budget for FY 2022-23. However, since the time of budget development, the total cost of the vehicle purchases has increased a total of $22,700 for the combined equipment purchases. The additional expenditures have been included as a proposed budget adjustment within the Police and Public Works General Fund departmental budgets. As the Town was able to secure a greater amount of grant funding through the USDA than originally expected at the time of budget development, the proposed additional expenditures are offset by increases to budgeted USDA revenues based on the total amount of the grant award. As such, there is no General Fund impact as a result of the proposed amendments.

Expenditures:

Overall, General Fund expenditures are within revised budgeted expectations for the first four months of the fiscal year.

As mentioned above, during the September 13, September 15, and October 11, 2022 Town Council Meetings, Council approved additional expenditures relating to the restoration of dispatch services project (CIP #7324), the Category 4 Tree Removal program (CIP #7312), various capital projects relating to CDBG-DR Infrastructure funding, and additional public works department positions. The total projected General Fund impact of these approved expenditures for FY 2022-23 is $145,870. These additional General Fund financial impacts related to the General Fund

portion of costs for the Public Works positions approved during the September 15, 2022 Council meeting ($90,870), the purchase of workstations and equipment for the newly approved Public Works positions ($20,000), and the purchase of a new Ford Ranger for the newly approved Construction Inspector position ($35,000). These additional costs are included in the amended budget column of the summaries below.

In addition to these previously approved expenditures, staff has identified a net $100,500 of recommended additional General Fund expenditures for FY 2022-23 (excluding Measure V), the majority of which are offset by the additional unbudgeted revenues recognized above. Additionally, staff has identified $144,000 of recommended expenditures to be funded through Measure V reserves.

The recommended changes by department are summarized in the chart below. A detailed description of each change by department is also provided.

TOWN OF PARADISE
General Fund Expenditure Summary by Division
Fiscal Year 2022/23 Budget

Description	2021/22 Unaudited Acutal	2022/23 Adopted Budget	2022/23 Amended Budget	2022/23 Actual to Date	2022/23 Proposed Adjustments	2022/23 Proposed Budget
Non Departmental	$ 1,323,274	$ 1,734,773	$ 1,734,773	$ 6,879	$ -	$ 1,734,773
Town Council	36,066	37,600	37,600	11,757	-	37,600
Town Clerk	257,213	334,531	334,531	105,121	-	334,531
Town Manager	294,433	370,179	370,179	123,689	-	370,179
Central Services	593,519	665,138	665,138	442,820	12,700	677,838
Information Technology	95,838	-	-	-	-	-
HR & Risk Management	210,709	226,733	226,733	72,845	-	226,733
Legal Services	156,559	203,110	203,110	5,133	-	203,110
Finance	293,384	309,762	309,762	83,181	2,150	311,912
Police	5,405,275	6,118,298	6,118,298	2,477,628	12,500	6,130,798
Fire	4,511,280	5,857,303	5,857,303	1,039,325	-	5,857,303
Community Development	586,049	1,469,713	1,469,713	182,375	-	1,469,713
Public Works	1,212,520	1,226,280	1,567,150	404,957	73,150	1,640,300
Subtotal	14,976,118	18,553,420	18,894,290	4,955,709	100,500	18,994,790
Measure V	1,183,046	1,510,994	1,510,994	313,643	144,000	1,654,994
Grand Total	$ 16,159,164	$ 20,064,414	$ 20,405,284	$ 5,269,352	$ 244,500	$ 20,649,784

Measure V:

- **$144,000 Increase**: As mentioned above, during the first quarter of FY 2022-23, the Town was awarded grant funding through the USDA that would provide up to 60% of the total purchase price of much needed equipment for the Town of Paradise. A portion of the grant for which the Town was awarded was to be applied toward the purchase of a new Street Sweeper to assist with street clean up during ongoing road construction efforts. The total amount of the grant relating to the street sweeper purchase was $156,000 based on 60% of the originally estimated purchase price of $260,000. Due to inflationary pressures since the time of grant award, the quoted purchase price of the street sweeper has increased to $300,000. As such, the proposed budget adjustment for FY 2022-23 includes the total local match requirement of $144,000 in order to leverage the grant funding available through USDA and secure current pricing for this much-needed equipment. The proposed budget adjustment would increase the total budgeted expenditures for FY 2022-23 from $1,510,994 to $1,654,994. This would reduce the projected Measure V reserves as of the end of FY 2022/23 from approximately $917,000 to $773,000.
- The proposed amendment and revised budget for the purchase of the Street Sweeper, as described above, was presented to, and approved by the Measure V Citizen Oversight Committee on October 25, 2022.

Town Manager:

- **$0 Net Impact**: Based on review of financial activity within the departmental budget, $4,000 of the total funds originally budgeted towards the replacement of departmental equipment are proposed to be reclassified toward employee development and costs related to Town-wide meetings based on anticipated need for the remainder of the fiscal year.

Central Services

- **$10,000 Increase**: The actual cost of insurance premiums in the amount of approximately $298,000 relating primarily to general liability, mobile equipment and property coverage was approximately $10,000 greater than the budgeted premium of $289,000.

- **$2,700 Increase**: The Town's apportioned share of LAFCO operating expenses for the fiscal year was approximately $2,700 greater than originally anticipated at the time of budget development.

Finance

- **$2,150 Increase:** During the first quarter of the fiscal year, staff identified the urgent need for replacement of the fireproof filing cabinet used by the Finance and other administrative departments for storage of deposits and confidential information. The replacement was not originally included in the adopted departmental budget; however, the old cabinet was no longer functional, and the new cabinet is expected to serve the Town for years to come.

Police Department

- **$0 Net Impact:** Based on direction provided by Council during the prior fiscal year, Town staff has been actively involved in restoring dispatch services to the Town. The originally adopted budget included salaries and benefits for two public safety dispatcher positions for the full fiscal year. Staff continues to work towards recruitment efforts, however as of the time of budget review, neither of the two public safety dispatcher positions have been filled. The lack of expenditures relating to salaries and benefits for these two positions has created budget savings for the first quarter of the fiscal year. A budget adjustment of $10,500 is recommended to provide funds for advertising and ongoing recruitment efforts for these positions. The proposed additional expenditures are offset by savings related to salaries and benefits described above.

Public Works Engineering

- **$0 Net Impact:** The repairs of traffic loops at two locations throughout Town were needed due to damages incurred. The cost of the repairs totaled $22,950 and will be reimbursed by the parties responsible for the damages. A budget amendment for the expenditures and related reimbursement revenues has been included for proper tracking of financial activity.

Facilities

- **$40,000 Increase**: The cost of services for the removal of green waste from Town-owned properties has been identified as ongoing need based on continued annual clean up requirements. The recommended amendment of $40,000 is based on the anticipated annual cost for all Town-owned properties.

General Fund Fiscal Impact and Fund Summary:

The total recommended General Fund budget amendments includes $244,500 of net additional expenditures, which is offset by $56,450 of additional revenues. This leaves a total of $188,050 of additional funding requirements. In order to balance the General Fund budget, an additional transfer from the PG&E Settlement Fund in the amount of $44,050 is recommended as well as a draw-down of Measure V reserves in the amount of $144,000. This additional recommended transfer amount brings the total proposed budgeted transfer from the settlement funds to $11,175,297 for the full fiscal year. The Fiscal Sustainability Model has been updated based on this amended transfer amount to ensure ongoing fiscal sustainability based on a medium growth scenario. The details of the updates to the Fiscal Sustainability Model have been included below. A General Fund and PG&E Settlement Fund budget summary is also included below which presents the beginning fund balances, original and amended budget figures, and summarized actual results to date. A full detail of all figures presented below is included in the attached Budget Worksheet Reports.

TOWN OF PARADISE
General Fund (GF) Summary
Fiscal Year 2022/23 Budget

Description	2021/22 Unaudited Acutal	2022/23 Adopted Budget	2022/23 Amended Budget	2022/23 Actual to Date	2022/23 Proposed Adjustments	2022/23 Proposed Budget
Beginning Fund Balance						
GF (excluding Measure V)	2,265,760	2,265,760	2,265,760	2,265,760		2,265,760
Measure V	1,672,024	1,790,220	1,790,220	1,790,220		1,790,220
Measure V (encumbrances)	(364,694)	(562,162)	(562,162)	(562,162)		(562,162)
Total	3,573,090	3,493,818	3,493,818	3,493,818		3,493,818
GF Revenues	7,694,514	5,751,853	5,751,853	265,970	22,950	5,774,803
GF Transfers In	7,283,123	12,801,567	13,142,437	4,689,739	77,550	13,219,987
GF Expenditures / Transfers Out (excluding Measure V)	14,977,637	18,553,420	18,894,290	4,955,709	100,500	18,994,790
GF Net Income (Expense)	-	-	-	-	-	-
Measure V Revenues	1,299,723	1,200,000	1,200,000	93,391	-	1,200,000
Measure V Expenditures	1,181,527	1,510,994	1,510,994	313,643	144,000	1,654,994
Measure V Net Income (Expense)	118,196	(310,994)	(310,994)	(220,252)	(144,000)	(454,994)
Ending Fund Balance						
GF (excluding Measure V)	2,265,760	2,265,760	2,265,760	2,265,760		2,265,760
Measure V	1,790,220	1,479,226	1,479,226	1,569,968		1,335,226
Measure V (encumbrances)	(562,162)	(562,162)	(562,162)	(549,775)		(562,162)
Total	3,493,818	3,182,824	3,182,824	3,285,953		3,038,824
PGE Settlement Fund						
Beginning Fund Balance	220,091,398	214,971,613	214,971,613	214,971,613		214,971,613
Revenues	959,687	1,100,000	1,100,000	269,477	2,227,843	3,327,843
Expenditures / Transfers Out	6,079,472	11,069,377	11,215,247	4,694,987	44,050	11,259,297
Ending Fund Balance	214,971,613	205,002,236	204,856,366	210,546,103	2,183,793	207,040,159

General Fund Long Term Fiscal Sustainability Model Impact:

The originally adopted budget for FY 2022-23 included a transfer from the PG&E Fund to the General Fund totaling $10,985,377. The originally budgeted transfer amount maintained an ending reserve balance of the PGE Settlement Fund of $205,002,236 as of the end of FY 2022-23. Based on the fiscal sustainability model projections from the FY 2022-23 adopted budget, the amount of the original settlement amount reserved for use toward operational costs (~$200 million) remaining as of the end of the 25-year projection period is projected to be $64 million, as shown in the charts below.

The amendments to the originally adopted budget that were approved by Council during the September 13, 2022, September 15, 2022, and October 11, 2022 Council meetings increased the total projected General Fund expenditures for FY 2022-23 by $145,870. These additional General Fund financial impacts related to the General Fund portion of costs for the Public Works positions approved during the September 15, 2022 Council meeting ($90,870), the purchase of workstations and equipment for the newly approved Public Works positions ($20,000), and the purchase of a new Ford Ranger for the newly approved Construction Inspector position ($35,000), as described above. These General Fund impacts increased the revised estimated total projected transfer needed from the PG&E Fund to balance the General Fund to $11,131,247. This increase to the budgeted transfer from the PG&E Fund reduced the estimated balance of the PG&E Fund at the end of FY 2022-23 to $204,856,366.

The costs related to the additional public works positions are the only costs that would be expected to be recurring, while the remainder of the costs would be expected to be one-time, nonrecurring expenditures for the current fiscal year. Based on the updated fiscal sustainability model projections from the recurring costs incorporated into the FY 2022-23 amended budget, the amount of the original settlement amount reserved for use toward operational costs (~$200 million) remaining as of the end of the 25-year projection period after is projected to be approximately $2.7 million less than the original estimate based on the adopted budget, or $61.3 million.

Based on review of the actual fiscal activity compared to the amended budget through October 2022, staff has proposed net additional General Fund expenditures totaling $44,050, which would bring the revised estimated total projected transfer from the PG&E Fund required to balance the General Fund to $11,175,297.

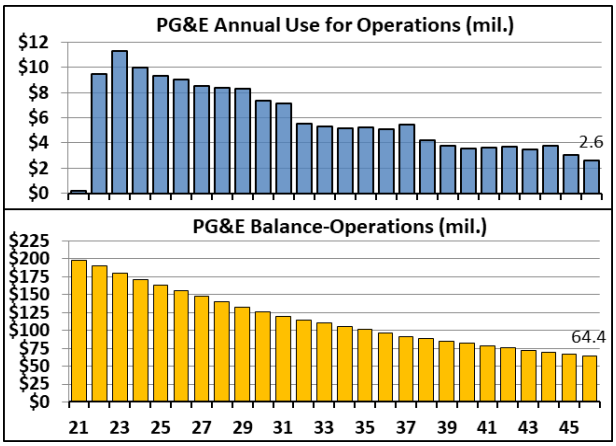
During the first quarter of the fiscal year, the Town received reimbursement of the 1% total settlement amount that was originally held back during the settlement to pay for trailing legal costs. The amount of the reimbursement received by the Town was equal to 1% of the total settlement amount ($2,700,000) less final attorney fees ($472,157), for a net reimbursement of $2,227,843. The net effect of the additional increase to the budgeted transfer from the PG&E Fund and the trailing cost reimbursement is projected to increase the estimated balance of the PG&E Fund at the end of FY 2022-23 to $207,040,159.

Based on the further updated fiscal sustainability model projections from the recurring costs of $44,050 incorporated into the FY 2022-23 amended budget, the amount of the original settlement amount reserved for use toward operational costs (~$200 million) remaining as of the end of the 25-year projection period after is projected to be approximately $1.4 million less than the amended estimate based on the adopted budget, or $59.9 million.

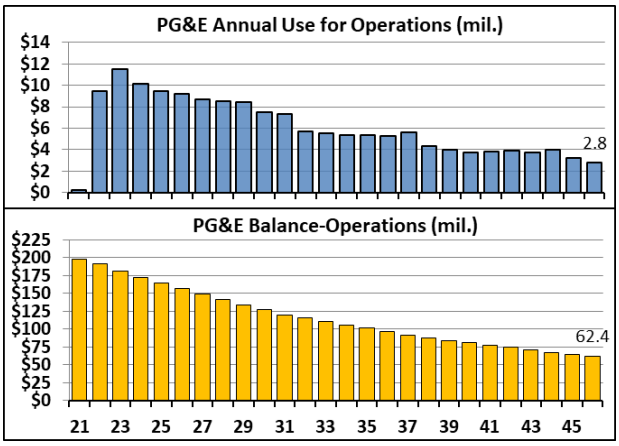
However, with the receipt of the trailing costs reimbursement during the current fiscal year, the total amount of the original settlement expected to be remaining at the end of the 25-year projection period is projected to be approximately $62.4 million as shown in the charts below.

The projected balance of $62.4 million is a positive indicator of continued long-term fiscal sustainability through the period projected and provides an additional contingency reserve that can be utilized if revenue backfill is needed beyond the 25-year projection period, or in the event that rebuild activity, or other factors, varies significantly from current projections at any point in the future.

Originally Adopted FY 2022-23 Budget



Proposed Amended FY 2022-23 Budget



Building Safety and Wastewater Services (Fund 2030)

All revenues and expenditures relating to the Building Safety and Wastewater Services fund are within budgeted expectations for the first four months of the fiscal year. A detailed budget performance report is attached for review.

Animal Control Services (Fund 2070)

All revenues and expenditures relating to the Animal Control fund are within budgeted expectations for the first four months of the fiscal year. A detailed budget performance report is attached for review.

Camp Fire Recovery (Fund 2090)

All revenues and expenditures relating to the Camp Fire Recovery Fund are within budgeted expectations for the first four months of the fiscal year. Town staff continues to work closely with FEMA, CalOES, and insurance to recover reimbursement for infrastructure project costs related to the 2018 Camp Fire on a timely basis. A detailed budget performance report is attached for review.

COVID-19 (Fund 2095)

The original budget included $1,359,500 of approved expenditures for FY 2022-23 and projected an ending fund balance of $1,224,280 as of June 30, 2023.

During Town Council meetings held through October 11, 2022, Council approved $777,561 of total additional expenditures funded through the use of the American Rescue Plan Act (ARPA) funds. The additional expenditures included $392,561 toward the restoration of dispatch services project (CIP #7324), $90,000 toward the Category 4 Tree Removal program (CIP #7312), $195,000 toward facility repairs to Town Hall, and $100,000 toward facility repairs to Fire Station 81.

The amended budget includes $2,137,061 of approved expenditures for FY 2022-23 and currently projects an ending fund balance of $446,719 as of June 30, 2023.

All revenues and expenditures relating to the COVID-19 fund are within revised budgeted expectations for the first four months of the fiscal year. Revenues relating to the second disbursement for the second half of the Town's allocation of ARPA funds are likely to be realized during the second half of the fiscal year. A detailed budget performance report is attached for review.

Capital Improvement Fund (2100)

- **$250,000 Increase**: On June 14, 2022 Paradise Town Council declared an emergency to repair or replace the culvert on Stearns Road in the vicinity of the Dry Creek drainage and to make related repairs to the roadway (CIP/DR Project #9418). Since the declaration, Town staff has bid the project, contracted the work, and completed the project of replacing the culvert. Town Council accepted the completed project on October 11, 2022. The $250,000 proposed maximum project cost is based on the maximum estimated project cost for project engineering and construction. All project costs are expected to be funded through local drainage funds, which would result in no additional General Fund impacts.

- **$100,000 Increase**: Additional funds in the amount of $100,000 have been identified as needed towards the completion of the Pentz Pathway Phase 2 (CIP/DR Project #9389). The original budget estimate included in the CIP/DR plan for FY 2022-23 was $187,450, which was budgeted to be funded through the use of Federal Congestion Mitigation Air Quality funds. The additional $100,000 budget amendment is proposed to be funded through the use of the Town's transportation funds annual allocations.

- **$0 Net Impact**: Interim Safety Striping for various critical locations throughout Town (CIP/DR Project #9420) has been identified as a critical project proposed to be completed during the current fiscal year. This project is proposed to be funded through the use of transportation funds originally allocated towards the Town's CDBG Sidewalk Improvements 2022 project (CIP/DR Project #9417). As presented during the October 11, 2022 Council meeting, cost savings are expected to be realized on the CDBG Sidewalk project that would allow for the reallocation of up to $300,000 in additional funds towards other transportation related projects.

- **$60,000 Correction**: A project to update the Town's pavement management program software was included under the adopted FY 2022-23 Capital Improvement Plan (CIP/DR Project #9416), which was planned to be funded through use of Gas Tax Funds. The budgeted line item for these costs was inadvertently excluded from the Gas Tax budget and is recommended to be included under the Gas Tax Fund (GL 2120.45.4750.5910.100) to ensure the Town-wide budget document matches the CIP/DR budget. As the entirety of this project was planned to be funded through the use of Gas Tax fund, there is no General Fund financial impact as a result of this adjustment.

- All other revenues and expenditures relating to the Capital Improvement fund are within budgeted expectations for the first four months of the fiscal year. Revenues are likely to be realized later in the fiscal year as reimbursement requests are completed for costs incurred during the fiscal year. A detailed budget performance report is attached for review.

Significant expenditures for the first four months of the fiscal year include:

- 9394 Downtown Sewer Environmental Survey: $ 348,969
- 9377 Almond Multi-Modal Improvements: $ 238,093
- 9385 Paradise Gap Closure Project: $ 191,695
- 9418 Stearns Road Culvert Replacement $ 159,819
- 9390 Skyway-Neal Bike-Ped Project $ 41,952

Disaster Recovery Fund (2105)

All revenues and expenditures relating to the Disaster Recovery fund are within budgeted expectations for the first four months of the fiscal year. Revenues are likely to be realized later in the fiscal year as reimbursement requests are completed for costs incurred during the fiscal year. A detailed budget performance report is attached for review.

Significant expenditures for the first four months of the fiscal year include:

- 7303 On System Road Rehabilitation: $2,683,586
- 7324 Restoration of Dispatch Services: $ 180,044
- 7312 Category 4 Tree Removal: $ 119,137
- 7320 SWRCB Septic Grant $ 98,937
- 7309 Transportation Master Plan $ 60,365

Gas Tax / Street Maintenance (Fund 2120)

All revenues and expenditures relating to the Gas Tax fund are within budgeted expectations for the first four months of the fiscal year. A detailed budget performance report is attached for review.

Business and Housing (Fund 2160)

All revenues and expenditures relating to the Business and Housing fund are within budgeted expectations for the first four months of the fiscal year. A detailed budget performance report is attached for review.

PGE Settlement Fund (7700)

- **Revenues**:
    - The Town has received $381,490 in interest revenues for the first three months of the fiscal year, which is trending in line with total budgeted expectations of $1,100,000 for the full fiscal year. Staff continues to closely monitor revenues as securities mature and funds are reinvested into new investments under this quickly changing interest rate environment.
    - As mentioned above, during the first quarter of the fiscal year, the Town received reimbursement of the 1% total settlement amount that was originally held back during the settlement to pay for trailing costs. The amount of the reimbursement received by the Town was equal to 1% of the total settlement amount ($2,700,000) less final attorney fees ($472,157), for a net reimbursement of $2,227,843.
- **Expenditures / Transfers Out:**
    - **$44,050 Increase**: As mentioned above, the total recommended General Fund budget amendments includes $244,500 of net additional expenditures, which is offset by $56,450 of additional revenues, and a recommended draw-down of Measure V reserves in the amount of $144,000. This leaves a total of $44,050 of additional funding requirements. In order to balance the General Fund budget, an additional transfer from the PG&E Settlement Fund in the amount of $44,050 is recommended.

Conclusion:

Overall, the Town-wide financial activity for the first four months of the fiscal year is within budgeted expectations. The total impact to the General Fund of the recommended adjustments above is an additional $44,050 in expenditures, which is recommended to be offset by an additional transfer from the PG&E Settlement Funds. The amended FY 2022-23 PG&E fund total transfer amount of $11,175,297 and projected PG&E Settlement Fund balance at the end of the projection period included in the Fiscal Sustainability model ($62.4 million) is still a positive indicator of ongoing fiscal sustainability based on a medium growth scenario. Staff will continue to closely monitor financial activity against budgeted benchmarks and will bring any additional recommendations for budget amendment during the mid-year budget review process.

Adjustment Summary: November 7, 2022

Budget Fund (Department)	Adjustment Item	GL Budget Code	Adjustment Description	Amount	
General (Town Manager)	Budget Reclassification - Employee Development	1010.20.4200.5223.105	Reclassification of original furniture and equipment budget for Town-wide employee development	$ 1,000	Estimated Costs
General (Town Manager)	Budget Reclassification - Meetings	1010.20.4200.5224	Reclassification of original furniture and equipment budget for Town-wide meetings	3,000	Estimated Costs
General (Town Manager)	Budget Reclassification - Meetings	1010.20.4200.5304	Reclassification of original furniture and equipment budget for Town-wide meetings and employee development	(4,000)	Estimated Costs
General (Central Services)	Insurance Premium	1010.20.4201.5212.100	Increase to property insurance premium due to additional property covered during current fiscal year	10,000	Actual Costs
General (Central Services)	LAFCO Apportionment	1010.20.4201.5260	Increased LAFCO apportionment compared to prior year	2,700	Actual Costs
General (Finance)	Fireproof Filing Cabinet	1010.25.4400.5304	Replacement fire proof cabinet for Finance Department	2,150	Actual Costs
General (Police Comms)	Budget Reclassification - Recruitment	1010.30.4530.5218.100	Reclassification of savings in salaries and benefits budget for recruitment efforts relating to Dispatcher positions	10,500	Actual Costs
General (Police Comms)	Budget Reclassification - Recruitment	1010.30.4530.5101	Reclassification of savings in salaries and benefits budget for recruitment efforts relating to Dispatcher positions	(10,500)	Actual Costs
General (PW Engineering)	Encroachment Permit Fees	1010.45.4740.3402.270	Clark & Nunnely and Clark & Elliot repairs to traffic loops - reimbursed by PG&E	(22,950)	Actual Costs
General (PW Engineering)	Traffic Loop Repairs	1010.45.4740.5214.100	Clark & Nunnely and Clark & Elliot repairs to traffic loops - reimbursed by PG&E	22,950	Actual Costs
General (Facilities)	Property Maintenance	1010.45.4747.5211.136	Hauling services related to clearing of green waste from Town properties	40,000	Estimated Costs
General (Police)	Community Services Officer Truck & Upfit	1010.30.4520.5305	Additional cost above original budget for Community Services Officer Truck & Upfit - Offset by Additional USDA Grant Revenues	12,500	Quoted Costs
General (PW Engineering)	Construction Inspector Ford Ranger (x2)	1010.45.4740.5305	Additional cost above original budget for Construction Inspector Vehicle - Offset by Additional USDA Grant Revenues	10,200	Quoted Costs
General (Revenues)	USDA Equipment Grant 2022	1010.00.0000.3910.138	Transfer in to General Fund from USDA Fund for award of Grant from USDA	(33,500)	Quoted Costs
USDA	USDA Equipment Grant 2022	2138.00.0000.3310.099	USDA Fund Revenue for Equipment/Vehicle Grant Award	(33,500)	Quoted Costs
USDA	USDA Equipment Grant 2022	2138.00.0000.5910.010	Transfer out from USDA Fund to General Fund for award of Grant from USDA	33,500	Quoted Costs
General (Revenues)	Transfer in from PGE Fund	1010.00.0000.3910.700	Additional transfer from PG&E Fund related to proposed adjustments	(44,050)	Total proposed GF adjustments
PGE Fund	Transfer out to General Fund	7700.00.0000.5910.010	Additional transfer from PG&E Fund related to proposed adjustments	44,050	Total proposed GF adjustments
General (Measure V)	Street Sweeper Local Share	1010.25.4420.350.5910.100	Transfer out of General Fund (Measure V) to Gas Tax Fund for Public Works street sweeper - net of $156,000 USDA Grant	144,000	Quoted Costs
Gas Tax	Street Sweeper Local Share	2120.45.4750.3910.010	Transfer in to Gas Tax Fund from General Fund (Measure V) for Public Works street sweeper - net of $156,000 USDA Grant	(144,000)	Quoted Costs
Gas Tax	Street Sweeper Total Cost	2120.45.4750.5305	Public Works street sweeper - total cost of asset purchase	300,000	Quoted Costs
Gas Tax	Street Sweeper USDA Share	2120.45.4750.3910.138	Transfer in to Gas Tax Fund from USDA Fund for Public Works street sweeper - portion of total cost covered through USDA Grant award	(156,000)	Quoted Costs
USDA	Street Sweeper USDA Share	2138.00.0000.3310.099	USDA Fund Revenue for Public Works street sweeper - portion of total cost covered through USDA Grant award of $156,000	(156,000)	Quoted Costs
USDA	Street Sweeper USDA Share	2138.00.0000.5910.120	Transfer out of USDA Fund to Gas Tax Fund for Public Works street sweeper - portion of total cost covered through USDA Grant award	156,000	Quoted Costs
ARPA (Facilities)	Reclassification - Town Hall Facilities Improvements	1010.45.4747.5214.100	Move budget from Repair/Maintenance Services to Improvements account	(200,000)	Adjusting expense account
ARPA (Facilities)	Reclassification - Town Hall Facilities Improvements	1010.45.4747.5303	Move budget from Repair/Maintenance Services to Improvements account	200,000	Adjusting expense account
ARPA (FD)	Reclassification - Fire Station 81 Facilities Improvements	2095.35.4610.595.5214.100	Move budget from Repair/Maintenance Services to Improvements account	(250,000)	Adjusting expense account
ARPA (FD)	Reclassification - Fire Station 81 Facilities Improvements	2095.35.4610.595.5303	Move budget from Repair/Maintenance Services to Improvements account	250,000	Adjusting expense account
General (Measure V)	Reclassification - Fire Station 81 Facilities Improvements	1010.25.4420.326.5304	Move budget from Suppression to Admin and from Furniture/Equip. to Improvements account	(50,000)	Adjusting expense account
General (Measure V)	Reclassification - Fire Station 81 Facilities Improvements	1010.25.4420.325.5303	Move budget from Suppression to Admin and from Furniture/Equip. to Improvements account	50,000	Adjusting expense account
CIP / DR	9416 Pavement Mgmt. Program Update 2022	2120.45.4750.5910.100	Transfer out from Gas Tax to Capital Projects Fund for $60k included in CIP/DR spreadsheet but not in Gas Tax budget in original draft	60,000	Original CIP / DR Budget
CIP / DR	9416 Pavement Mgmt. Program Update 2022	2100.50.8901.3910.120	Transfer out from Gas Tax to Capital Projects Fund for $60k included in CIP/DR spreadsheet but not in Gas Tax budget in original draft	(60,000)	Original CIP / DR Budget
CIP / DR	9416 Pavement Mgmt. Program Update 2022	2100.50.8901.9416	Transfer out from Gas Tax to Capital Projects Fund for $60k included in CIP/DR spreadsheet but not in Gas Tax budget in original draft	60,000	Original CIP / DR Budget
CIP / DR	9418 Stearns Road Emergency Culvert Replacement	2100.50.8901.9418	Estimated total Project costs ($50k PE/$200k construction)	250,000	Estimated Costs
CIP / DR	9418 Stearns Road Emergency Culvert Replacement	2100.50.8901.3910.551	Transfer in to Capital Projects Fund from Impact Fees Drainage Fund	(250,000)	Estimated Costs
CIP / DR	9418 Stearns Road Emergency Culvert Replacement	2551.45.0000.5910.100	Transfer out of Impact Fees Drainage Fund to Capital Projects Fund	250,000	Estimated Costs
CIP / DR	9389 Pentz Pathway Phase 2	2100.50.8901.9389	Additional project cost expected for FY 2022-23	100,000	Estimated Costs
CIP / DR	9389 Pentz Pathway Phase 2	2100.50.8901.3910.110	Transfer in from Transportation Fund	(100,000)	Estimated Costs
CIP / DR	9389 Pentz Pathway Phase 2	2110.45.4743.5910.100	Transfer out to Capital Project Fund	100,000	Estimated Costs
CIP / DR	9389 Pentz Pathway Phase 2	2110.00.0000.3345.001	Additional transportation fund revenue for additional drawdown expected	(100,000)	Estimated Costs
CIP / DR	9417 CDBG Sidewalk Improvements 2022	2100.50.8901.9417	Reallocation of available funding from underbudget CDBG Sidewalk Improvements project to Interim Safety Striping project	(105,000)	Estimated Costs
CIP / DR	9420 Interim Safety Striping 2022	2100.50.8901.9420	Reallocation of available funding from underbudget CDBG Sidewalk Improvements project to Interim Safety Striping project	105,000	Estimated Costs
PGE Fund	Receipt of Trailing Costs	7700.00.0000.3901.100	Receipt of 1% Trailing Costs from Total Settlement	$ (2,227,843)	Actual Receipt

$ (1,729,793)	**Total Financial Impact**

Financial Impact Fund Distribution	
$ 44,050	General Fund (Non-Measure V)
$ 144,000	General Fund (Measure V)
$ 60,000	Gas Tax Fund
$ 250,000	Impact Fees Drainage Fund
$ (2,227,843)	PG&E Settlement Fund

TOWN OF PARADISE

Budget Worksheet Report as of October 20, 2022

G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
Fund: 1010 - General Fund							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
1010.00.0000.3110.311	Property Tax Current Secured	2,368,023	2,340,000	2,340,000	-	-	2,340,000
1010.00.0000.3110.312	Property Tax Current Unsecured	107,575	116,500	116,500	-	-	116,500
1010.00.0000.3110.315	Property Tax Prior Secured/Unsecured	3,254	5,000	5,000	-	-	5,000
1010.00.0000.3110.320	Property Tax General Supplemental	43,459	40,000	40,000	-	-	40,000
1010.00.0000.3130.325	General Sales and Use Tax Sales and Use Tax	1,198,929	1,000,000	1,000,000	69,832	-	1,000,000
1010.00.0000.3167.330	Real Property Transfer Tax Real Property Transfer Tax	101,168	85,000	85,000	23,675	-	85,000
1010.00.0000.3182.335	Franchise Taxes Franchise Taxes	386,817	347,000	347,000	-	-	347,000
1010.00.0000.3185.340	Transient Occupancy Tax Transient Occupancy Tax	225,722	200,000	200,000	-	-	200,000
1010.00.0000.3210.110	Business Licenses and Permits Business Regulation	9,133	7,500	7,500	2,575	-	7,500
1010.00.0000.3210.120	Business Licenses and Permits Bingo Regulation	42	-	-	-	-	-
1010.00.0000.3215.100	DOJ/FBI Fees Fingerprinting/Processing	(2,271)	-	-	(1,016)	-	-
1010.00.0000.3351.001	Property Tax Homeowners Apportionment	22,404	15,000	15,000	-	-	15,000
1010.00.0000.3356.001	State Motor Vehicle In Lieu Motor Vehicle In Lieu Tax	1,067,604	1,097,000	1,097,000	-	-	1,097,000
1010.00.0000.3410.104	Administrative Services Returned Check Processing	307	150	150	26	-	150
1010.00.0000.3410.107	Administrative Services Electronic Audio Reproduction	12	-	-	-	-	-
1010.00.0000.3410.113	Administrative Services Document Copying	138	50	50	3	-	50
1010.00.0000.3410.114	Administrative Services Document Certification	180	150	150	120	-	150
1010.00.0000.3610.100	Interest Revenue Investments	3,283	15,000	15,000	8	-	15,000
1010.00.0000.3630.200	Rents and Royalties Billboard Rents and Leases	440	440	440	-	-	440
1010.00.0000.3901.100	Refunds and Reimbursements Miscellaneous	25,740	2,000	2,000	617	-	2,000
1010.00.0000.3901.145	Refunds and Reimbursements Insurance Proceeds	1,071,088	-	-	-	-	-
1010.00.0000.3902.100	Miscellaneous Revenue General	14,189	4,000	4,000	558	-	4,000
1010.00.0000.3902.110	Miscellaneous Revenue Cash Over and Short	78	-	-	-	-	-
1010.00.0000.3910.030	Transfers In From Development Services Fund	262,686	341,836	341,836	-	-	341,836
1010.00.0000.3910.070	Transfers In From Animal Control	54,357	66,344	66,344	-	-	66,344
1010.00.0000.3910.090	Transfers In From Camp Fire Recovery	321,790	94,749	94,749	-	-	94,749
1010.00.0000.3910.095	Transfers In From COVID-19 Fund	-	102,000	297,000	-	-	297,000
1010.00.0000.3910.110	Transfers In From Local Transportation Fund	5,091	7,568	7,568	-	-	7,568
1010.00.0000.3910.120	Transfers In From State Gas Tax Fund	353,824	225,147	225,147	-	-	225,147
1010.00.0000.3910.130	Transfers In From State Water Board Prop 1	97	-	-	-	-	-
1010.00.0000.3910.138	Transfers In From USDA Fund	-	70,500	70,500	-	33,500	104,000
1010.00.0000.3910.140	Transfers In From Traffic Safety Fund	2,250	2,250	2,250	-	-	2,250
1010.00.0000.3910.160	Transfers In From BHS Development Svcs Fund	76,274	73,096	73,096	-	-	73,096

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1010.00.0000.3910.215	Transfers In From Aband Vehicle Abate Fund	26,858	16,500	16,500	1,814	-	16,500
1010.00.0000.3910.628	Transfers In From Gen Plan Fee	167,510	800,000	800,000	-	-	800,000
1010.00.0000.3910.650	Transfers In From Successor Agency to RDA NH	16,200	16,200	16,200	-	-	16,200
1010.00.0000.3910.700	Transfers In From PG&E Settlement Fund	5,996,186	10,985,377	11,131,247	4,687,925	44,050	11,175,297
	Program Total: 0000 - Non Program Activity	13,930,437	18,076,357	18,417,227	4,786,136	77,550	18,494,777
	Department Total: 00 - Non Department Activity	13,930,437	18,076,357	18,417,227	4,786,136	77,550	18,494,777
Department: 25 - Finance							
Program: 4420 - Measure C/V TUT							
1010.25.4420.3130.326	General Sales and Use Tax Transactions and Use Tax (TUT)	1,299,723	1,200,000	1,200,000	93,391	-	1,200,000
	Program Total: 4420 - Measure C/V TUT	1,299,723	1,200,000	1,200,000	93,391	-	1,200,000
Program: 5005 - Rental Properties							
1010.25.5005.3901.100	Refunds and Reimbursements Miscellaneous	528	400	400	88	-	400
	Program Total: 5005 - Rental Properties	528	400	400	88	-	400
	Department Total: 25 - Finance	1,300,250	1,200,400	1,200,400	93,479	-	1,200,400

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Department: 30 - Police							
Program: 0000 - Non Program Activity							
1010.30.0000.3320.100	Federal Revenue - Other Refunds and Reimbursements	-	2,000	2,000	-	-	2,000
1010.30.0000.3345.004	State Revenues - Other POST Reimbursements	858	5,000	5,000	2,474	-	5,000
1010.30.0000.3345.100	State Revenues - Other Refunds & Reimbursements	52	250	250	-	-	250
1010.30.0000.3380.100	Local Government Revenue Fines and Forfeitures	24,468	15,000	15,000	2,416	-	15,000
1010.30.0000.3380.106	Local Government Revenue Administrative Citations Police	100	400	400	-	-	400
1010.30.0000.3380.112	Local Government Revenue Property Room Proceeds	-	400	400	-	-	400
1010.30.0000.3421.100	Police Vehicle Repossession	-	100	100	27	-	100
1010.30.0000.3421.105	Police Cite Sign Off / VIN Verification	305	500	500	23	-	500
1010.30.0000.3421.110	Police DUI Accident & Arrest Processing	1,057	500	500	242	-	500
1010.30.0000.3421.111	Police Vehicle Impound Fee	1,446	500	500	321	-	500
1010.30.0000.3421.115	Police Police Report (Copy)	18	10	10	7	-	10
1010.30.0000.3421.120	Police Fingerprint Processing	4,712	2,500	2,500	2,045	-	2,500
1010.30.0000.3421.122	Police Visa/Clearance Letter	31	31	31	16	-	31
1010.30.0000.3421.130	Police Reproduce/Sale of Tapes & Photos	170	50	50	57	-	50
1010.30.0000.3421.140	Police Alarm System Registration	1,531	750	750	200	-	750
1010.30.0000.3421.141	Police False Alarm Response	2,808	500	500	119	-	500
1010.30.0000.3421.180	Police Special Services	-	250	250	-	-	250
1010.30.0000.3421.187	Police Subpoena Duces Tecum	63	-	-	31	-	-
1010.30.0000.3901.100	Refunds and Reimbursements Miscellaneous	40,348	1,500	1,500	490	-	1,500
1010.30.0000.3901.140	Refunds and Reimbursements Negligence Cost Recovery Fees	989	-	-	-	-	-
1010.30.0000.3902.100	Miscellaneous Revenue General	288	100	100	330	-	100
1010.30.0000.3910.010	Transfers In From General Fund	-	3,070	3,070	-	-	3,070
1010.30.0000.3910.138	Transfers In From USDA Fund	-	3,148	3,148	-	-	3,148
	Program Total: 0000 - Non Program Activity	79,244	36,559	36,559	8,799	-	36,559
	Department Total: 30 - Police	79,244	36,559	36,559	8,799	-	36,559
Department: 35 - Fire							
Program: 0000 - Non Program Activity							
1010.35.0000.3345.100	State Revenues - Other Refunds & Reimbursements	302,196	75,000	75,000	-	-	75,000
1010.35.0000.3380.103	Local Government Revenue Fines and Citations Fire	36,650	-	-	-	-	-
1010.35.0000.3422.304	Fire Fuel Reduction Burn Permit	6,980	10,000	10,000	-	-	10,000
1010.35.0000.3422.315	Fire Residential Burning Regulation	13,393	10,000	10,000	-	-	10,000
1010.35.0000.3422.338	Fire Fire Flow/Hydrant Location	22	-	-	-	-	-
1010.35.0000.3901.100	Refunds and Reimbursements Miscellaneous	-	-	-	52,500	-	-
1010.35.0000.3902.100	Miscellaneous Revenue General	1,706	-	-	-	-	-

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	Program Total: 0000 - Non Program Activity	360,948	95,000	95,000	52,500	-	95,000
	Department Total: 35 - Fire	360,948	95,000	95,000	52,500	-	95,000
Department:	**40 - Community Development**						
Program:	**4720 - CDD Planning**						
1010.40.4720.3380.101	Local Government Revenue Fines and Citations Comm Develop	12,400	8,000	8,000	-	-	8,000
1010.40.4720.3400.101	CDD Planning Appeals Review	104	-	-	-	-	-
1010.40.4720.3400.104	CDD Planning Tentative Parcel Map	2,074	1,754	1,754	-	-	1,754
1010.40.4720.3400.109	CDD Planning Street Address Change Review	-	176	176	-	-	176
1010.40.4720.3400.111	CDD Planning Landscape Plan	849	1,136	1,136	283	-	1,136
1010.40.4720.3400.130	CDD Planning General Plan Amend and Rezoning	-	2,907	2,907	-	-	2,907
1010.40.4720.3400.139	CDD Planning Research on Request	94	94	94	-	-	94
1010.40.4720.3400.170	CDD Planning Use Permit Class A	2,828	2,121	2,121	1,414	-	2,121
1010.40.4720.3400.171	CDD Planning Use Permit Class B	3,759	-	-	-	-	-
1010.40.4720.3400.173	CDD Planning Temporary Use Permit	3,991	3,000	3,000	1,265	-	3,000
1010.40.4720.3400.174	CDD Planning Administrative Permit	16,682	12,000	12,000	2,606	-	12,000
1010.40.4720.3400.178	CDD Planning Site Plan/Use Permit Mod Class B	-	-	-	652	-	-

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1010.40.4720.3400.184	CDD Planning Site Plan Review Class A	660	660	660	-	-	660
1010.40.4720.3400.200	CDD Planning Tree Felling Permit	49	-	-	-	-	-
1010.40.4720.3400.307	CDD Planning Design Review Application	1,581	1,756	1,756	922	-	1,756
1010.40.4720.3901.100	Refunds and Reimbursements Miscellaneous	-	-	-	435	-	-
1010.40.4720.3910.628	Transfers In From Gen Plan Fee	201,178	-	-	-	-	-
	Program Total: 4720 - CDD Planning	246,250	33,604	33,604	7,577	-	33,604
Program: 4780 - CDD - Waste Management							
1010.40.4780.3182.335	Franchise Taxes Franchise Taxes	15,184	15,500	15,500	-	-	15,500
1010.40.4780.3380.104	Local Government Revenue Fines and Citations Waste Mgmt	100	-	-	-	-	-
	Program Total: 4780 - CDD - Waste Management	15,284	15,500	15,500	-	-	15,500
	Department Total: 40 - Community Development	261,534	49,104	49,104	7,577	-	49,104
Department: 45 - Public Works							
Program: 4740 - Public Works - Engineering							
1010.45.4740.3402.201	PW Engineering Final Parcel Map	-	-	-	1,296	-	-
1010.45.4740.3402.223	PW Engineering Engineering Site Plan	1,037	1,000	1,000	-	-	1,000
1010.45.4740.3402.224	PW Engineering Grading Check/Inspection	14,229	7,500	7,500	1,911	-	7,500
1010.45.4740.3402.226	PW Engineering Cert of Correction with Hearing	2,333	-	-	1,462	-	-
1010.45.4740.3402.227	PW Engineering Lot Merger Review	4,666	7,500	7,500	2,592	-	7,500
1010.45.4740.3402.228	PW Engineering Lot Line Adjustment	4,536	4,000	4,000	1,815	-	4,000
1010.45.4740.3402.230	PW Engineering Engineer Drain Plan/Calc Review	18,534	20,000	20,000	26	-	20,000
1010.45.4740.3402.232	PW Engineering Erosion Control Plan Review	389	-	-	-	-	-
1010.45.4740.3402.250	PW Engineering Oversized Vehicle Regulation	4,360	5,000	5,000	874	-	5,000
1010.45.4740.3402.270	PW Engineering Encroachment Permit Fees	293,133	250,000	250,000	90,634	22,950	272,950
	Program Total: 4740 - Public Works - Engineering	343,218	295,000	295,000	100,609	22,950	317,950
Program: 4745 - Paradise Community Park							
1010.45.4745.3470.251	Parks & Recreation Space Rental	1,730	1,000	1,000	-	-	1,000
	Program Total: 4745 - Paradise Community Park	1,730	1,000	1,000	-	-	1,000
	Department Total: 45 - Public Works	344,948	296,000	296,000	100,609	22,950	318,950
	REVENUES Total	16,277,360	19,753,420	20,094,290	5,049,100	100,500	20,194,790
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
1010.00.0000.5213.100	Professional/Contract Services General	124,824	100,000	100,000	6,500	-	100,000
1010.00.0000.5225	Bank Fees and Charges	4,638	3,500	3,500	379	-	3,500
1010.00.0000.5501	Debt Service Payment - Principal	484,425	469,658	469,658	-	-	469,658
1010.00.0000.5502	Debt Service Payment - Interest	640,575	685,342	685,342	-	-	685,342
1010.00.0000.5910.090	Transfers Out To Camp Fire 2018 Recovery	-	373,273	373,273	-	-	373,273

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1010.00.0000.5910.105	Transfers Out To Camp Fire Recovery Projects	68,812	60,000	60,000	-	-	60,000
1010.00.0000.5910.650	Transfers Out To Successor Agency RDA NH	-	40,500	40,500	-	-	40,500
1010.00.0000.5910.923	Transfers Out To TOP Housing Loan Fund	-	2,500	2,500	-	-	2,500
	Program Total: 0000 - Non Program Activity	1,323,274	1,734,773	1,734,773	6,879	-	1,734,773
	Department Total: 00 - Non Department Activity	1,323,274	1,734,773	1,734,773	6,879	-	1,734,773
Department: 10 - Legislative							
Program: 4000 - Town Council							
1010.10.4000.5101	Salaries - Permanent	18,000	18,000	18,000	5,250	-	18,000
1010.10.4000.5107	Car Allowance/Mileage	5,501	5,400	5,400	1,575	-	5,400
1010.10.4000.5111	Medicare	339	339	339	99	-	339
1010.10.4000.5112.102	GASB 68 - Pension Expense Social Security	1,451	1,451	1,451	423	-	1,451
1010.10.4000.5113	Worker's Compensation	124	160	160	53	-	160
1010.10.4000.5202.100	Operating Supplies General	229	50	50	170	-	50
1010.10.4000.5213.100	Professional/Contract Services General	-	475	475	-	-	475
1010.10.4000.5219.100	Printing General	54	100	100	-	-	100
1010.10.4000.5220.100	Employee Development General	10,267	11,625	11,625	4,187	-	11,625
1010.10.4000.5223.105	Meals and Refreshments Emergencies and Meetings	102	-	-	-	-	-
	Program Total: 4000 - Town Council	36,066	37,600	37,600	11,757	-	37,600
	Department Total: 10 - Legislative	36,066	37,600	37,600	11,757	-	37,600

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Department: 15 - Town Clerk							
Program: 4100 - Town Clerk							
1010.15.4100.5101	Salaries - Permanent	155,022	179,809	179,809	47,042	-	179,809
1010.15.4100.5105	Salaries - Overtime/FLSA	304	-	-	-	-	-
1010.15.4100.5106.100	Incentives & Admin Leave Administrative Leave	4,529	6,870	6,870	-	-	6,870
1010.15.4100.5107	Car Allowance/Mileage	-	2,400	2,400	623	-	2,400
1010.15.4100.5111	Medicare	2,207	2,742	2,742	688	-	2,742
1010.15.4100.5112.101	GASB 68 - Pension Expense PERS	33,961	37,301	37,301	24,410	-	37,301
1010.15.4100.5113	Worker's Compensation	1,124	935	935	310	-	935
1010.15.4100.5114.101	Health Insurance Medical	15,636	19,662	19,662	4,871	-	19,662
1010.15.4100.5114.102	Health Insurance Dental	1,857	-	-	557	-	-
1010.15.4100.5114.103	Health Insurance Vision	128	-	-	38	-	-
1010.15.4100.5115	Unemployment Compensation	968	-	-	342	-	-
1010.15.4100.5116.101	Life and Disability Insurance Life & Disab.	499	2,006	2,006	174	-	2,006
1010.15.4100.5116.102	Life and Disability Insurance Long Term/Short Term Disability	1,211	-	-	395	-	-
1010.15.4100.5119.100	Retiree Costs Medical Insurance	4,591	4,675	4,675	1,150	-	4,675
1010.15.4100.5201.100	Office Supplies General	247	250	250	166	-	250
1010.15.4100.5202.100	Operating Supplies General	1,225	235	235	-	-	235
1010.15.4100.5204	Subscriptions and Code Books	307	350	350	-	-	350
1010.15.4100.5210.100	Postage General	105	150	150	23	-	150
1010.15.4100.5213.100	Professional/Contract Services General	13,004	27,581	27,581	15,544	-	27,581
1010.15.4100.5214.100	Repair and Maint Service General	11,349	11,415	11,415	5,851	-	11,415
1010.15.4100.5215.106	Rents and Leases Copiers	708	900	900	283	-	900
1010.15.4100.5218.100	Advertising General	3,024	6,500	6,500	729	-	6,500
1010.15.4100.5219.100	Printing General	48	50	50	38	-	50
1010.15.4100.5220.100	Employee Development General	5,157	5,700	5,700	1,888	-	5,700
1010.15.4100.5221	Election-County Services	-	25,000	25,000	-	-	25,000
1010.15.4100.5304	Furniture & Equipment	-	-	-	-	-	-
	Program Total: 4100 - Town Clerk	257,213	334,531	334,531	105,121	-	334,531
	Department Total: 15 - Town Clerk	257,213	334,531	334,531	105,121	-	334,531
Department: 20 - Administrative Services							
Program: 4001 - Tourism							
1010.20.4001.5213.100	Professional/Contract Services General	17,363	-	-	-	-	-
	Program Total: 4001 - Tourism	17,363	-	-	-	-	-
Program: 4200 - Town Manager							
1010.20.4200.5101	Salaries - Permanent	175,918	184,673	184,673	50,227	-	184,673
1010.20.4200.5106.100	Incentives & Admin Leave Administrative Leave	9,042	9,403	9,403	-	-	9,403

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1010.20.4200.5107	Car Allowance/Mileage	2,029	2,040	2,040	430	-	2,040
1010.20.4200.5111	Medicare	2,663	2,406	2,406	716	-	2,406
1010.20.4200.5112.101	GASB 68 - Pension Expense PERS	32,304	33,867	33,867	23,817	-	33,867
1010.20.4200.5113	Worker's Compensation	1,211	960	960	318	-	960
1010.20.4200.5114.101	Health Insurance Medical	13,519	18,320	18,320	4,400	-	18,320
1010.20.4200.5114.102	Health Insurance Dental	1,848	-	-	536	-	-
1010.20.4200.5114.103	Health Insurance Vision	153	-	-	45	-	-
1010.20.4200.5115	Unemployment Compensation	1,183	-	-	356	-	-
1010.20.4200.5116.101	Life and Disability Insurance Life & Disab.	459	1,305	1,305	133	-	1,305
1010.20.4200.5116.102	Life and Disability Insurance Long Term/Short Term Disability	1,813	-	-	541	-	-
1010.20.4200.5119.100	Retiree Costs Medical Insurance	33,946	36,318	36,318	7,781	-	36,318
1010.20.4200.5201.100	Office Supplies General	14	500	500	15	-	500
1010.20.4200.5202.100	Operating Supplies General	990	1,000	1,000	-	-	1,000
1010.20.4200.5203.100	Repairs and Maint Supplies General	-	-	-	21	-	-
1010.20.4200.5210.100	Postage General	71	80	80	15	-	80
1010.20.4200.5213.100	Professional/Contract Services General	5,600	65,500	65,500	30,500	-	65,500
1010.20.4200.5216.100	Communications General Services	760	607	607	123	-	607
1010.20.4200.5218.100	Advertising General	25	-	-	-	-	-
1010.20.4200.5219.100	Printing General	102	200	200	38	-	200
1010.20.4200.5220.100	Employee Development General	7,774	5,000	5,000	2,671	-	5,000
1010.20.4200.5223.105	Meals and Refreshments Emergencies and Meetings	1,132	1,000	1,000	1,006	1,000	2,000
1010.20.4200.5224	Travel Expenses - Lodging, Airfare, Incidentals	-	2,500	2,500	-	3,000	5,500
1010.20.4200.5260	Miscellaneous	(2,565)	-	-	-	-	-
1010.20.4200.5304	Furniture & Equipment	4,441	4,500	4,500	-	(4,000)	500
	Program Total: 4200 - Town Manager	294,433	370,179	370,179	123,689	-	370,179
Program: 4201 - Central Services							
1010.20.4201.5101	Salaries - Permanent	126,982	144,186	144,186	36,645	-	144,186
1010.20.4201.5106.100	Incentives & Admin Leave Administrative Leave	-	3,421	3,421	-	-	3,421
1010.20.4201.5111	Medicare	1,989	2,140	2,140	577	-	2,140
1010.20.4201.5112.101	GASB 68 - Pension Expense PERS	24,324	26,489	26,489	18,461	-	26,489
1010.20.4201.5113	Worker's Compensation	881	750	750	249	-	750
1010.20.4201.5114.101	Health Insurance Medical	10,410	13,612	13,612	3,247	-	13,612
1010.20.4201.5114.102	Health Insurance Dental	1,279	-	-	417	-	-
1010.20.4201.5114.103	Health Insurance Vision	87	-	-	27	-	-
1010.20.4201.5115	Unemployment Compensation	873	-	-	284	-	-
1010.20.4201.5116.101	Life and Disability Insurance Life & Disab.	509	1,905	1,905	142	-	1,905
1010.20.4201.5116.102	Life and Disability Insurance Long Term/Short Term Disability	1,275	-	-	391	-	-

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1010.20.4201.5201.100	Office Supplies General	1,011	1,000	1,000	-	-	1,000
1010.20.4201.5202.100	Operating Supplies General	3,775	3,145	3,145	720	-	3,145
1010.20.4201.5203.100	Repairs and Maint Supplies General	5,048	3,500	3,500	1,848	-	3,500
1010.20.4201.5209.101	Auto Fuel Expense Town Vehicles	1,131	2,000	2,000	-	-	2,000
1010.20.4201.5210.100	Postage General	-	50	50	-	-	50
1010.20.4201.5211.135	Utilities Water and Sewer	1,445	1,401	1,401	233	-	1,401
1010.20.4201.5211.137	Utilities Electric and Gas	30,132	31,000	31,000	9,839	-	31,000
1010.20.4201.5212.100	Insurance General	264,212	289,850	289,850	297,051	10,000	299,850
1010.20.4201.5213.100	Professional/Contract Services General	47,114	66,525	66,525	24,667	-	66,525
1010.20.4201.5214.100	Repair and Maint Service General	27,177	26,800	26,800	3,898	-	26,800
1010.20.4201.5215.100	Rents and Leases Miscellaneous	1,578	1,620	1,620	541	-	1,620
1010.20.4201.5218.100	Advertising General	-	100	100	-	-	100
1010.20.4201.5219.100	Printing General	245	750	750	237	-	750
1010.20.4201.5220.100	Employee Development General	918	-	-	-	-	-
1010.20.4201.5223.105	Meals and Refreshments Emergencies and Meetings	72	-	-	-	-	-
1010.20.4201.5225	Bank Fees and Charges	0	-	-	-	-	-
1010.20.4201.5260	Miscellaneous	38,392	40,644	40,644	43,344	2,700	43,344
1010.20.4201.5304	Furniture & Equipment	1,162	-	-	-	-	-
1010.20.4201.5500	Bond Payments - Fiscal Agent	1,496	4,250	4,250	-	-	4,250
	Program Total: 4201 - Central Services	593,519	665,138	665,138	442,820	12,700	677,838
Program:	**4202 - Information Technology**						
1010.20.4202.5101	Salaries - Permanent	47,824	131,698	131,698	34,821	-	131,698
1010.20.4202.5106.100	Incentives & Admin Leave Administrative Leave	2,693	7,598	7,598	-	-	7,598
1010.20.4202.5107	Car Allowance/Mileage	907	2,400	2,400	700	-	2,400
1010.20.4202.5111	Medicare	691	2,055	2,055	481	-	2,055
1010.20.4202.5112.101	GASB 68 - Pension Expense PERS	4,137	25,781	25,781	17,420	-	25,781
1010.20.4202.5113	Worker's Compensation	-	685	685	227	-	685
1010.20.4202.5114.101	Health Insurance Medical	5,639	17,994	17,994	4,222	-	17,994
1010.20.4202.5114.102	Health Insurance Dental	901	-	-	630	-	-
1010.20.4202.5114.103	Health Insurance Vision	75	-	-	53	-	-
1010.20.4202.5115	Unemployment Compensation	274	-	-	243	-	-
1010.20.4202.5116.101	Life and Disability Insurance Life & Disab.	128	1,336	1,336	112	-	1,336
1010.20.4202.5116.102	Life and Disability Insurance Long Term/Short Term Disability	239	-	-	234	-	-
1010.20.4202.5199.199	Other Fund Support IT-Serv from Tech Fee	(380,902)	(463,123)	(463,123)	(167,837)	-	(463,123)
1010.20.4202.5202.100	Operating Supplies General	628	3,250	3,250	298	-	3,250
1010.20.4202.5209.101	Auto Fuel Expense Town Vehicles	881	-	-	-	-	-
1010.20.4202.5213.100	Professional/Contract Services General	270,218	59,890	59,890	28,766	-	59,890

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1010.20.4202.5214.100	Repair and Maint Service General	70,236	131,482	131,482	65,935	-	131,482
1010.20.4202.5215.106	Rents and Leases Copiers	2,203	2,184	2,184	728	-	2,184
1010.20.4202.5216.100	Communications General Services	41,992	49,320	49,320	11,193	-	49,320
1010.20.4202.5218.100	Advertising General	1,371	-	-	-	-	-
1010.20.4202.5219.100	Printing General	27	-	-	-	-	-
1010.20.4202.5220.100	Employee Development General	-	5,000	5,000	554	-	5,000
1010.20.4202.5223.105	Meals and Refreshments Emergencies and Meetings	54	-	-	-	-	-
1010.20.4202.5225	Bank Fees and Charges	1,798	1,450	1,450	164	-	1,450
1010.20.4202.5304	Furniture & Equipment	23,825	21,000	21,000	1,057	-	21,000
	Program Total: 4202 - Information Technology	95,838	-	-	(0)	-	-
Program: 4203 - HR and Risk Management							
1010.20.4203.5101	Salaries - Permanent	143,522	149,530	149,530	41,159	-	149,530
1010.20.4203.5106.100	Incentives & Admin Leave Administrative Leave	1,890	7,828	7,828	-	-	7,828
1010.20.4203.5107	Car Allowance/Mileage	2,316	2,400	2,400	700	-	2,400
1010.20.4203.5111	Medicare	2,077	2,430	2,430	585	-	2,430
1010.20.4203.5112.101	GASB 68 - Pension Expense PERS	32,064	33,542	33,542	21,454	-	33,542
1010.20.4203.5113	Worker's Compensation	996	818	818	271	-	818
1010.20.4203.5114.101	Health Insurance Medical	16,135	21,019	21,019	4,908	-	21,019
1010.20.4203.5114.102	Health Insurance Dental	2,105	-	-	630	-	-
1010.20.4203.5114.103	Health Insurance Vision	180	-	-	51	-	-
1010.20.4203.5115	Unemployment Compensation	909	-	-	292	-	-
1010.20.4203.5116.101	Life and Disability Insurance Life & Disab.	505	1,473	1,473	146	-	1,473
1010.20.4203.5116.102	Life and Disability Insurance Long Term/Short Term Disability	910	-	-	298	-	-
1010.20.4203.5119.120	Retiree Costs PERS 1959 Survivor Benefits	4,061	3,750	3,750	-	-	3,750
1010.20.4203.5201.100	Office Supplies General	358	500	500	35	-	500
1010.20.4203.5202.100	Operating Supplies General	471	700	700	7	-	700
1010.20.4203.5210.100	Postage General	3	25	25	22	-	25
1010.20.4203.5213.100	Professional/Contract Services General	1,481	2,218	2,218	2,285	-	2,218
1010.20.4203.5214.100	Repair and Maint Service General	373	500	500	-	-	500
1010.20.4203.5216.100	Communications General Services	31	-	-	-	-	-
1010.20.4203.5219.100	Printing General	75	-	-	0	-	-
1010.20.4203.5220.100	Employee Development General	246	-	-	-	-	-
	Program Total: 4203 - HR and Risk Management	210,709	226,733	226,733	72,845	-	226,733
Program: 4300 - Legal Services							
1010.20.4300.5210.100	Postage General	-	10	10	-	-	10
1010.20.4300.5213.100	Professional/Contract Services General	156,559	203,100	203,100	5,133	-	203,100
	Program Total: 4300 - Legal Services	156,559	203,110	203,110	5,133	-	203,110

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	Department Total: 20 - Administrative Services	1,368,420	1,465,160	1,465,160	644,487	12,700	1,477,860
Department: 25 - Finance							
Program: 4400 - Finance							
1010.25.4400.5101	Salaries - Permanent	156,006	171,452	171,452	45,764	-	171,452
1010.25.4400.5106.100	Incentives & Admin Leave Administrative Leave	8,392	8,924	8,924	-	-	8,924
1010.25.4400.5107	Car Allowance/Mileage	1,992	1,992	1,992	581	-	1,992
1010.25.4400.5111	Medicare	2,358	2,644	2,644	653	-	2,644
1010.25.4400.5112.101	GASB 68 - Pension Expense PERS	30,134	31,539	31,539	22,143	-	31,539
1010.25.4400.5113	Worker's Compensation	1,084	892	892	296	-	892
1010.25.4400.5114.101	Health Insurance Medical	7,728	10,073	10,073	2,436	-	10,073
1010.25.4400.5114.102	Health Insurance Dental	914	-	-	274	-	-
1010.25.4400.5114.103	Health Insurance Vision	91	-	-	27	-	-
1010.25.4400.5115	Unemployment Compensation	1,034	-	-	328	-	-
1010.25.4400.5116.101	Life and Disability Insurance Life & Disab.	486	1,594	1,594	143	-	1,594
1010.25.4400.5116.102	Life and Disability Insurance Long Term/Short Term Disability	927	-	-	305	-	-
1010.25.4400.5119.100	Retiree Costs Medical Insurance	33,083	34,000	34,000	8,502	-	34,000
1010.25.4400.5201.100	Office Supplies General	267	500	500	18	-	500
1010.25.4400.5202.100	Operating Supplies General	-	230	230	96	-	230
1010.25.4400.5210.100	Postage General	1,477	1,300	1,300	431	-	1,300
1010.25.4400.5213.100	Professional/Contract Services General	20,872	36,480	36,480	310	-	36,480
1010.25.4400.5218.100	Advertising General	-	100	100	-	-	100
1010.25.4400.5219.100	Printing General	1,272	1,000	1,000	-	-	1,000
1010.25.4400.5220.100	Employee Development General	2,532	4,750	4,750	225	-	4,750
1010.25.4400.5220.110	Employee Development Education Reimb MOU Program	400	-	-	600	-	-
1010.25.4400.5304	Furniture & Equipment	4,158	1,500	1,500	-	2,150	3,650
	Program Total: 4400 - Finance	275,208	308,970	308,970	83,131	2,150	311,120
Program: 4420 - Measure C/V TUT							
Cost Center Activity: 301 - Police Operations							
1010.25.4420.301.5102	Salaries - Temporary	24,124	40,000	40,000	-	-	40,000
1010.25.4420.301.5105	Salaries - Overtime/FLSA	5,733	-	-	-	-	-
1010.25.4420.301.5111	Medicare	432	-	-	-	-	-
1010.25.4420.301.5112.101	GASB 68 - Pension Expense PERS	76	-	-	-	-	-
1010.25.4420.301.5112.102	GASB 68 - Pension Expense Social Security	1,785	-	-	-	-	-
1010.25.4420.301.5113	Worker's Compensation	1,328	-	-	-	-	-
1010.25.4420.301.5114.101	Health Insurance Medical	220	-	-	-	-	-
1010.25.4420.301.5114.102	Health Insurance Dental	23	-	-	-	-	-
1010.25.4420.301.5114.103	Health Insurance Vision	2	-	-	-	-	-

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1010.25.4420.301.5115	Unemployment Compensation	190	-	-	-	-	-
1010.25.4420.301.5116.101	Life and Disability Insurance Life & Disab.	9	-	-	-	-	-
1010.25.4420.301.5202.100	Operating Supplies General	6,846	5,500	5,500	568	-	5,500
1010.25.4420.301.5213.100	Professional/Contract Services General	1,846	18,000	18,000	990	-	18,000
1010.25.4420.301.5220.100	Employee Development General	30,174	40,000	40,000	8,418	-	40,000
1010.25.4420.301.5303	Improvements	6,404	-	-	945	-	-
1010.25.4420.301.5304	Furniture & Equipment	249,872	-	-	-	-	-
1010.25.4420.301.5305	Vehicles	-	235,000	235,000	7,122	-	235,000
1010.25.4420.301.5501	Debt Service Payment - Principal	15,194	-	-	-	-	-
	Cost Center Activity Total: 301 - Police Operations	344,258	338,500	338,500	18,043	-	338,500
Cost Center Activity:	**302 - Police Dispatch**						
1010.25.4420.302.5910.105	Transfers Out To Camp Fire Recovery Projects	7,920	-	-	4,320	-	-
	Cost Center Activity Total: 302 - Police Dispatch	7,920	-	-	4,320	-	-
Cost Center Activity:	**303 - Animal Control**						
1010.25.4420.303.5910.070	Transfers Out To Animal Control Fund	313,377	360,494	360,494	70,774	-	360,494
	Cost Center Activity Total: 303 - Animal Control	313,377	360,494	360,494	70,774	-	360,494
Cost Center Activity:	**326 - Fire Suppression**						
1010.25.4420.326.5213.100	Professional/Contract Services General	250,000	250,000	250,000	-	-	250,000
1010.25.4420.326.5303	Improvements	-	-	-	-	50,000	50,000
1010.25.4420.326.5304	Furniture & Equipment	43,254	70,000	70,000	586	(50,000)	20,000
1010.25.4420.326.5305	Vehicles	-	350,000	350,000	219,921	-	350,000
	Cost Center Activity Total: 326 - Fire Suppression	293,254	670,000	670,000	220,506	-	670,000
Cost Center Activity:	**350 - Public Works Streets**						
1010.25.4420.350.5305	Vehicles	113,963	142,000	142,000	-	-	142,000
1010.25.4420.350.5910.100	Transfer out to Gas Tax Fund	110,273	-	-	-	144,000	144,000
	Cost Center Activity Total: 350 - Public Works Streets	224,236	142,000	142,000	-	144,000	286,000
	Program Total: 4420 - Measure C/V TUT	1,183,046	1,510,994	1,510,994	313,643	144,000	1,654,994
Program:	**5005 - Rental Properties**						
1010.25.5005.5203.100	Repairs and Maint Supplies General	22	-	-	7	-	-
1010.25.5005.5211.175	Utilities Rental Properties	792	792	792	44	-	792
	Program Total: 5005 - Rental Properties	814	792	792	51	-	792
	Department Total: 25 - Finance	1,459,067	1,820,756	1,820,756	396,824	146,150	1,966,906
Department:	**30 - Police**						
Program:	**4510 - Police Administration**						
1010.30.4510.5101	Salaries - Permanent	407,610	484,467	484,467	122,936	-	484,467
1010.30.4510.5103.102	Differential Pay Out of Class	106	-	-	103	-	-
1010.30.4510.5104	Wages - PS Holiday Pay	18,612	24,383	24,383	6,974	-	24,383
1010.30.4510.5105	Salaries - Overtime/FLSA	311	500	500	144	-	500

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1010.30.4510.5106.100	Incentives & Admin Leave Administrative Leave	20,571	25,940	25,940	7,471	-	25,940
1010.30.4510.5106.101	Incentives & Admin Leave School Incentive	21,342	26,363	26,363	7,296	-	26,363
1010.30.4510.5109.100	Allowances Uniform Allowance	2,403	1,860	1,860	814	-	1,860
1010.30.4510.5111	Medicare	6,617	8,164	8,164	2,033	-	8,164
1010.30.4510.5112.101	GASB 68 - Pension Expense PERS	368,868	385,047	385,047	300,405	-	385,047
1010.30.4510.5113	Worker's Compensation	30,993	28,070	28,070	9,304	-	28,070
1010.30.4510.5114.101	Health Insurance Medical	39,465	44,377	44,377	14,015	-	44,377
1010.30.4510.5114.102	Health Insurance Dental	7,610	-	-	2,544	-	-
1010.30.4510.5114.103	Health Insurance Vision	637	-	-	207	-	-
1010.30.4510.5115	Unemployment Compensation	2,880	-	-	1,009	-	-
1010.30.4510.5116.101	Life and Disability Insurance Life & Disab.	1,025	3,512	3,512	321	-	3,512
1010.30.4510.5116.102	Life and Disability Insurance Long Term/Short Term Disability	2,609	-	-	971	-	-
1010.30.4510.5119.100	Retiree Costs Medical Insurance	69,411	59,892	59,892	18,011	-	59,892
1010.30.4510.5201.100	Office Supplies General	594	2,000	2,000	399	-	2,000
1010.30.4510.5202.100	Operating Supplies General	5,415	5,650	5,650	1,148	-	5,650
1010.30.4510.5203.100	Repairs and Maint Supplies General	2,157	2,150	2,150	93	-	2,150
1010.30.4510.5210.100	Postage General	1,608	1,500	1,500	500	-	1,500
1010.30.4510.5211.135	Utilities Water and Sewer	1,137	1,137	1,137	200	-	1,137
1010.30.4510.5211.137	Utilities Electric and Gas	27,533	25,000	25,000	9,916	-	25,000
1010.30.4510.5211.139	Utilities Propane	1,971	1,750	1,750	-	-	1,750
1010.30.4510.5213.100	Professional/Contract Services General	7,646	13,590	13,590	686	-	13,590
1010.30.4510.5214.100	Repair and Maint Service General	39,224	34,139	34,139	8,536	-	34,139
1010.30.4510.5215.100	Rents and Leases Miscellaneous	676	565	565	135	-	565
1010.30.4510.5215.106	Rents and Leases Copiers	1,447	1,344	1,344	445	-	1,344
1010.30.4510.5216.100	Communications General Services	14,405	12,240	12,240	3,966	-	12,240
1010.30.4510.5218.100	Advertising General	1,259	-	-	-	-	-
1010.30.4510.5219.100	Printing General	1,305	500	500	-	-	500
1010.30.4510.5220.100	Employee Development General	7,072	8,500	8,500	741	-	8,500
1010.30.4510.5223.105	Meals and Refreshments Emergencies and Meetings	550	500	500	22	-	500
1010.30.4510.5225	Bank Fees and Charges	1,470	1,000	1,000	123	-	1,000
1010.30.4510.5303	Improvements	-	14,000	14,000	-	-	14,000
1010.30.4510.5304	Furniture & Equipment	15,690	2,500	2,500	-	-	2,500
	Program Total: 4510 - Police Administration	1,132,229	1,220,640	1,220,640	521,468	-	1,220,640
Program: 4520 - Police Operations							
1010.30.4520.5101	Salaries - Permanent	1,231,392	1,502,582	1,502,582	347,349	-	1,502,582
1010.30.4520.5103.102	Differential Pay Out of Class	5,529	-	-	4,091	-	-
1010.30.4520.5103.105	Differential Pay Swing/Graveyard Shift	37,315	-	-	11,161	-	-

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1010.30.4520.5103.108	Differential Pay Canine Maintenance	15,708	-	-	3,856	-	-
1010.30.4520.5104	Wages - PS Holiday Pay	65,550	79,805	79,805	22,223	-	79,805
1010.30.4520.5105	Salaries - Overtime/FLSA	294,473	235,000	235,000	70,230	-	235,000
1010.30.4520.5106.100	Incentives & Admin Leave Administrative Leave	-	-	-	34,726	-	-
1010.30.4520.5106.101	Incentives & Admin Leave School Incentive	73,855	59,347	59,347	15,739	-	59,347
1010.30.4520.5106.103	Incentives & Admin Leave Team Pay	10,085	-	-	2,628	-	-
1010.30.4520.5106.200	Incentives & Admin Leave Gym Reimbursement	-	360	360	-	-	360
1010.30.4520.5106.205	Incentives & Admin Leave PS Recruitment Incentive	-	5,000	5,000	-	-	5,000
1010.30.4520.5109.100	Allowances Uniform Allowance	15,102	15,562	15,562	5,069	-	15,562
1010.30.4520.5111	Medicare	23,170	28,023	28,023	6,797	-	28,023
1010.30.4520.5112.101	GASB 68 - Pension Expense PERS	1,248,327	1,347,719	1,347,719	1,128,618	-	1,347,719
1010.30.4520.5113	Worker's Compensation	114,038	105,564	105,564	34,988	-	105,564
1010.30.4520.5114.101	Health Insurance Medical	198,063	252,993	252,993	55,803	-	252,993
1010.30.4520.5114.102	Health Insurance Dental	24,909	-	-	7,509	-	-
1010.30.4520.5114.103	Health Insurance Vision	2,177	-	-	630	-	-
1010.30.4520.5115	Unemployment Compensation	15,192	-	-	3,277	-	-
1010.30.4520.5116.101	Life and Disability Insurance Life & Disab.	3,859	16,711	16,711	1,112	-	16,711
1010.30.4520.5116.102	Life and Disability Insurance Long Term/Short Term Disability	10,353	-	-	3,125	-	-
1010.30.4520.5119.100	Retiree Costs Medical Insurance	143,591	154,019	154,019	36,499	-	154,019
1010.30.4520.5122	Accrual Bank Payoff	3,288	-	-	422	-	-
1010.30.4520.5199.130	Other Payroll Expenses Interfund Payroll Transfers	(86,985)	(93,478)	(93,478)	-	-	(93,478)
1010.30.4520.5202.100	Operating Supplies General	21,202	44,333	44,333	9,836	-	44,333
1010.30.4520.5204	Subscriptions and Code Books	1,235	500	500	-	-	500
1010.30.4520.5209.101	Auto Fuel Expense Town Vehicles	80,917	70,000	70,000	13,257	-	70,000
1010.30.4520.5213.100	Professional/Contract Services General	7,389	10,200	10,200	2,434	-	10,200
1010.30.4520.5214.100	Repair and Maint Service General	810	1,500	1,500	-	-	1,500
1010.30.4520.5216.100	Communications General Services	33,728	98,281	98,281	2,054	-	98,281
1010.30.4520.5218.100	Advertising General	235	200	200	-	-	200
1010.30.4520.5220.110	Employee Development Education Reimb MOU Program	-	200	200	-	-	200
1010.30.4520.5223.105	Meals and Refreshments Emergencies and Meetings	26	-	-	-	-	-
1010.30.4520.5224	Travel Expenses - Lodging, Airfare, Incidentals	146	-	-	-	-	-
1010.30.4520.5304	Furniture & Equipment	8,750	65,500	3,000	-	-	3,000
1010.30.4520.5305	Vehicles	-	-	62,500	-	12,500	75,000
1010.30.4520.5501	Debt Service Payment - Principal	10,861	10,861	10,861	10,861	-	10,861
	Program Total: 4520 - Police Operations	3,614,289	4,010,782	4,010,782	1,834,294	12,500	4,023,282
Program:	**4530 - Public Safety Communications**						
1010.30.4530.5101	Salaries - Permanent	129,489	244,835	244,835	37,708	(10,500)	234,335

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1010.30.4530.5104	Wages - PS Holiday Pay	3,744	10,718	10,718	2,239	-	10,718
1010.30.4530.5105	Salaries - Overtime/FLSA	1,783	1,000	1,000	396	-	1,000
1010.30.4530.5106.100	Incentives & Admin Leave Administrative Leave	-	-	-	2,084	-	-
1010.30.4530.5106.101	Incentives & Admin Leave School Incentive	3,284	13,767	13,767	1,402	-	13,767
1010.30.4530.5106.200	Incentives & Admin Leave Gym Reimbursement	360	90	90	90	-	90
1010.30.4530.5109.100	Allowances Uniform Allowance	1,364	3,228	3,228	398	-	3,228
1010.30.4530.5109.101	Allowances Boot Allowance	500	-	-	500	-	-
1010.30.4530.5111	Medicare	1,705	3,968	3,968	556	-	3,968
1010.30.4530.5112.101	GASB 68 - Pension Expense PERS	28,250	51,845	51,845	32,974	-	51,845
1010.30.4530.5113	Worker's Compensation	3,085	4,888	4,888	1,620	-	4,888
1010.30.4530.5114.101	Health Insurance Medical	28,851	63,624	63,624	9,176	-	63,624
1010.30.4530.5114.102	Health Insurance Dental	4,280	-	-	1,261	-	-
1010.30.4530.5114.103	Health Insurance Vision	306	-	-	91	-	-
1010.30.4530.5115	Unemployment Compensation	748	-	-	276	-	-
1010.30.4530.5116.101	Life and Disability Insurance Life & Disab.	506	3,520	3,520	150	-	3,520
1010.30.4530.5116.102	Life and Disability Insurance Long Term/Short Term Disability	1,312	-	-	398	-	-
1010.30.4530.5119.100	Retiree Costs Medical Insurance	70,577	74,720	74,720	15,996	-	74,720
1010.30.4530.5122	Accrual Bank Payoff	-	-	-	778	-	-
1010.30.4530.5199.130	Other Payroll Expenses Interfund Payroll Transfers	(61,358)	(66,785)	(66,785)	-	-	(66,785)
1010.30.4530.5202.100	Operating Supplies General	656	2,200	2,200	-	-	2,200
1010.30.4530.5204	Subscriptions and Code Books	160	190	190	-	-	190
1010.30.4530.5213.100	Professional/Contract Services General	374,595	352,008	352,008	-	-	352,008
1010.30.4530.5214.100	Repair and Maint Service General	22,310	96,310	96,310	-	-	96,310
1010.30.4530.5216.100	Communications General Services	39,133	13,200	13,200	3,321	-	13,200
1010.30.4530.5218.100	Advertising General	-	100	100	5,250	10,500	10,600
1010.30.4530.5220.100	Employee Development General	3,117	8,450	8,450	5,201	-	8,450
1010.30.4530.5304	Furniture & Equipment	-	5,000	5,000	-	-	5,000
	Program Total: 4530 - Public Safety Communications	658,757	886,876	886,876	121,866	-	886,876
Program: 4550 - Fleet Management							
1010.30.4550.5101	Salaries - Permanent	99,793	130,238	130,238	36,896	-	130,238
1010.30.4550.5109.100	Allowances Uniform Allowance	779	1,000	1,000	292	-	1,000
1010.30.4550.5109.101	Allowances Boot Allowance	1,000	1,000	1,000	1,000	-	1,000
1010.30.4550.5109.102	Allowances Tool Allowance	2,000	2,000	2,000	3,500	-	2,000
1010.30.4550.5111	Medicare	1,437	1,946	1,946	582	-	1,946
1010.30.4550.5112.101	GASB 68 - Pension Expense PERS	22,807	24,798	24,798	16,945	-	24,798
1010.30.4550.5113	Worker's Compensation	4,817	3,243	3,243	1,075	-	3,243
1010.30.4550.5114.101	Health Insurance Medical	9,626	14,277	14,277	3,247	-	14,277

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1010.30.4550.5114.102	Health Insurance Dental	1,811	-	-	600	-	-
1010.30.4550.5114.103	Health Insurance Vision	99	-	-	36	-	-
1010.30.4550.5115	Unemployment Compensation	618	-	-	287	-	-

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1010.30.4550.5116.101	Life and Disability Insurance Life & Disab.	417	1,845	1,845	150	-	1,845
1010.30.4550.5116.102	Life and Disability Insurance Long Term/Short Term Disability	987	-	-	376	-	-
1010.30.4550.5119.100	Retiree Costs Medical Insurance	7,259	7,213	7,213	1,774	-	7,213
1010.30.4550.5202.100	Operating Supplies General	12,328	4,500	4,500	6,745	-	4,500
1010.30.4550.5203.100	Repairs and Maint Supplies General	101,476	65,000	65,000	22,482	-	65,000
1010.30.4550.5203.300	Repairs and Maint Supplies Accident and Negligence	11,326	5,000	5,000	-	-	5,000
1010.30.4550.5209.101	Auto Fuel Expense Town Vehicles	1,752	1,000	1,000	388	-	1,000
1010.30.4550.5210.100	Postage General	-	50	50	26	-	50
1010.30.4550.5213.100	Professional/Contract Services General	4,082	2,316	2,316	346	-	2,316
1010.30.4550.5214.100	Repair and Maint Service General	33,130	22,000	22,000	3,939	-	22,000
1010.30.4550.5214.300	Repair and Maint Service Accident and Negligence	5,292	3,500	3,500	-	-	3,500
1010.30.4550.5216.100	Communications General Services	900	900	900	263	-	900
1010.30.4550.5218.100	Advertising General	259	-	-	-	-	-
1010.30.4550.5220.100	Employee Development General	5,854	10,000	10,000	447	-	10,000
1010.30.4550.5224	Travel Expenses - Lodging, Airfare, Incidentals	42	-	-	-	-	-
1010.30.4550.5304	Furniture & Equipment	5,908	21,800	21,800	-	-	21,800
	Program Total: 4550 - Fleet Management	335,799	323,626	323,626	101,394	-	323,626
	Department Total: 30 - Police	5,741,075	6,441,924	6,441,924	2,579,022	12,500	6,454,424
Department:	**35 - Fire**						
Program:	**4610 - Fire - Administrative**						
1010.35.4610.5101	Salaries - Permanent	95,828	122,922	122,922	32,120	-	122,922
1010.35.4610.5105	Salaries - Overtime/FLSA	34	-	-	-	-	-
1010.35.4610.5106.200	Incentives & Admin Leave Gym Reimbursement	-	60	60	-	-	60
1010.35.4610.5109.100	Allowances Uniform Allowance	566	636	636	225	-	636
1010.35.4610.5109.101	Allowances Boot Allowance	565	700	700	565	-	700
1010.35.4610.5111	Medicare	1,522	1,802	1,802	519	-	1,802
1010.35.4610.5112.101	GASB 68 - Pension Expense PERS	18,158	22,496	22,496	15,613	-	22,496
1010.35.4610.5113	Worker's Compensation	2,436	2,299	2,299	762	-	2,299
1010.35.4610.5114.101	Health Insurance Medical	7,617	10,466	10,466	2,809	-	10,466
1010.35.4610.5115	Unemployment Compensation	656	-	-	257	-	-
1010.35.4610.5116.101	Life and Disability Insurance Life & Disab.	372	1,630	1,630	127	-	1,630
1010.35.4610.5116.102	Life and Disability Insurance Long Term/Short Term Disability	927	-	-	343	-	-
1010.35.4610.5119.100	Retiree Costs Medical Insurance	55,180	53,231	53,231	14,735	-	53,231
1010.35.4610.5201.100	Office Supplies General	212	400	400	33	-	400
1010.35.4610.5202.100	Operating Supplies General	1,574	3,450	3,450	508	-	3,450
1010.35.4610.5203.100	Repairs and Maint Supplies General	7,725	8,050	8,050	3,147	-	8,050
1010.35.4610.5209.101	Auto Fuel Expense Town Vehicles	-	500	500	-	-	500

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1010.35.4610.5210.100	Postage General	255	300	300	146	-	300
1010.35.4610.5211.135	Utilities Water and Sewer	2,589	2,300	2,300	376	-	2,300
1010.35.4610.5211.137	Utilities Electric and Gas	30,466	27,000	27,000	10,761	-	27,000
1010.35.4610.5211.139	Utilities Propane	698	750	750	155	-	750
1010.35.4610.5213.100	Professional/Contract Services General	5,072	1,476	1,476	265	-	1,476
1010.35.4610.5214.100	Repair and Maint Service General	7,442	7,320	7,320	6,275	-	7,320
1010.35.4610.5215.106	Rents and Leases Copiers	802	780	780	245	-	780
1010.35.4610.5216.100	Communications General Services	14,192	16,270	16,270	3,339	-	16,270
1010.35.4610.5219.100	Printing General	-	11,000	11,000	-	-	11,000
1010.35.4610.5225	Bank Fees and Charges	-	-	-	398	-	-
1010.35.4610.5303	Improvements	-	35,100	35,100	22,046	-	35,100
	Program Total: 4610 - Fire - Administrative	254,885	330,938	330,938	115,771	-	330,938
Program:	**4615 - Fire - EOC**						
1010.35.4615.5202.100	Operating Supplies General	18	400	400	959	-	400
1010.35.4615.5203.100	Repairs and Maint Supplies General	-	-	-	75	-	-
1010.35.4615.5213.100	Professional/Contract Services General	96	-	-	-	-	-
1010.35.4615.5214.100	Repair and Maint Service General	3,502	4,760	4,760	563	-	4,760
1010.35.4615.5216.100	Communications General Services	6,885	5,862	5,862	1,372	-	5,862
1010.35.4615.5223.105	Meals and Refreshments Emergencies and Meetings	-	500	500	-	-	500
1010.35.4615.5304	Furniture & Equipment	-	6,500	6,500	-	-	6,500
	Program Total: 4615 - Fire - EOC	10,500	18,022	18,022	2,970	-	18,022

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Program: 4620 - Fire - Prevention							
1010.35.4620.5213.100	Professional/Contract Services General	13,175	-	-	-	-	-
	Program Total: 4620 - Fire - Prevention	13,175	-	-	-	-	-
Program: 4630 - Fire - Suppression							
1010.35.4630.5112.101	GASB 68 - Pension Expense PERS	112,411	224,287	224,287	224,287	-	224,287
1010.35.4630.5119.100	Retiree Costs Medical Insurance	165,243	164,362	164,362	41,308	-	164,362
1010.35.4630.5202.100	Operating Supplies General	8,712	12,750	12,750	4,212	-	12,750
1010.35.4630.5203.100	Repairs and Maint Supplies General	1,984	4,450	4,450	1,259	-	4,450
1010.35.4630.5209.101	Auto Fuel Expense Town Vehicles	28,822	19,000	19,000	4,837	-	19,000
1010.35.4630.5213.100	Professional/Contract Services General	3,813,964	4,320,404	4,320,404	-	-	4,320,404
1010.35.4630.5214.100	Repair and Maint Service General	3,603	9,750	9,750	3,024	-	9,750
1010.35.4630.5220.100	Employee Development General	(50)	500	500	-	-	500
1010.35.4630.5223.105	Meals and Refreshments Emergencies and Meetings	14	200	200	-	-	200
1010.35.4630.5269.135	Emergency Incident Costs Fire Related	-	250	250	-	-	250
1010.35.4630.5304	Furniture & Equipment	23,158	22,420	22,420	2,553	-	22,420
1010.35.4630.5305	Vehicles	4,952	659,000	659,000	570,000	-	659,000
1010.35.4630.5501	Debt Service Payment - Principal	68,738	68,738	68,738	68,738	-	68,738
	Program Total: 4630 - Fire - Suppression	4,231,550	5,506,111	5,506,111	920,217	-	5,506,111
Program: 4640 - Fire - Volunteer Program							
1010.35.4640.5118	Volunteer Benefits	587	1,632	1,632	367	-	1,632
1010.35.4640.5202.100	Operating Supplies General	-	200	200	-	-	200
1010.35.4640.5213.100	Professional/Contract Services General	583	400	400	-	-	400
	Program Total: 4640 - Fire - Volunteer Program	1,170	2,232	2,232	367	-	2,232
	Department Total: 35 - Fire	4,511,280	5,857,303	5,857,303	1,039,325	-	5,857,303
Department: 40 - Community Development							
Program: 4720 - CDD Planning							
1010.40.4720.5101	Salaries - Permanent	262,507	376,161	376,161	72,293	-	376,161
1010.40.4720.5105	Salaries - Overtime/FLSA	387	5,000	5,000	-	-	5,000
1010.40.4720.5106.100	Incentives & Admin Leave Administrative Leave	2,962	6,076	6,076	-	-	6,076
1010.40.4720.5106.200	Incentives & Admin Leave Gym Reimbursement	216	432	432	228	-	432
1010.40.4720.5107	Car Allowance/Mileage	360	360	360	105	-	360
1010.40.4720.5109.101	Allowances Boot Allowance	450	1,100	1,100	1,000	-	1,100
1010.40.4720.5111	Medicare	3,711	5,394	5,394	1,034	-	5,394
1010.40.4720.5112.101	GASB 68 - Pension Expense PERS	59,196	71,471	71,471	46,625	-	71,471
1010.40.4720.5113	Worker's Compensation	6,546	4,726	4,726	1,566	-	4,726
1010.40.4720.5114.101	Health Insurance Medical	33,974	61,595	61,595	9,394	-	61,595
1010.40.4720.5114.102	Health Insurance Dental	5,194	-	-	1,339	-	-
1010.40.4720.5114.103	Health Insurance Vision	455	-	-	118	-	-

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1010.40.4720.5115	Unemployment Compensation	1,626	-	-	511	-	-
1010.40.4720.5116.101	Life and Disability Insurance Life & Disab.	1,094	4,779	4,779	323	-	4,779
1010.40.4720.5116.102	Life and Disability Insurance Long Term/Short Term Disability	2,034	-	-	568	-	-
1010.40.4720.5119.100	Retiree Costs Medical Insurance	15,042	15,311	15,311	3,907	-	15,311
1010.40.4720.5122	Accrual Bank Payoff	145	-	-	-	-	-
1010.40.4720.5201.100	Office Supplies General	90	200	200	29	-	200
1010.40.4720.5202.100	Operating Supplies General	165	500	500	27	-	500
1010.40.4720.5209.101	Auto Fuel Expense Town Vehicles	4,081	4,000	4,000	430	-	4,000
1010.40.4720.5210.100	Postage General	232	500	500	70	-	500
1010.40.4720.5213.100	Professional/Contract Services General	167,510	800,000	800,000	35,905	-	800,000
1010.40.4720.5214.100	Repair and Maint Service General	5,073	5,500	5,500	5,327	-	5,500
1010.40.4720.5216.100	Communications General Services	901	8,032	8,032	-	-	8,032
1010.40.4720.5218.100	Advertising General	3,152	2,000	2,000	290	-	2,000
1010.40.4720.5219.100	Printing General	54	55	55	86	-	55
1010.40.4720.5220.100	Employee Development General	665	5,000	5,000	1,123	-	5,000
1010.40.4720.5305	Vehicles	-	84,000	84,000	-	-	84,000
	Program Total: 4720 - CDD Planning	577,823	1,462,192	1,462,192	182,299	-	1,462,192
Program: 4780 - CDD - Waste Management							
1010.40.4780.5101	Salaries - Permanent	5,905	-	-	67	-	-
1010.40.4780.5106.100	Incentives & Admin Leave Administrative Leave	243	-	-	-	-	-
1010.40.4780.5107	Car Allowance/Mileage	72	-	-	-	-	-
1010.40.4780.5111	Medicare	95	-	-	1	-	-
1010.40.4780.5112.101	GASB 68 - Pension Expense PERS	1,280	-	-	5	-	-
1010.40.4780.5113	Worker's Compensation	41	-	-	-	-	-
1010.40.4780.5114.101	Health Insurance Medical	349	-	-	-	-	-
1010.40.4780.5114.102	Health Insurance Dental	89	-	-	1	-	-
1010.40.4780.5114.103	Health Insurance Vision	9	-	-	0	-	-
1010.40.4780.5115	Unemployment Compensation	49	-	-	0	-	-
1010.40.4780.5116.101	Life and Disability Insurance Life & Disab.	22	-	-	0	-	-
1010.40.4780.5116.102	Life and Disability Insurance Long Term/Short Term Disability	71	-	-	1	-	-
1010.40.4780.5213.100	Professional/Contract Services General	-	7,521	7,521	-	-	7,521
	Program Total: 4780 - CDD - Waste Management	8,225	7,521	7,521	75	-	7,521
	Department Total: 40 - Community Development	586,049	1,469,713	1,469,713	182,375	-	1,469,713
Department: 45 - Public Works							
Program: 4740 - Public Works - Engineering							
1010.45.4740.5101	Salaries - Permanent	229,239	342,967	402,398	75,049	-	402,398
1010.45.4740.5105	Salaries - Overtime/FLSA	2,961	2,800	2,800	-	-	2,800

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1010.45.4740.5106.100	Incentives & Admin Leave Administrative Leave	7,211	9,795	11,147	-	-	11,147
1010.45.4740.5106.200	Incentives & Admin Leave Gym Reimbursement	-	-	-	144	-	-
1010.45.4740.5107	Car Allowance/Mileage	1,200	1,200	1,200	350	-	1,200
1010.45.4740.5109.101	Allowances Boot Allowance	400	800	1,200	460	-	1,200
1010.45.4740.5111	Medicare	3,516	5,185	6,072	1,115	-	6,072
1010.45.4740.5112.101	GASB 68 - Pension Expense PERS	46,526	66,734	81,224	44,126	-	81,224
1010.45.4740.5113	Worker's Compensation	19,108	29,135	32,640	9,657	-	32,640
1010.45.4740.5114.101	Health Insurance Medical	20,462	43,529	53,397	7,249	-	53,397
1010.45.4740.5114.102	Health Insurance Dental	2,263	-	-	779	-	-
1010.45.4740.5114.103	Health Insurance Vision	198	-	-	64	-	-
1010.45.4740.5115	Unemployment Compensation	1,529	-	-	553	-	-
1010.45.4740.5116.101	Life and Disability Insurance Life & Disab.	677	3,504	4,441	231	-	4,441
1010.45.4740.5116.102	Life and Disability Insurance Long Term/Short Term Disability	2,267	-	-	803	-	-
1010.45.4740.5119.100	Retiree Costs Medical Insurance	6,077	7,213	7,213	887	-	7,213
1010.45.4740.5201.100	Office Supplies General	691	1,500	1,500	186	-	1,500
1010.45.4740.5202.100	Operating Supplies General	1,835	1,200	1,200	-	-	1,200
1010.45.4740.5203.100	Repairs and Maint Supplies General	94	100	100	-	-	100
1010.45.4740.5204	Subscriptions and Code Books	216	-	-	-	-	-
1010.45.4740.5209.101	Auto Fuel Expense Town Vehicles	2,301	1,800	1,800	523	-	1,800
1010.45.4740.5210.100	Postage General	121	1,000	1,000	18	-	1,000
1010.45.4740.5213.100	Professional/Contract Services General	200,678	55,000	55,000	37,619	-	55,000
1010.45.4740.5214.100	Repair and Maint Service General	19,846	15,100	15,100	32,077	22,950	38,050
1010.45.4740.5216.100	Communications General Services	2,213	2,082	2,082	633	-	2,082
1010.45.4740.5218.100	Advertising General	831	700	700	805	-	700
1010.45.4740.5219.100	Printing General	206	110	110	(10)	-	110
1010.45.4740.5220.100	Employee Development General	6,319	5,500	5,500	2,203	-	5,500
1010.45.4740.5223.105	Meals and Refreshments Emergencies and Meetings	383	-	-	37	-	-
1010.45.4740.5304	Furniture & Equipment	5,869	6,500	26,500	1,390	-	26,500
1010.45.4740.5305	Vehicles	-	30,000	65,000	-	10,200	75,200
	Program Total: 4740 - Public Works - Engineering	585,236	633,454	779,324	216,946	33,150	812,474
Program:	**4745 - Paradise Community Park**						
1010.45.4745.5202.100	Operating Supplies General	613	1,000	1,000	1,432	-	1,000
1010.45.4745.5203.100	Repairs and Maint Supplies General	2,017	1,000	1,000	459	-	1,000
1010.45.4745.5211.135	Utilities Water and Sewer	2,300	2,760	2,760	460	-	2,760
1010.45.4745.5211.137	Utilities Electric and Gas	2,230	2,050	2,050	630	-	2,050
1010.45.4745.5214.100	Repair and Maint Service General	59,024	58,800	58,800	17,505	-	58,800
1010.45.4745.5216.100	Communications General Services	274	275	275	69	-	275

TOWN OF PARADISE

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G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
	Program Total: 4745 - Paradise Community Park	66,458	65,885	65,885	20,555	-	65,885
Program: 4747 - Public Facilities							
1010.45.4747.5101	Salaries - Permanent	53,917	76,129	76,129	19,718	-	76,129
1010.45.4747.5105	Salaries - Overtime/FLSA	111	-	-	-	-	-

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G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
1010.45.4747.5106.100	Incentives & Admin Leave Administrative Leave	863	897	897	-	-	897
1010.45.4747.5109.101	Allowances Boot Allowance	99	560	560	560	-	560
1010.45.4747.5111	Medicare	735	1,125	1,125	265	-	1,125
1010.45.4747.5112.101	GASB 68 - Pension Expense PERS	11,079	13,913	13,913	9,654	-	13,913
1010.45.4747.5113	Worker's Compensation	13,693	15,515	15,515	5,142	-	15,515
1010.45.4747.5114.101	Health Insurance Medical	9,527	19,581	19,581	4,473	-	19,581
1010.45.4747.5114.102	Health Insurance Dental	1,649	-	-	728	-	-
1010.45.4747.5114.103	Health Insurance Vision	109	-	-	45	-	-
1010.45.4747.5115	Unemployment Compensation	314	-	-	134	-	-
1010.45.4747.5116.101	Life and Disability Insurance Life & Disab.	195	1,025	1,025	83	-	1,025
1010.45.4747.5116.102	Life and Disability Insurance Long Term/Short Term Disability	535	-	-	216	-	-
1010.45.4747.5201.100	Office Supplies General	64	-	-	-	-	-
1010.45.4747.5203.100	Repairs and Maint Supplies General	3,560	3,525	3,525	445	-	3,525
1010.45.4747.5211.135	Utilities Water and Sewer	5,061	4,380	4,380	761	-	4,380
1010.45.4747.5211.136	Utilities Refuse Service	-	-	-	14,342	40,000	40,000
1010.45.4747.5214.100	Repair and Maint Service General	123,134	66,500	261,500	9,448	(200,000)	61,500
1010.45.4747.5218.100	Advertising General	140	140	140	-	-	140
1010.45.4747.5219.100	Printing General	27	25	25	-	-	25
1010.45.4747.5220.100	Employee Development General	200	-	-	-	-	-
1010.45.4747.5223.101	Meals and Refreshments Employee Meals-MOU Overtime	15	-	-	45	-	-
1010.45.4747.5303	Improvements	-	-	-	-	200,000	200,000
	Program Total: 4747 - Public Facilities	225,027	203,315	398,315	66,061	40,000	438,315
	Department Total: 45 - Public Works	876,721	902,654	1,243,524	303,562	73,150	1,316,674
	EXPENSES Total	16,159,164	20,064,414	20,405,284	5,269,352	244,500	20,649,784
	Fund REVENUE Total: 1010 - General Fund	16,277,360	19,753,420	20,094,290	5,049,100	100,500	20,194,790
	Fund EXPENSE Total: 1010 - General Fund	16,159,164	20,064,414	20,405,284	5,269,352	244,500	20,649,784
	Fund Total: 1010 - General Fund	118,197	(310,994)	(310,994)	(220,252)	(144,000)	(454,994)
Fund: 2030 - Building Safety & Waste Wtr Svcs							
REVENUES							
Department: 40 - Community Development							
Program: 4730 - Building and Onsite Inspections							
2030.40.4730.3380.102	Local Government Revenue Fines and Citations Onsite	2,800	1,000	1,000	-	-	1,000
2030.40.4730.3401.301	CDD Building Plan Check Fees	1,227,024	1,200,000	1,200,000	243,343	-	1,200,000
2030.40.4730.3401.302	CDD Building Construction Review-Bldg Permit	1,836,955	1,812,000	1,812,000	487,742	-	1,812,000
2030.40.4730.3401.306	CDD Building Development Permit/DIF Est Req	307	400	400	-	-	400
2030.40.4730.3401.320	CDD Building Permit Valuation Surcharge	636	1,000	1,000	310	-	1,000

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2030.40.4730.3404.116	Onsite Land Use Review	56,577	48,000	48,000	11,899	-	48,000
2030.40.4730.3404.117	Onsite Repairs to Maintain Existing Use	102,249	100,000	100,000	19,038	-	100,000
2030.40.4730.3404.118	Onsite New Installation Standard System	9,104	8,000	8,000	-	-	8,000
2030.40.4730.3404.119	Onsite Permit: Alteration/Expanded Use	53,655	45,000	45,000	17,392	-	45,000
2030.40.4730.3404.120	Onsite Review for Land Division	1,214	541	541	1,701	-	541
2030.40.4730.3404.125	Onsite Escrow Clearance	25,476	20,000	20,000	8,152	-	20,000
2030.40.4730.3404.126	Onsite Building Permit Clearance	48,381	46,000	46,000	10,736	-	46,000
2030.40.4730.3404.127	Onsite Operating Permit/Annual	378,424	385,000	385,000	2,646	-	385,000
2030.40.4730.3404.128	Onsite Construct Install Permit Renewal	-	272	272	-	-	272
2030.40.4730.3404.130	Onsite Water Well Clearance	94	190	190	-	-	190
2030.40.4730.3404.137	Onsite Alternative Systems Review	9,253	8,000	8,000	1,367	-	8,000
2030.40.4730.3404.138	Onsite Abandonment of Septic System	2,219	1,500	1,500	143	-	1,500
2030.40.4730.3404.150	Onsite Annual Evaluator License Fee	817	850	850	894	-	850
2030.40.4730.3404.151	Onsite Extension Req for Eval or Repair	-	-	-	33	-	-
2030.40.4730.3410.150	Administrative Services Late Fees	16	-	-	-	-	-
2030.40.4730.3422.337	Fire Code Enforcement Inspection	244,082	228,000	228,000	74,873	-	228,000
2030.40.4730.3422.368	Fire Permit Fees	84,481	84,000	84,000	20,396	-	84,000
2030.40.4730.3610.100	Interest Revenue Investments	-	10,000	10,000	-	-	10,000
2030.40.4730.3901.100	Refunds and Reimbursements Miscellaneous	-	10,000	10,000	-	-	10,000
2030.40.4730.3902.110	Miscellaneous Revenue Cash Over and Short	1	-	-	-	-	-
2030.40.4730.3910.130	Transfers In From State Water Board Prop 1	3,690	-	-	-	-	-
2030.40.4730.3910.221	Transfers In From WWAD	411,165	-	-	-	-	-
2030.40.4730.3910.297	Transfers In Grants Miscellaneous State	83,451	-	-	-	-	-
2030.40.4730.3910.627	Transfers In From Tech Equipment Replacement	-	116,000	116,000	-	-	116,000
	Program Total: 4730 - Building and Onsite Inspections	4,582,071	4,125,753	4,125,753	900,664	-	4,125,753
	Department Total: 40 - Community Development	4,582,071	4,125,753	4,125,753	900,664	-	4,125,753
	REVENUES Total	4,582,071	4,125,753	4,125,753	900,664	-	4,125,753

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G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
EXPENSES							
Department:	**40 - Community Development**						
Program:	**4730 - Building and Onsite Inspections**						
2030.40.4730.5101	Salaries - Permanent	946,550	1,290,844	1,290,844	306,597	-	1,290,844
2030.40.4730.5102	Salaries - Temporary	42,428	96,289	96,289	13,834	-	96,289
2030.40.4730.5105	Salaries - Overtime/FLSA	1,421	5,000	5,000	-	-	5,000
2030.40.4730.5106.100	Incentives & Admin Leave Administrative Leave	19,804	21,884	21,884	-	-	21,884
2030.40.4730.5106.200	Incentives & Admin Leave Gym Reimbursement	234	468	468	282	-	468
2030.40.4730.5107	Car Allowance/Mileage	2,372	2,448	2,448	701	-	2,448
2030.40.4730.5109.100	Allowances Uniform Allowance	3,675	3,028	3,028	1,254	-	3,028
2030.40.4730.5109.101	Allowances Boot Allowance	2,785	3,700	3,700	2,235	-	3,700
2030.40.4730.5111	Medicare	15,186	19,613	19,613	4,806	-	19,613
2030.40.4730.5112.101	GASB 68 - Pension Expense PERS	205,270	249,647	249,647	166,091	-	249,647
2030.40.4730.5112.102	GASB 68 - Pension Expense Social Security	767	5,970	5,970	418	-	5,970
2030.40.4730.5113	Worker's Compensation	31,170	28,639	28,639	9,492	-	28,639
2030.40.4730.5114.101	Health Insurance Medical	87,633	162,440	162,440	30,570	-	162,440
2030.40.4730.5114.102	Health Insurance Dental	17,467	-	-	5,472	-	-
2030.40.4730.5114.103	Health Insurance Vision	1,376	-	-	422	-	-
2030.40.4730.5115	Unemployment Compensation	6,268	-	-	2,375	-	-
2030.40.4730.5116.101	Life and Disability Insurance Life & Disab.	3,625	15,916	15,916	1,196	-	15,916
2030.40.4730.5116.102	Life and Disability Insurance Long Term/Short Term Disability	8,490	-	-	2,990	-	-
2030.40.4730.5119.100	Retiree Costs Medical Insurance	39,667	44,635	44,635	12,665	-	44,635
2030.40.4730.5122	Accrual Bank Payoff	8,234	-	-	807	-	-
2030.40.4730.5201.100	Office Supplies General	1,246	2,000	2,000	492	-	2,000
2030.40.4730.5202.100	Operating Supplies General	10,564	13,000	13,000	3,605	-	13,000
2030.40.4730.5203.100	Repairs and Maint Supplies General	22,984	26,500	26,500	626	-	26,500
2030.40.4730.5204	Subscriptions and Code Books	1,954	9,000	9,000	812	-	9,000
2030.40.4730.5209.101	Auto Fuel Expense Town Vehicles	10,308	7,000	7,000	2,500	-	7,000
2030.40.4730.5210.100	Postage General	(135)	1,500	1,500	(275)	-	1,500
2030.40.4730.5211.135	Utilities Water and Sewer	1,729	3,000	3,000	288	-	3,000
2030.40.4730.5211.137	Utilities Electric and Gas	30,784	45,600	45,600	9,261	-	45,600
2030.40.4730.5213.100	Professional/Contract Services General	1,033,858	903,650	903,650	175,044	-	903,650
2030.40.4730.5214.100	Repair and Maint Service General	156,889	258,490	258,490	126,885	-	258,490
2030.40.4730.5215.100	Rents and Leases Miscellaneous	2,080	2,300	2,300	637	-	2,300
2030.40.4730.5215.106	Rents and Leases Copiers	8,162	5,400	5,400	1,424	-	5,400
2030.40.4730.5216.100	Communications General Services	13,280	28,645	28,645	5,131	-	28,645
2030.40.4730.5218.100	Advertising General	690	500	500	-	-	500

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2030.40.4730.5219.100	Printing General	611	1,000	1,000	129	-	1,000
2030.40.4730.5220.100	Employee Development General	8,525	30,000	30,000	4,979	-	30,000
2030.40.4730.5223.105	Meals and Refreshments Emergencies and Meetings	1,078	2,400	2,400	365	-	2,400
2030.40.4730.5225	Bank Fees and Charges	48,240	36,000	36,000	5,346	-	36,000
2030.40.4730.5303	Improvements	17,185	80,000	80,000	-	-	80,000
2030.40.4730.5304	Furniture & Equipment	6,665	45,300	45,300	22,277	-	45,300
2030.40.4730.5305	Vehicles	147,417	64,000	64,000	-	-	64,000
2030.40.4730.5501	Debt Service Payment - Principal	7,944	4,830	4,830	4,091	-	4,830
2030.40.4730.5910.010	Transfers Out To General Fund	262,686	341,836	341,836	-	-	341,836
	Program Total: 4730 - Building and Onsite Inspections	3,239,168	3,862,472	3,862,472	925,822	-	3,862,472
	Department Total: 40 - Community Development	3,239,168	3,862,472	3,862,472	925,822	-	3,862,472
	EXPENSES Total	3,239,168	3,862,472	3,862,472	925,822	-	3,862,472
	Fund REVENUE Total: 2030 - Building Safety & Waste Wtr Svcs	4,582,071	4,125,753	4,125,753	900,664	-	4,125,753
	Fund EXPENSE Total: 2030 - Building Safety & Waste Wtr Svcs	3,239,168	3,862,472	3,862,472	925,822	-	3,862,472
	Fund Total: 2030 - Building Safety & Waste Wtr Svcs	1,342,903	263,281	263,281	(25,159)	-	263,281
Fund: 2070 - Animal Control							
REVENUES							
Department: 30 - Police							
Program: 4540 - Police - Animal Control							
2070.30.4540.3120.330	Other Taxes Voter Appointed Parcel Tax	131,776	130,000	130,000	-	-	130,000
2070.30.4540.3380.105	Local Government Revenue Fines and Citations Animal Cntrl	4,950	500	500	-	-	500
2070.30.4540.3410.113	Administrative Services Document Copying	-	25	25	-	-	25
2070.30.4540.3410.150	Administrative Services Late Fees	373	250	250	40	-	250
2070.30.4540.3455.200	Animal Control Adoption Fees	5,451	4,500	4,500	1,372	-	4,500
2070.30.4540.3455.205	Animal Control Surrender/Euth/Disp Fees	393	500	500	75	-	500
2070.30.4540.3455.210	Animal Control Dog Licenses	8,021	6,296	6,296	2,740	-	6,296
2070.30.4540.3455.215	Animal Control Dangerous/Wild Animal Permit	122	-	-	122	-	-
2070.30.4540.3455.225	Animal Control Impound/Quarantine Fees	6,545	6,000	6,000	1,577	-	6,000
2070.30.4540.3455.226	Animal Control Impound Unaltered State Fee	1,130	850	850	245	-	850
2070.30.4540.3901.100	Refunds and Reimbursements Miscellaneous	12,789	-	-	-	-	-
2070.30.4540.3902.100	Miscellaneous Revenue General	8	-	-	(0)	-	-
2070.30.4540.3910.010	Transfers In From General Fund	-	360,494	360,494	-	-	360,494
2070.30.4540.3910.138	Transfers In From USDA Fund	-	61,000	61,000	-	-	61,000
2070.30.4540.3910.811	Transfers In From Animal Control Donations	3,500	6,917	6,917	-	-	6,917
	Program Total: 4540 - Police - Animal Control	175,058	577,332	577,332	6,172	-	577,332
	Department Total: 30 - Police	175,058	577,332	577,332	6,172	-	577,332
	REVENUES Total	175,058	577,332	577,332	6,172	-	577,332

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EXPENSES							
Department: 30 - Police							
Program: 4540 - Police - Animal Control							
2070.30.4540.5101	Salaries - Permanent	173,551	215,048	215,048	38,799	-	215,048
2070.30.4540.5103.102	Differential Pay Out of Class	1,042	-	-	689	-	-
2070.30.4540.5104	Wages - PS Holiday Pay	8,606	10,273	10,273	2,012	-	10,273
2070.30.4540.5105	Salaries - Overtime/FLSA	1,360	2,500	2,500	634	-	2,500
2070.30.4540.5109.100	Allowances Uniform Allowance	2,359	2,558	2,558	547	-	2,558
2070.30.4540.5111	Medicare	2,572	3,340	3,340	591	-	3,340
2070.30.4540.5112.101	GASB 68 - Pension Expense PERS	39,508	43,023	43,023	27,816	-	43,023
2070.30.4540.5113	Worker's Compensation	12,488	11,603	11,603	3,846	-	11,603
2070.30.4540.5114.101	Health Insurance Medical	23,272	33,194	33,194	4,366	-	33,194
2070.30.4540.5114.102	Health Insurance Dental	3,302	-	-	646	-	-
2070.30.4540.5114.103	Health Insurance Vision	185	-	-	35	-	-
2070.30.4540.5115	Unemployment Compensation	1,144	-	-	289	-	-
2070.30.4540.5116.101	Life and Disability Insurance Life & Disab.	867	3,171	3,171	201	-	3,171
2070.30.4540.5116.102	Life and Disability Insurance Long Term/Short Term Disability	2,049	-	-	413	-	-
2070.30.4540.5119.100	Retiree Costs Medical Insurance	8,837	9,295	9,295	2,299	-	9,295
2070.30.4540.5122	Accrual Bank Payoff	-	-	-	9	-	-
2070.30.4540.5201.100	Office Supplies General	30	475	475	-	-	475
2070.30.4540.5202.100	Operating Supplies General	8,611	9,900	9,900	1,266	-	9,900
2070.30.4540.5203.100	Repairs and Maint Supplies General	1,933	1,000	1,000	31	-	1,000
2070.30.4540.5204	Subscriptions and Code Books	144	180	180	-	-	180
2070.30.4540.5209.101	Auto Fuel Expense Town Vehicles	6,049	7,000	7,000	1,221	-	7,000
2070.30.4540.5210.100	Postage General	1	-	-	-	-	-
2070.30.4540.5211.135	Utilities Water and Sewer	528	1,055	1,055	88	-	1,055
2070.30.4540.5211.137	Utilities Electric and Gas	4,841	4,125	4,125	1,997	-	4,125
2070.30.4540.5211.139	Utilities Propane	4,015	5,000	5,000	251	-	5,000
2070.30.4540.5213.100	Professional/Contract Services General	28,625	16,050	16,050	8,189	-	16,050
2070.30.4540.5214.100	Repair and Maint Service General	8,894	10,637	10,637	259	-	10,637
2070.30.4540.5215.100	Rents and Leases Miscellaneous	-	1	1	-	-	1
2070.30.4540.5216.100	Communications General Services	2,419	2,630	2,630	359	-	2,630
2070.30.4540.5219.100	Printing General	42	400	400	-	-	400
2070.30.4540.5220.100	Employee Development General	1,532	8,750	8,750	60	-	8,750
2070.30.4540.5223.101	Meals and Refreshments Employee Meals-MOU Overtime	-	30	30	-	-	30
2070.30.4540.5225	Bank Fees and Charges	1,473	1,250	1,250	125	-	1,250
2070.30.4540.5303	Improvements	-	4,500	4,500	-	-	4,500

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2070.30.4540.5305	Vehicles	106,229	104,000	104,000	-	-	104,000
2070.30.4540.5910.010	Transfers Out To General Fund	54,357	66,344	66,344	-	-	66,344
	Program Total: 4540 - Police - Animal Control	510,864	577,332	577,332	97,037	-	577,332
	Department Total: 30 - Police	510,864	577,332	577,332	97,037	-	577,332
	EXPENSES Total	510,864	577,332	577,332	97,037	-	577,332
	Fund REVENUE Total: 2070 - Animal Control	175,058	577,332	577,332	6,172	-	577,332
	Fund EXPENSE Total: 2070 - Animal Control	510,864	577,332	577,332	97,037	-	577,332
	Fund Total: 2070 - Animal Control	(335,806)	-	-	(90,866)	-	-
Fund: 2090 - Camp Fire 2018							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2090.00.0000.3345.100	State Revenues - Other Refunds & Reimbursements	-	4,642,667	4,642,667	-	-	4,642,667
2090.00.0000.3901.145	Refunds and Reimbursements Insurance Proceeds	-	648,150	648,150	-	-	648,150
2090.00.0000.3902.100	Miscellaneous Revenue General	5,412	-	-	-	-	-
2090.00.0000.3910.010	Transfers In From General Fund	-	373,273	373,273	-	-	373,273
2090.00.0000.3910.136	Transfers In From FEMA Grants FHMG	13,741	376,188	376,188	-	-	376,188
2090.00.0000.3910.301	Transfers In CDBG - DR	4,580	309,511	309,511	-	-	309,511
	Program Total: 0000 - Non Program Activity	23,734	6,349,789	6,349,789	-	-	6,349,789
	Department Total: 00 - Non Department Activity	23,734	6,349,789	6,349,789	-	-	6,349,789
	REVENUES Total	23,734	6,349,789	6,349,789	-	-	6,349,789
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
Cost Center Activity:							
2090.00.0000.5213.100	Professional/Contract Services General	1,100	-	-	-	-	-
	Cost Center Activity Total	1,100	-	-	-	-	-
Cost Center Activity: 504 - FEMA Safety Assessment (SAP) B10							
2090.00.0000.504.5224	Travel Expenses - Lodging, Airfare, Incidentals	(154)	-	-	-	-	-
	Cost Center Activity Total: 504 - FEMA Safety Assessment (SAP) B10	(154)	-	-	-	-	-
Cost Center Activity: 506 - FEMA Administrative Costs Z1							
2090.00.0000.506.5213.100	Professional/Contract Services General	102,150	45,000	45,000	-	-	45,000
	Cost Center Activity Total: 506 - FEMA Administrative Costs Z1	102,150	45,000	45,000	-	-	45,000
Cost Center Activity: 507 - FEMA Haz Tree Removal (P2) - A1							
2090.00.0000.507.5202.100	Operating Supplies General	2,000	-	-	323	-	-
2090.00.0000.507.5209.105	Auto Fuel Expense Employee Personal Vehicle Use	73	-	-	-	-	-
2090.00.0000.507.5213.100	Professional/Contract Services General	148,164	-	-	15,776	-	-

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Cost Center Activity Total: 507 - FEMA Haz Tree Removal (P2) - A1		150,237	-	-	16,099	-	-
Cost Center Activity: 560 - Insurance Claim Preparation							
2090.00.0000.560.5213.100	Professional/Contract Services General	56,740	10,000	10,000	-	-	10,000
Cost Center Activity Total: 560 - Insurance Claim Preparation		56,740	10,000	10,000	-	-	10,000
Cost Center Activity: 561 - HMGP Administration							
2090.00.0000.561.5213.100	Professional/Contract Services General	12,546	-	-	-	-	-
Cost Center Activity Total: 561 - HMGP Administration		12,546	-	-	-	-	-
Program Total: 0000 - Non Program Activity		322,619	55,000	55,000	16,099	-	55,000
Department Total: 00 - Non Department Activity		322,619	55,000	55,000	16,099	-	55,000
Department: 30 - Police							
Program: 4540 - Police - Animal Control							
Cost Center Activity: 572 - NV Grant-Animal Control & Shelte							
2090.30.4540.572.5303	Improvements	4,905	-	-	-	-	-
Cost Center Activity Total: 572 - NV Grant-Animal Control & Shelte		4,905	-	-	-	-	-
Program Total: 4540 - Police - Animal Control		4,905	-	-	-	-	-
Department Total: 30 - Police		4,905	-	-	-	-	-
Department: 45 - Public Works							
Program: 4740 - Public Works - Engineering							
Cost Center Activity: 506 - FEMA Administrative Costs Z1							
2090.45.4740.506.5213.100	Professional/Contract Services General	(7,426)	-	-	-	-	-
Cost Center Activity Total: 506 - FEMA Administrative Costs Z1		(7,426)	-	-	-	-	-
Cost Center Activity: 559 - Insurance - Infrastructure							
2090.45.4740.559.5213.100	Professional/Contract Services General	(28,875)	-	-	-	-	-
Cost Center Activity Total: 559 - Insurance - Infrastructure		(28,875)	-	-	-	-	-
Program Total: 4740 - Public Works - Engineering		(36,301)	-	-	-	-	-
Program: 4743 - Streets and Roads							
Cost Center Activity: 506 - FEMA Administrative Costs Z1							
2090.45.4743.506.5213.100	Professional/Contract Services General	(2,222)	-	-	-	-	-
Cost Center Activity Total: 506 - FEMA Administrative Costs Z1		(2,222)	-	-	-	-	-
Program Total: 4743 - Streets and Roads		(2,222)	-	-	-	-	-
Program: 4747 - Public Facilities							
Cost Center Activity: 558 - Insurance Extra Expense							
2090.45.4747.558.5214.100	Repair and Maint Service General	31,750	-	-	3,639	-	-
Cost Center Activity Total: 558 - Insurance Extra Expense		31,750	-	-	3,639	-	-
Program Total: 4747 - Public Facilities		31,750	-	-	3,639	-	-
Program: 4750 - Public Works - Streets Maint.							
Cost Center Activity: 508 - FEMA - Culverts - C1-10							
2090.45.4750.508.5910.120	Transfers Out To State Gas Tax Fund	2,754	-	-	-	-	-

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2090.45.4750.508.8408	Off-System Culvert Repair	27,965	607,790	607,790	309	-	607,790
	Cost Center Activity Total: 508 - FEMA - Culverts - C1-10	30,718	607,790	607,790	309	-	607,790
Cost Center Activity:	**509 - FEMA - Non Fed Aid Roads - C2**						
2090.45.4750.509.5910.120	Transfers Out To State Gas Tax Fund	29,395	41,539	41,539	-	-	41,539
2090.45.4750.509.8407	Off System Road Rehabilitation	1,413,901	4,006,488	4,006,488	63,321	-	4,006,488
	Cost Center Activity Total: 509 - FEMA - Non Fed Aid Roads - C2	1,443,296	4,048,027	4,048,027	63,321	-	4,048,027
Cost Center Activity:	**516 - FEMA - Camp Fire Hydrant Repairs**						
2090.45.4750.516.8404	Camp Fire Hydrant Repairs	-	251,361	251,361	-	-	251,361
	Cost Center Activity Total: 516 - FEMA - Camp Fire Hydrant Repairs	-	251,361	251,361	-	-	251,361
Cost Center Activity:	**554 - Insurance Facility Yard Equip**						
2090.45.4750.554.5304	Furniture & Equipment	-	-	-	2,285	-	-
	Cost Center Activity Total: 554 - Insurance Facility Yard Equip	-	-	-	2,285	-	-
Cost Center Activity:	**556 - Insurance Veh & Equip Repair/Rep**						
2090.45.4750.556.5215.131	Rents and Leases Street Maintenance Equipment	-	10,000	10,000	-	-	10,000
	Cost Center Activity Total: 556 - Insurance Veh & Equip Repair/Rep	-	10,000	10,000	-	-	10,000
Cost Center Activity:	**559 - Insurance - Infrastructure**						
2090.45.4750.559.5203.100	Repairs and Maint Supplies General	-	-	-	629	-	-
2090.45.4750.559.5910.100	Transfers Out To Capital Projects	-	500,000	500,000	-	-	500,000
2090.45.4750.559.5910.105	Transfers Out To Camp Fire Recovery Projects	-	96,400	96,400	-	-	96,400
2090.45.4750.559.8402	Trailway Lighting Repairs	540	31,750	31,750	-	-	31,750
2090.45.4750.559.8403	Skyway/Pearson Traffic Signal Repair	287,408	-	-	19,348	-	-
	Cost Center Activity Total: 559 - Insurance - Infrastructure	287,948	628,150	628,150	19,977	-	628,150
	Program Total: 4750 - Public Works - Streets Maint.	1,761,962	5,545,328	5,545,328	85,892	-	5,545,328
	Department Total: 45 - Public Works	1,755,190	5,545,328	5,545,328	89,531	-	5,545,328
Department:	**65 - Emergency Mngmt & Disaster Recov**						
Program:	**4205 - Disaster Recovery**						
Cost Center Activity:	**590 - Disaster Management**						
2090.65.4205.590.5101	Salaries - Permanent	196,929	337,215	337,215	63,312	-	337,215
2090.65.4205.590.5102	Salaries - Temporary	8,414	43,215	43,215	2,262	-	43,215
2090.65.4205.590.5103.102	Differential Pay Out of Class	632	-	-	-	-	-
2090.65.4205.590.5106.100	Incentives & Admin Leave Administrative Leave	7,945	12,371	12,371	-	-	12,371
2090.65.4205.590.5106.200	Incentives & Admin Leave Gym Reimbursement	-	-	-	300	-	-
2090.65.4205.590.5107	Car Allowance/Mileage	2,400	2,400	2,400	700	-	2,400
2090.65.4205.590.5109.101	Allowances Boot Allowance	-	-	-	300	-	-
2090.65.4205.590.5111	Medicare	3,429	5,730	5,730	1,014	-	5,730
2090.65.4205.590.5112.101	GASB 68 - Pension Expense PERS	62,633	64,379	64,379	41,230	-	64,379
2090.65.4205.590.5113	Worker's Compensation	2,236	1,978	1,978	656	-	1,978
2090.65.4205.590.5114.101	Health Insurance Medical	11,451	41,402	41,402	3,247	-	41,402

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2090.65.4205.590.5114.102	Health Insurance Dental	2,017	-	-	630	-	-
2090.65.4205.590.5115	Unemployment Compensation	1,503	-	-	501	-	-
2090.65.4205.590.5116.101	Life and Disability Insurance Life & Disab.	628	3,601	3,601	187	-	3,601
2090.65.4205.590.5116.102	Life and Disability Insurance Long Term/Short Term Disability	1,963	-	-	681	-	-
2090.65.4205.590.5122	Accrual Bank Payoff	11,921	-	-	-	-	-
2090.65.4205.590.5201.100	Office Supplies General	669	300	300	-	-	300
2090.65.4205.590.5202.100	Operating Supplies General	106	200	200	-	-	200
2090.65.4205.590.5203.100	Repairs and Maint Supplies General	-	619	619	-	-	619
2090.65.4205.590.5204	Subscriptions and Code Books	1	-	-	-	-	-
2090.65.4205.590.5213.100	Professional/Contract Services General	126,229	118,577	118,577	20,495	-	118,577
2090.65.4205.590.5216.100	Communications General Services	494	10,600	10,600	4,981	-	10,600
2090.65.4205.590.5218.100	Advertising General	280	125	125	451	-	125
2090.65.4205.590.5219.100	Printing General	80	-	-	-	-	-
2090.65.4205.590.5220.100	Employee Development General	2,090	8,500	8,500	-	-	8,500
2090.65.4205.590.5223.105	Meals and Refreshments Emergencies and Meetings	-	2,500	2,500	42	-	2,500
2090.65.4205.590.5304	Furniture & Equipment	2,932	1,000	1,000	247	-	1,000
2090.65.4205.590.5910.010	Transfers Out To General Fund	321,790	94,749	94,749	-	-	94,749
	Cost Center Activity Total: 590 - Disaster Management	768,770	749,461	749,461	141,236	-	749,461
	Program Total: 4205 - Disaster Recovery	768,770	749,461	749,461	141,236	-	749,461
	Department Total: 65 - Emergency Mngmt & Disaster Recov	768,770	749,461	749,461	141,236	-	749,461
	EXPENSES Total	2,851,484	6,349,789	6,349,789	246,867	-	6,349,789
	Fund REVENUE Total: 2090 - Camp Fire 2018	23,734	6,349,789	6,349,789	-	-	6,349,789
	Fund EXPENSE Total: 2090 - Camp Fire 2018	2,851,484	6,349,789	6,349,789	246,867	-	6,349,789
	Fund Total: 2090 - Camp Fire 2018	(2,827,750)	-	-	(246,867)	-	-

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Fund: 2095 - COVID-19							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.00.0000.595.3320.100	Federal Revenue - Other Refunds and Reimbursements	25,983	-	-	-	-	-
2095.00.0000.595.3345.100	State Revenues - Other Refunds & Reimbursements	1,339,227	1,396,407	1,396,407	-	-	1,396,407
Cost Center Activity Total: 595 - COVID-19 - Emergency Response		1,365,210	1,396,407	1,396,407	-	-	1,396,407
Program Total: 0000 - Non Program Activity		1,365,210	1,396,407	1,396,407	-	-	1,396,407
Department Total: 00 - Non Department Activity		1,365,210	1,396,407	1,396,407	-	-	1,396,407
REVENUES Total		1,365,210	1,396,407	1,396,407	-	-	1,396,407
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.00.0000.595.5101	Salaries - Permanent	52,056	50,000	50,000	21,717	-	50,000
2095.00.0000.595.5111	Medicare	702	-	-	297	-	-
2095.00.0000.595.5112.101	GASB 68 - Pension Expense PERS	3,775	-	-	2,000	-	-
2095.00.0000.595.5114.101	Health Insurance Medical	4,043	-	-	1,801	-	-
2095.00.0000.595.5114.103	Health Insurance Vision	66	-	-	28	-	-
2095.00.0000.595.5115	Unemployment Compensation	310	-	-	131	-	-
2095.00.0000.595.5116.101	Life and Disability Insurance Life & Disab.	206	-	-	62	-	-
2095.00.0000.595.5116.102	Life and Disability Insurance Long Term/Short Term Disability	519	-	-	14	-	-
2095.00.0000.595.5202.100	Operating Supplies General	6,930	17,500	17,500	574	-	17,500
2095.00.0000.595.5203.100	Repairs and Maint Supplies General	2,219	-	-	-	-	-
2095.00.0000.595.5213.100	Professional/Contract Services General	500	5,000	5,000	-	-	5,000
2095.00.0000.595.5214.100	Repair and Maint Service General	1,500	-	-	-	-	-
2095.00.0000.595.5304	Furniture & Equipment	-	5,000	5,000	-	-	5,000
2095.00.0000.595.5910.010	Transfers Out To General Fund	-	102,000	297,000	-	-	297,000
2095.00.0000.595.5910.105	Transfers Out To Camp Fire Recovery Projects	-	820,000	1,302,561	-	-	1,302,561
Cost Center Activity Total: 595 - COVID-19 - Emergency Response		72,825	999,500	1,677,061	26,624	-	1,677,061
Program Total: 0000 - Non Program Activity		72,825	999,500	1,677,061	26,624	-	1,677,061
Department Total: 00 - Non Department Activity		72,825	999,500	1,677,061	26,624	-	1,677,061
Department: 20 - Administrative Services							
Program: 4202 - Information Technology							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.20.4202.595.5304	Furniture & Equipment	1,005	-	-	-	-	-

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	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	1,005	-	-	-	-	-
	Program Total: 4202 - Information Technology	1,005	-	-	-	-	-
Program: 4203 - HR and Risk Management							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.20.4203.595.5202.100	Operating Supplies General	110	-	-	-	-	-
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	110	-	-	-	-	-
	Program Total: 4203 - HR and Risk Management	110	-	-	-	-	-
	Department Total: 20 - Administrative Services	1,116	-	-	-	-	-
Department: 30 - Police							
Program: 4510 - Police Administration							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.30.4510.595.5213.100	Professional/Contract Services General	150	-	-	-	-	-
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	150	-	-	-	-	-
	Program Total: 4510 - Police Administration	150	-	-	-	-	-
Program: 4520 - Police Operations							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.30.4520.595.5213.100	Professional/Contract Services General	147	-	-	-	-	-
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	147	-	-	-	-	-
	Program Total: 4520 - Police Operations	147	-	-	-	-	-
	Department Total: 30 - Police	297	-	-	-	-	-
Department: 35 - Fire							
Program: 4610 - Fire - Administrative							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.35.4610.595.5214.100	Repair and Maint Service General	-	150,000	250,000	754	(250,000)	-
2095.35.4610.595.5214.100	Repair and Maint Service General	-	-	-	-	250,000	250,000
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	-	150,000	250,000	754	-	250,000
	Program Total: 4610 - Fire - Administrative	-	150,000	250,000	754	-	250,000
	Department Total: 35 - Fire	-	150,000	250,000	754	-	250,000

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Department: 40 - Community Development							
Program: 4720 - CDD Planning							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.40.4720.595.5202.100	Operating Supplies General	2,127	-	-	-	-	-
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	2,127	-	-	-	-	-
	Program Total: 4720 - CDD Planning	2,127	-	-	-	-	-
Program: 4730 - Building and Onsite Inspections							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.40.4730.595.5202.100	Operating Supplies General	43	-	-	-	-	-
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	43	-	-	-	-	-
	Program Total: 4730 - Building and Onsite Inspections	43	-	-	-	-	-
	Department Total: 40 - Community Development	2,170	-	-	-	-	-
Department: 45 - Public Works							
Program: 4747 - Public Facilities							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.45.4747.595.5214.100	Repair and Maint Service General	-	10,000	10,000	-	-	10,000
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	-	10,000	10,000	-	-	10,000
	Program Total: 4747 - Public Facilities	-	10,000	10,000	-	-	10,000
Program: 4750 - Public Works - Streets Maint.							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.45.4750.595.5215.100	Rents and Leases Miscellaneous	22,218	-	-	-	-	-
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	22,218	-	-	-	-	-
	Program Total: 4750 - Public Works - Streets Maint.	22,218	-	-	-	-	-
	Department Total: 45 - Public Works	22,218	10,000	10,000	-	-	10,000
Department: 65 - Emergency Mngmt & Disaster Recov							
Program: 4205 - Disaster Recovery							
Cost Center Activity: 595 - COVID-19 - Emergency Response							
2095.65.4205.595.5213.100	Professional/Contract Services General	-	200,000	200,000	-	-	200,000
	Cost Center Activity Total: 595 - COVID-19 - Emergency Response	-	200,000	200,000	-	-	200,000
	Program Total: 4205 - Disaster Recovery	-	200,000	200,000	-	-	200,000
	Department Total: 65 - Emergency Mngmt & Disaster Recov	-	200,000	200,000	-	-	200,000
	EXPENSES Total	98,626	1,359,500	2,137,061	27,378	-	2,137,061
	Fund REVENUE Total: 2095 - COVID-19	1,365,210	1,396,407	1,396,407	-	-	1,396,407
	Fund EXPENSE Total: 2095 - COVID-19	98,626	1,359,500	2,137,061	27,378	-	2,137,061
	Fund Total: 2095 - COVID-19	1,266,584	36,907	(740,654)	(27,378)	-	(740,654)
Fund: 2100 - CIP Fund							
REVENUES							

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Department: 50 - CIP Programs							
Program: 8901 - CIP Programs							
2100.50.8901.3910.090	Transfers In From Camp Fire Recovery	-	500,000	500,000	-	-	500,000
2100.50.8901.3910.110	Transfers In From Local Transportation Fund	196,416	676,099	676,099	-	100,000	776,099
2100.50.8901.3910.120	Transfers In From Gas Tax Fund	-	-	-	-	60,000	60,000
2100.50.8901.3910.112	Transfers In From Federal CMAQ Fund	1,180,929	714,894	714,894	-	-	714,894
2100.50.8901.3910.130	Transfers In From State Water Board Prop 1	454,100	303,782	303,782	-	-	303,782
2100.50.8901.3910.132	Transfers In From HSIP Grant	26,540	9,000	9,000	-	-	9,000
2100.50.8901.3910.133	Transfers In From ATP Grant	2,918,736	886,017	886,017	-	-	886,017
2100.50.8901.3910.161	Transfers In From BHS HUD Revolving Loan Fund	-	126,957	126,957	-	-	126,957
2100.50.8901.3910.301	Transfers In CDBG - DR	106,221	-	-	-	-	-
2100.50.8901.3910.315	Transfers In From BHS CDBG 2015 Grant	-	9,671	9,671	-	-	9,671
2100.50.8901.3910.316	Transfers In From BHS CDBG 2016 Grant	-	40,000	40,000	-	-	40,000
2100.50.8901.3910.317	Transfers In From BHS CDBG 2017 Grant	-	13,223	13,223	-	-	13,223
2100.50.8901.3910.318	Transfers In From BHS CDBG 2018 Grant	-	120,701	120,701	-	-	120,701
2100.50.8901.3910.319	Transfers In From BHS CDBG 2019 Grant	-	117,833	117,833	-	-	117,833
2100.50.8901.3910.320	Transfers In From BHS CDBG 2020 Grant	-	33,943	33,943	-	-	33,943
2100.50.8901.3910.321	Transfers In From BHS CDBG 2021 Grant	-	80,650	80,650	-	-	80,650
2100.50.8901.3910.322	Transfers In From BHS CDBG 2022 Grant	-	57,000	57,000	-	-	57,000
2100.50.8901.3910.551	Transfer In from Impact Fees Drainage Fund	-	-	-	-	250,000	250,000
	Program Total: 8901 - CIP Programs	4,882,942	3,689,770	3,689,770	-	410,000	4,099,770
	Department Total: 50 - CIP Programs	4,882,942	3,689,770	3,689,770	-	410,000	4,099,770
	REVENUES Total	4,882,942	3,689,770	3,689,770	-	410,000	4,099,770
EXPENSES							
Department: 50 - CIP Programs							
Program: 8901 - CIP Programs							
2100.50.8901.9377	Almond Multi-Modal Improvements	978,415	819,681	819,681	238,093	-	819,681
2100.50.8901.9380	Ponderosa Safe Routes to School	1,001,407	74,000	74,000	-	-	74,000

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2100.50.8901.9385	Paradise Gap Closure Complex	1,496,370	867,435	867,435	191,695	-	867,435
2100.50.8901.9389	Pentz Pathway Ph II Project	606,045	187,450	187,450	23,867	100,000	287,450
2100.50.8901.9390	Skyway-Neal Bike-Ped Project	129,827	291,188	291,188	41,952	-	291,188
2100.50.8901.9391	Oliver Curve Pathway Project	187,213	236,256	236,256	4,202	-	236,256
2100.50.8901.9394	Downtown Sewer Environmental Study	896,593	303,782	303,782	348,969	-	303,782
2100.50.8901.9408	Systemic Intersection Safety Improvements	29,489	10,000	10,000	11,277	-	10,000
2100.50.8901.9416	Pavement Management Program Update 2022	150	-	-	-	60,000	60,000
2100.50.8901.9417	CDBG Sidewalk Improvements 2022 - HUD funding	150	899,978	899,978	126	(105,000)	794,978
2100.50.8901.9418	Stearns Road Emergency Culvert Replacement	-	-	-	159,819	250,000	250,000
2100.50.8901.9420	Interim Safety Striping Project 2022	-	-	-	-	105,000	105,000
	Program Total: 8901 - CIP Programs	5,325,659	3,689,770	3,689,770	1,019,999	410,000	4,099,770
	Department Total: 50 - CIP Programs	5,325,659	3,689,770	3,689,770	1,019,999	410,000	4,099,770
	EXPENSES Total	5,325,659	3,689,770	3,689,770	1,019,999	410,000	4,099,770
	Fund REVENUE Total: 2100 - CIP Fund	4,882,942	3,689,770	3,689,770	-	410,000	4,099,770
	Fund EXPENSE Total: 2100 - CIP Fund	5,325,659	3,689,770	3,689,770	1,019,999	410,000	4,099,770
	Fund Total: 2100 - CIP Fund	(442,717)	-	-	(1,019,999)	-	-
Fund: 2105 - Disaster Recovery Projects							
REVENUES							
Department: 65 - Emergency Mngmt & Disaster Recov							
Program: 4205 - Disaster Recovery							
2105.65.4205.3910.010	Transfers In From General Fund	76,732	60,000	124,080	-	-	124,080
2105.65.4205.3910.090	Transfers In From Camp Fire Recovery	-	96,400	96,400	-	-	96,400
2105.65.4205.3910.095	Transfers In From COVID-19 Fund	-	820,000	1,302,561	-	-	1,302,561
2105.65.4205.3910.130	Transfers In From State Water Board Prop 1	23,557	492,546	492,546	-	-	492,546
2105.65.4205.3910.136	Transfers In From FEMA Grants FHMG	265,769	4,263,497	4,263,497	-	-	4,263,497
2105.65.4205.3910.137	Transfers In EDA Grant	1,056,645	503,571	503,571	-	-	503,571
2105.65.4205.3910.139	Transfers In From FHWA Funds	1,396,593	8,721,598	8,721,598	-	-	8,721,598
2105.65.4205.3910.280	Transfers In From North Valley/Butte Strong	37,236	-	-	-	-	-
2105.65.4205.3910.298	Transfers In Grants Miscellaneous Federal	-	615,000	615,000	-	-	615,000
2105.65.4205.3910.299	Transfers In From Grants Misc One Time Fund	25,000	134,816	134,816	-	-	134,816
2105.65.4205.3910.301	Transfers In CDBG - DR	376,923	4,027,284	4,027,284	-	-	4,027,284
	Program Total: 4205 - Disaster Recovery	3,258,455	19,734,712	20,281,353	-	-	20,281,353
	Department Total: 65 - Emergency Mngmt & Disaster Recov	3,258,455	19,734,712	20,281,353	-	-	20,281,353
	REVENUES Total	3,258,455	19,734,712	20,281,353	-	-	20,281,353
EXPENSES							
Department: 65 - Emergency Mngmt & Disaster Recov							
Program: 4205 - Disaster Recovery							

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2105.65.4205.7100	Building Resource Center (BRC)	12,627	50,000	50,000	-	-	50,000
2105.65.4205.7105	Police Department Radios	86,749	-	-	-	-	-
2105.65.4205.7106	Portable and Mobile Police Radios	-	711,400	711,400	-	-	711,400
2105.65.4205.7200	Public Safety Power Shutoff Preparedness	30,829	30,829	30,829	-	-	30,829
2105.65.4205.7301	On-System Culvert Replacement	652,748	122,856	122,856	2,055	-	122,856
2105.65.4205.7302	On-System Hardscape Replacement	552,629	10,000	10,000	12,331	-	10,000
2105.65.4205.7303	On-System Road Rehabilitation	418,498	9,840,586	9,840,586	2,683,586	-	9,840,586
2105.65.4205.7304	On-System Sign Replacement	18,236	274,200	274,200	1,678	-	274,200
2105.65.4205.7307	Neal Road Rehabilitation	41,956	-	-	-	-	-
2105.65.4205.7308	Storm Drain Master Plan	295,838	-	-	94	-	-
2105.65.4205.7309	Transportation Master Plan	1,056,645	503,571	503,571	60,365	-	503,571
2105.65.4205.7312	Category 4 Tree Removal	5,011	1,975,000	2,065,000	119,137	-	2,065,000
2105.65.4205.7313	Residential Ignition Resistant Program	104	137,337	137,337	-	-	137,337
2105.65.4205.7314	Early Warning System	132	2,952,325	2,952,325	-	-	2,952,325
2105.65.4205.7315	Hazardous Fuel Reduction Program	104	445,000	445,000	-	-	445,000
2105.65.4205.7316	Defensible Space Code Enforcement	105	175,000	175,000	-	-	175,000
2105.65.4205.7317	Reseeding Program	53,065	-	-	-	-	-
2105.65.4205.7320	SWRCB - Septic Grant (3 Years)	47,499	492,546	492,546	98,937	-	492,546
2105.65.4205.7321	Emergency Operations Plan Update	33,170	50,000	50,000	-	-	50,000
2105.65.4205.7322	Long Term Recovery Plan Update	85,642	60,000	60,000	23,107	-	60,000
2105.65.4205.7323	California Resilience Challenge 2021 Grant	45,592	134,816	134,816	-	-	134,816
2105.65.4205.7324	Restoration of Dispatch Services	7,920	820,000	1,276,641	180,044	-	1,276,641
	Program Total: 4205 - Disaster Recovery	3,445,099	18,785,466	19,332,107	3,181,334	-	19,332,107
	Department Total: 65 - Emergency Mngmt & Disaster Recov	3,445,099	18,785,466	19,332,107	3,181,334	-	19,332,107
	EXPENSES Total	3,445,099	18,785,466	19,332,107	3,181,334	-	19,332,107
	Fund REVENUE Total: 2105 - Disaster Recovery Projects	3,258,455	19,734,712	20,281,353	-	-	20,281,353
	Fund EXPENSE Total: 2105 - Disaster Recovery Projects	3,445,099	18,785,466	19,332,107	3,181,334	-	19,332,107
	Fund Total: 2105 - Disaster Recovery Projects	(186,644)	949,246	949,246	(3,181,334)	-	949,246

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Fund: 2110 - Transportation Fund							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2110.00.0000.3345.001	State Revenues - Other LTF - Local Transit Funds	226,714	731,640	731,640	-	100,000	831,640
2110.00.0000.3910.900	Transfers In From Transit Fund	-	28,720	28,720	-	-	28,720
	Program Total: 0000 - Non Program Activity	226,714	760,360	760,360	-	100,000	860,360
	Department Total: 00 - Non Department Activity	226,714	760,360	760,360	-	100,000	860,360
	REVENUES Total	226,714	760,360	760,360	-	100,000	860,360
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2110.00.0000.5910.120	Transfers Out To State Gas Tax Fund	7,034	62,682	62,682	-	-	62,682
	Program Total: 0000 - Non Program Activity	7,034	62,682	62,682	-	-	62,682
	Department Total: 00 - Non Department Activity	7,034	62,682	62,682	-	-	62,682
Department: 45 - Public Works							
Program: 4743 - Streets and Roads							
2110.45.4743.5101	Salaries - Permanent	26,475	41,975	42,477	8,472	-	42,477
2110.45.4743.5105	Salaries - Overtime/FLSA	74	-	-	-	-	-
2110.45.4743.5106.100	Incentives & Admin Leave Administrative Leave	882	1,696	1,717	-	-	1,717
2110.45.4743.5106.200	Incentives & Admin Leave Gym Reimbursement	-	-	-	4	-	-
2110.45.4743.5107	Car Allowance/Mileage	48	48	48	14	-	48
2110.45.4743.5109.101	Allowances Boot Allowance	10	20	20	40	-	20
2110.45.4743.5111	Medicare	400	634	642	124	-	642
2110.45.4743.5112.101	GASB 68 - Pension Expense PERS	5,124	8,110	8,232	5,466	-	8,232
2110.45.4743.5113	Worker's Compensation	1,099	6,966	7,069	2,309	-	7,069
2110.45.4743.5114.101	Health Insurance Medical	1,898	4,502	4,502	686	-	4,502
2110.45.4743.5114.102	Health Insurance Dental	196	-	-	75	-	-
2110.45.4743.5114.103	Health Insurance Vision	16	-	-	6	-	-
2110.45.4743.5115	Unemployment Compensation	173	-	-	62	-	-
2110.45.4743.5116.101	Life and Disability Insurance Life & Disab.	65	387	415	21	-	415
2110.45.4743.5116.102	Life and Disability Insurance Long Term/Short Term Disability	259	-	-	91	-	-
2110.45.4743.5216.100	Communications General Services	173	105	105	58	-	105
2110.45.4743.5910.010	Transfers Out To General Fund	5,091	7,568	7,568	-	-	7,568
2110.45.4743.5910.100	Transfers Out To Capital Projects	196,416	676,099	676,099	-	100,000	776,099
	Program Total: 4743 - Streets and Roads	238,398	748,110	748,894	17,425	100,000	848,894
	Department Total: 45 - Public Works	238,398	748,110	748,894	17,425	100,000	848,894

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	EXPENSES Total	245,431	810,792	811,576	17,425	100,000	911,576
	Fund REVENUE Total: 2110 - Transportation Fund	226,714	760,360	760,360	-	100,000	860,360
	Fund EXPENSE Total: 2110 - Transportation Fund	245,431	810,792	811,576	17,425	100,000	911,576
	Fund Total: 2110 - Transportation Fund	(18,717)	(50,432)	(51,216)	(17,425)	-	(51,216)
Fund: 2112 - Fed CMAQ Congest Mgmt Air Qual							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2112.00.0000.3310.200	Federal Funding CIP Funding	1,213,132	742,097	742,097	-	-	742,097
	Program Total: 0000 - Non Program Activity	1,213,132	742,097	742,097	-	-	742,097
	Department Total: 00 - Non Department Activity	1,213,132	742,097	742,097	-	-	742,097
	REVENUES Total	1,213,132	742,097	742,097	-	-	742,097
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2112.00.0000.5910.100	Transfers Out To Capital Projects	1,180,929	714,894	714,894	-	-	714,894
2112.00.0000.5910.120	Transfers Out To State Gas Tax Fund	32,203	27,203	27,203	-	-	27,203
	Program Total: 0000 - Non Program Activity	1,213,132	742,097	742,097	-	-	742,097
	Department Total: 00 - Non Department Activity	1,213,132	742,097	742,097	-	-	742,097
	EXPENSES Total	1,213,132	742,097	742,097	-	-	742,097
	Fund REVENUE Total: 2112 - Fed CMAQ Congest Mgmt Air Qual	1,213,132	742,097	742,097	-	-	742,097
	Fund EXPENSE Total: 2112 - Fed CMAQ Congest Mgmt Air Qual	1,213,132	742,097	742,097	-	-	742,097
	Fund Total: 2112 - Fed CMAQ Congest Mgmt Air Qual	-	-	-	-	-	-

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Fund: 2120 - State Gas Tax							
REVENUES							
Department: 45 - Public Works							
Program: 4750 - Public Works - Streets Maint.							
2120.45.4750.3355.001	State gas Tax Section 2106	114,154	22,872	22,872	5,679	-	22,872
2120.45.4750.3355.002	State gas Tax Section 2107	237,327	60,500	60,500	10,058	-	60,500
2120.45.4750.3355.003	State gas Tax Section 2107.5	6,000	2,000	2,000	2,000	-	2,000
2120.45.4750.3355.005	State gas Tax Section 2105	189,271	39,000	39,000	7,230	-	39,000
2120.45.4750.3355.006	State gas Tax RSTP Regional Surface Trans Prog	187,312	150,000	150,000	-	-	150,000
2120.45.4750.3355.007	State gas Tax Section 2103	257,681	59,500	59,500	13,559	-	59,500
2120.45.4750.3355.008	State gas Tax Section 2032	453,973	137,500	137,500	24,357	-	137,500
2120.45.4750.3410.150	Administrative Services Late Fees	198	-	-	-	-	-
2120.45.4750.3610.100	Interest Revenue Investments	-	200	200	-	-	200
2120.45.4750.3901.100	Refunds and Reimbursements Miscellaneous	53,465	10,000	10,000	10,842	-	10,000
2120.45.4750.3902.100	Miscellaneous Revenue General	-	913,716	913,716	-	-	913,716
2120.45.4750.3910.010	Transfers In From General Fund	-	-	-	-	144,000	144,000
2120.45.4750.3910.090	Transfers In From Camp Fire Recovery	32,149	41,539	41,539	-	-	41,539
2120.45.4750.3910.110	Transfers In From Local Transportation Fund	7,034	62,682	62,682	-	-	62,682
2120.45.4750.3910.112	Transfers In From Federal CMAQ Fund	32,203	27,203	27,203	-	-	27,203
2120.45.4750.3910.130	Transfers In From State Water Board Prop 1	29,903	76,916	76,916	-	-	76,916
2120.45.4750.3910.132	Transfers In From HSIP Grant	8,927	36,764	36,764	-	-	36,764
2120.45.4750.3910.133	Transfers In From ATP Grant	43,434	33,561	33,561	-	-	33,561
2120.45.4750.3910.136	Transfers In From FEMA Grants FHMG	15,695	-	-	-	-	-
2120.45.4750.3910.137	Transfers In EDA Grant	52,251	30,532	30,532	-	-	30,532
2120.45.4750.3910.138	Transfer In from USDA Fund	-	-	-	-	156,000	156,000
2120.45.4750.3910.139	Transfers In From FHWA Funds	60,919	63,479	63,479	-	-	63,479
2120.45.4750.3910.301	Transfers In CDBG - DR	24,132	19,911	204,381	-	-	204,381
	Program Total: 4750 - Public Works - Streets Maint.	1,806,026	1,787,875	1,972,345	73,724	300,000	2,272,345
	Department Total: 45 - Public Works	1,806,026	1,787,875	1,972,345	73,724	300,000	2,272,345
	REVENUES Total	1,806,026	1,787,875	1,972,345	73,724	300,000	2,272,345
EXPENSES							
Department: 45 - Public Works							
Program: 4750 - Public Works - Streets Maint.							
2120.45.4750.5101	Salaries - Permanent	563,602	736,400	854,374	162,597	-	854,374
2120.45.4750.5103.101	Differential Pay On Call	23,755	23,500	23,500	6,535	-	23,500
2120.45.4750.5103.102	Differential Pay Out of Class	556	750	750	284	-	750
2120.45.4750.5105	Salaries - Overtime/FLSA	8,843	8,450	8,450	2,576	-	8,450
2120.45.4750.5106.100	Incentives & Admin Leave Administrative Leave	11,927	17,381	22,082	-	-	22,082

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2120.45.4750.5106.200	Incentives & Admin Leave Gym Reimbursement	-	360	360	32	-	360
2120.45.4750.5107	Car Allowance/Mileage	1,388	1,392	1,392	393	-	1,392
2120.45.4750.5109.101	Allowances Boot Allowance	3,291	3,420	3,520	3,040	-	3,520
2120.45.4750.5111	Medicare	8,651	11,448	13,228	2,464	-	13,228
2120.45.4750.5112.101	GASB 68 - Pension Expense PERS	114,456	143,910	172,624	95,370	-	172,624
2120.45.4750.5113	Worker's Compensation	96,592	132,203	144,894	43,817	-	144,894
2120.45.4750.5114.101	Health Insurance Medical	53,933	92,735	109,636	15,999	-	109,636
2120.45.4750.5114.102	Health Insurance Dental	6,358	-	-	1,816	-	-
2120.45.4750.5114.103	Health Insurance Vision	589	-	-	171	-	-
2120.45.4750.5115	Unemployment Compensation	3,782	-	-	1,228	-	-
2120.45.4750.5116.101	Life and Disability Insurance Life & Disab.	1,935	8,557	10,166	560	-	10,166
2120.45.4750.5116.102	Life and Disability Insurance Long Term/Short Term Disability	3,779	-	-	1,203	-	-
2120.45.4750.5119.100	Retiree Costs Medical Insurance	21,367	22,307	22,307	5,485	-	22,307
2120.45.4750.5201.100	Office Supplies General	281	300	300	11	-	300
2120.45.4750.5202.100	Operating Supplies General	11,485	4,250	4,250	2,622	-	4,250
2120.45.4750.5203.100	Repairs and Maint Supplies General	94,668	94,000	94,000	54,985	-	94,000
2120.45.4750.5209.101	Auto Fuel Expense Town Vehicles	32,711	27,500	27,500	5,957	-	27,500
2120.45.4750.5211.135	Utilities Water and Sewer	264	264	264	142	-	264
2120.45.4750.5211.137	Utilities Electric and Gas	41,467	34,800	34,800	11,740	-	34,800
2120.45.4750.5213.100	Professional/Contract Services General	23,553	16,500	16,500	437	-	16,500
2120.45.4750.5214.100	Repair and Maint Service General	111,622	94,800	94,800	16,528	-	94,800
2120.45.4750.5215.100	Rents and Leases Miscellaneous	8,412	8,000	8,000	1,732	-	8,000
2120.45.4750.5215.131	Rents and Leases Street Maintenance Equipment	69,959	5,000	5,000	8,533	-	5,000
2120.45.4750.5216.100	Communications General Services	5,920	43,034	43,034	1,377	-	43,034
2120.45.4750.5218.100	Advertising General	123	100	100	163	-	100
2120.45.4750.5220.100	Employee Development General	5,084	5,000	5,000	4,024	-	5,000
2120.45.4750.5223.101	Meals and Refreshments Employee Meals-MOU Overtime	585	500	500	30	-	500
2120.45.4750.5223.105	Meals and Refreshments Emergencies and Meetings	-	-	-	30	-	-
2120.45.4750.5304	Furniture & Equipment	156,573	20,500	20,500	7,648	-	20,500
2120.45.4750.5305	Vehicles	307,682	-	-	-	300,000	300,000
2120.45.4750.5501	Debt Service Payment - Principal	8,376	5,367	5,367	2,147	-	5,367
2120.45.4750.5910.010	Transfers Out To General Fund	353,824	225,147	225,147	-	-	225,147
2120.45.4750.5910.100	Transfers Out To Capital Projects Fund	-	-	-	-	60,000	60,000
	Program Total: 4750 - Public Works - Streets Maint.	2,157,395	1,787,875	1,972,345	461,677	360,000	2,332,345
	Department Total: 45 - Public Works	2,157,395	1,787,875	1,972,345	461,677	360,000	2,332,345
	EXPENSES Total	2,157,395	1,787,875	1,972,345	461,677	360,000	2,332,345
	Fund REVENUE Total: 2120 - State Gas Tax	1,806,026	1,787,875	1,972,345	73,724	300,000	2,272,345

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	Fund EXPENSE Total: 2120 - State Gas Tax	2,157,395	1,787,875	1,972,345	461,677	360,000	2,332,345
	Fund Total: 2120 - State Gas Tax	(351,368)	-	-	(387,952)	(60,000)	(60,000)
Fund: 2130 - State Water Board Prop 1 Grant							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2130.00.0000.3310.200	Federal Funding CIP Funding	(13,792)	-	-	-	-	-
2130.00.0000.3340.200	State Funding - Grants CIP Funding	501,815	883,244	883,244	-	-	883,244
	Program Total: 0000 - Non Program Activity	488,023	883,244	883,244	-	-	883,244
	Department Total: 00 - Non Department Activity	488,023	883,244	883,244	-	-	883,244
	REVENUES Total	488,023	883,244	883,244	-	-	883,244
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2130.00.0000.5910.010	Transfers Out To General Fund	97	-	-	-	-	-
2130.00.0000.5910.030	Transfers Out To Development Services Fund	3,690	-	-	-	-	-
2130.00.0000.5910.100	Transfers Out To Capital Projects	454,100	303,782	303,782	-	-	303,782
2130.00.0000.5910.105	Transfers Out To Camp Fire Recovery Projects	23,557	492,546	492,546	-	-	492,546
2130.00.0000.5910.120	Transfers Out To State Gas Tax Fund	29,903	76,916	76,916	-	-	76,916
2130.00.0000.5910.160	Transfers Out To BHS Development Svcs Fund	9,412	10,000	10,000	-	-	10,000
	Program Total: 0000 - Non Program Activity	520,759	883,244	883,244	-	-	883,244
	Department Total: 00 - Non Department Activity	520,759	883,244	883,244	-	-	883,244
	EXPENSES Total	520,759	883,244	883,244	-	-	883,244
	Fund REVENUE Total: 2130 - State Water Board Prop 1 Grant	488,023	883,244	883,244	-	-	883,244
	Fund EXPENSE Total: 2130 - State Water Board Prop 1 Grant	520,759	883,244	883,244	-	-	883,244
	Fund Total: 2130 - State Water Board Prop 1 Grant	(32,737)	-	-	-	-	-
Fund: 2132 - HSIP Highway Safety Imp Prog.							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2132.00.0000.3310.200	Federal Funding CIP Funding	35,467	45,764	45,764	-	-	45,764
	Program Total: 0000 - Non Program Activity	35,467	45,764	45,764	-	-	45,764
	Department Total: 00 - Non Department Activity	35,467	45,764	45,764	-	-	45,764
	REVENUES Total	35,467	45,764	45,764	-	-	45,764
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							

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2132.00.0000.5910.100	Transfers Out To Capital Projects	26,540	9,000	9,000	-	-	9,000
2132.00.0000.5910.120	Transfers Out To State Gas Tax Fund	8,927	36,764	36,764	-	-	36,764
	Program Total: 0000 - Non Program Activity	35,467	45,764	45,764	-	-	45,764
	Department Total: 00 - Non Department Activity	35,467	45,764	45,764	-	-	45,764
	EXPENSES Total	35,467	45,764	45,764	-	-	45,764
	Fund REVENUE Total: 2132 - HSIP Highway Safety Imp Prog.	35,467	45,764	45,764	-	-	45,764
	Fund EXPENSE Total: 2132 - HSIP Highway Safety Imp Prog.	35,467	45,764	45,764	-	-	45,764
	Fund Total: 2132 - HSIP Highway Safety Imp Prog.	-	-	-	-	-	-
Fund: 2133 - Active Transportation Program							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2133.00.0000.3340.200	State Funding - Grants CIP Funding	2,962,170	919,578	919,578	-	-	919,578
	Program Total: 0000 - Non Program Activity	2,962,170	919,578	919,578	-	-	919,578
	Department Total: 00 - Non Department Activity	2,962,170	919,578	919,578	-	-	919,578
	REVENUES Total	2,962,170	919,578	919,578	-	-	919,578

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EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2133.00.0000.5910.100	Transfers Out To Capital Projects	2,918,736	886,017	886,017	-	-	886,017
2133.00.0000.5910.120	Transfers Out To State Gas Tax Fund	43,434	33,561	33,561	-	-	33,561
	Program Total: 0000 - Non Program Activity	2,962,170	919,578	919,578	-	-	919,578
	Department Total: 00 - Non Department Activity	2,962,170	919,578	919,578	-	-	919,578
	EXPENSES Total	2,962,170	919,578	919,578	-	-	919,578
Fund REVENUE	Total: 2133 - Active Transportation Program	2,962,170	919,578	919,578	-	-	919,578
Fund EXPENSE	Total: 2133 - Active Transportation Program	2,962,170	919,578	919,578	-	-	919,578
	Fund Total: 2133 - Active Transportation Program	-	-	-	-	-	-
Fund: 2136 - FEMA Grants FHMG							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2136.00.0000.3310.099	Federal Funding Federal Grants	306,511	4,639,685	4,639,685	-	-	4,639,685
	Program Total: 0000 - Non Program Activity	306,511	4,639,685	4,639,685	-	-	4,639,685
	Department Total: 00 - Non Department Activity	306,511	4,639,685	4,639,685	-	-	4,639,685
	REVENUES Total	306,511	4,639,685	4,639,685	-	-	4,639,685
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2136.00.0000.5910.090	Transfers Out To Camp Fire 2018 Recovery	13,741	376,188	376,188	-	-	376,188
2136.00.0000.5910.105	Transfers Out To Camp Fire Recovery Projects	265,769	4,263,497	4,263,497	-	-	4,263,497
2136.00.0000.5910.120	Transfers Out To State Gas Tax Fund	15,695	-	-	-	-	-
2136.00.0000.5910.160	Transfers Out To BHS Development Svcs Fund	67	-	-	-	-	-
	Program Total: 0000 - Non Program Activity	295,272	4,639,685	4,639,685	-	-	4,639,685
	Department Total: 00 - Non Department Activity	295,272	4,639,685	4,639,685	-	-	4,639,685
	EXPENSES Total	295,272	4,639,685	4,639,685	-	-	4,639,685
Fund REVENUE	Total: 2136 - FEMA Grants FHMG	306,511	4,639,685	4,639,685	-	-	4,639,685
Fund EXPENSE	Total: 2136 - FEMA Grants FHMG	295,272	4,639,685	4,639,685	-	-	4,639,685
	Fund Total: 2136 - FEMA Grants FHMG	11,239	-	-	-	-	-
Fund: 2137 - Economic Development Admin (EDA)							
REVENUES							
Department: 65 - Emergency Mngmt & Disaster Recov							
Program: 4205 - Disaster Recovery							
2137.65.4205.3310.099	Federal Funding Federal Grants	1,205,401	534,103	534,103	-	-	534,103

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	Program Total: 4205 - Disaster Recovery	1,205,401	534,103	534,103	-	-	534,103
	Department Total: 65 - Emergency Mngmt & Disaster Recov	1,205,401	534,103	534,103	-	-	534,103
	REVENUES Total	1,205,401	534,103	534,103	-	-	534,103
EXPENSES							
Department:	**65 - Emergency Mngmt & Disaster Recov**						
Program:	**4205 - Disaster Recovery**						
2137.65.4205.5910.105	Transfers Out To Camp Fire Recovery Projects	1,056,645	503,571	503,571	-	-	503,571
2137.65.4205.5910.120	Transfers Out To State Gas Tax Fund	52,251	30,532	30,532	-	-	30,532
	Program Total: 4205 - Disaster Recovery	1,108,896	534,103	534,103	-	-	534,103
	Department Total: 65 - Emergency Mngmt & Disaster Recov	1,108,896	534,103	534,103	-	-	534,103
	EXPENSES Total	1,108,896	534,103	534,103	-	-	534,103
Fund REVENUE	Total: 2137 - Economic Development Admin (EDA)	1,205,401	534,103	534,103	-	-	534,103
Fund EXPENSE	Total: 2137 - Economic Development Admin (EDA)	1,108,896	534,103	534,103	-	-	534,103
	Fund Total: 2137 - Economic Development Admin (EDA)	96,505	-	-	-	-	-
Fund:	**2138 - USDA**						
REVENUES							
Department:	**00 - Non Department Activity**						
Program:	**0000 - Non Program Activity**						
2138.00.0000.3310.099	Federal Funding Federal Grants	49,220	131,500	131,500	-	189,500	321,000
	Program Total: 0000 - Non Program Activity	49,220	131,500	131,500	-	189,500	321,000
	Department Total: 00 - Non Department Activity	49,220	131,500	131,500	-	189,500	321,000
	REVENUES Total	49,220	131,500	131,500	-	189,500	321,000
EXPENSES							
Department:	**00 - Non Department Activity**						
Program:	**0000 - Non Program Activity**						
2138.00.0000.5910.010	Transfers Out To General Fund	-	70,500	70,500	-	33,500	104,000
2138.00.0000.5910.070	Transfers Out To Animal Control Fund	-	61,000	61,000	-	-	61,000
2138.00.0000.5910.120	Transfers Out to Gas Tax Fund	-	-	-	-	156,000	156,000
	Program Total: 0000 - Non Program Activity	-	131,500	131,500	-	189,500	321,000
	Department Total: 00 - Non Department Activity	-	131,500	131,500	-	189,500	321,000
	EXPENSES Total	-	131,500	131,500	-	189,500	321,000
Fund REVENUE	Total: 2138 - USDA	49,220	131,500	131,500	-	189,500	321,000
Fund EXPENSE	Total: 2138 - USDA	-	131,500	131,500	-	189,500	321,000
	Fund Total: 2138 - USDA	49,220	-	-	-	-	-

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Fund: 2139 - FHWA - Federal-Aid Highway Act							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2139.00.0000.3310.200	Federal Funding CIP Funding	1,724,992	8,785,077	8,785,077	-	-	8,785,077
	Program Total: 0000 - Non Program Activity	1,724,992	8,785,077	8,785,077	-	-	8,785,077
	Department Total: 00 - Non Department Activity	1,724,992	8,785,077	8,785,077	-	-	8,785,077
	REVENUES Total	1,724,992	8,785,077	8,785,077	-	-	8,785,077
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2139.00.0000.5910.105	Transfers Out To Camp Fire Recovery Projects	1,396,593	8,721,598	8,721,598	-	-	8,721,598
2139.00.0000.5910.120	Transfers Out To State Gas Tax Fund	60,919	63,479	63,479	-	-	63,479
	Program Total: 0000 - Non Program Activity	1,457,512	8,785,077	8,785,077	-	-	8,785,077
	Department Total: 00 - Non Department Activity	1,457,512	8,785,077	8,785,077	-	-	8,785,077
	EXPENSES Total	1,457,512	8,785,077	8,785,077	-	-	8,785,077
	Fund REVENUE Total: 2139 - FHWA - Federal-Aid Highway Act	1,724,992	8,785,077	8,785,077	-	-	8,785,077
	Fund EXPENSE Total: 2139 - FHWA - Federal-Aid Highway Act	1,457,512	8,785,077	8,785,077	-	-	8,785,077
	Fund Total: 2139 - FHWA - Federal-Aid Highway Act	267,480	-	-	-	-	-
Fund: 2160 - Business & Housing Services							
REVENUES							
Department: 55 - Business & Housing Services							
Program: 4800 - Development Services							
2160.55.4800.3902.100	Miscellaneous Revenue General	225	-	-	75	-	-
2160.55.4800.3910.130	Transfers In From State Water Board Prop 1	9,412	10,000	10,000	-	-	10,000
2160.55.4800.3910.136	Transfers In From FEMA Grants FHMG	67	-	-	-	-	-
2160.55.4800.3910.162	Transfers In From BHS Home Loan Repay Fund	-	35,000	35,000	-	-	35,000
2160.55.4800.3910.163	Transfers In From BHS Cal Home Loan Fund	-	22,500	22,500	-	-	22,500
2160.55.4800.3910.297	Transfers In Grants Miscellaneous State	29,313	-	-	-	-	-
2160.55.4800.3910.301	Transfers In CDBG - DR	1,058	60,000	60,000	-	-	60,000
2160.55.4800.3910.420	Transfers In From 2020 CalHome DA Grant	-	358,390	358,390	-	-	358,390
	Program Total: 4800 - Development Services	40,075	485,890	485,890	75	-	485,890
	Department Total: 55 - Business & Housing Services	40,075	485,890	485,890	75	-	485,890
	REVENUES Total	40,075	485,890	485,890	75	-	485,890
EXPENSES							
Department: 55 - Business & Housing Services							
Program: 4800 - Development Services							

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2160.55.4800.5101	Salaries - Permanent	255,739	270,688	270,688	72,844	-	270,688
2160.55.4800.5105	Salaries - Overtime/FLSA	389	-	-	-	-	-
2160.55.4800.5106.100	Incentives & Admin Leave Administrative Leave	5,351	5,575	5,575	-	-	5,575
2160.55.4800.5107	Car Allowance/Mileage	116	120	120	22	-	120
2160.55.4800.5111	Medicare	3,658	3,982	3,982	1,009	-	3,982
2160.55.4800.5112.101	GASB 68 - Pension Expense PERS	51,896	53,216	53,216	35,597	-	53,216
2160.55.4800.5113	Worker's Compensation	1,741	1,408	1,408	467	-	1,408
2160.55.4800.5114.101	Health Insurance Medical	33,230	43,422	43,422	10,359	-	43,422
2160.55.4800.5114.102	Health Insurance Dental	4,517	-	-	1,347	-	-
2160.55.4800.5114.103	Health Insurance Vision	323	-	-	94	-	-
2160.55.4800.5115	Unemployment Compensation	1,610	-	-	507	-	-
2160.55.4800.5116.101	Life and Disability Insurance Life & Disab.	805	3,070	3,070	234	-	3,070
2160.55.4800.5116.102	Life and Disability Insurance Long Term/Short Term Disability	424	-	-	160	-	-
2160.55.4800.5199.130	Other Payroll Expenses Interfund Payroll Transfers	(22,291)	(82,880)	(82,880)	-	-	(82,880)
2160.55.4800.5201.100	Office Supplies General	256	1,000	1,000	16	-	1,000
2160.55.4800.5202.100	Operating Supplies General	312	1,500	1,500	25	-	1,500
2160.55.4800.5209.105	Auto Fuel Expense Employee Personal Vehicle Use	71	500	500	-	-	500
2160.55.4800.5210.100	Postage General	332	400	400	44	-	400
2160.55.4800.5213.100	Professional/Contract Services General	68,862	30,000	30,000	10,557	-	30,000
2160.55.4800.5214.100	Repair and Maint Service General	1,500	1,500	1,500	-	-	1,500
2160.55.4800.5218.100	Advertising General	114	-	-	-	-	-
2160.55.4800.5219.100	Printing General	48	300	300	(5)	-	300
2160.55.4800.5910.010	Transfers Out To General Fund	76,274	73,096	73,096	-	-	73,096
	Program Total: 4800 - Development Services	485,277	406,897	406,897	133,278	-	406,897
	Department Total: 55 - Business & Housing Services	485,277	406,897	406,897	133,278	-	406,897
	EXPENSES Total	485,277	406,897	406,897	133,278	-	406,897
	Fund REVENUE Total: 2160 - Business & Housing Services	40,075	485,890	485,890	75	-	485,890
	Fund EXPENSE Total: 2160 - Business & Housing Services	485,277	406,897	406,897	133,278	-	406,897
	Fund Total: 2160 - Business & Housing Services	(445,202)	78,993	78,993	(133,203)	-	78,993

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Fund: 2162 - BHS Home Loan Fund							
REVENUES							
Department: 55 - Business & Housing Services							
Program: 0000 - Non Program Activity							
2162.55.0000.3905.001	BHS Loan Payments Program Income	232,235	40,000	40,000	33,751	-	40,000
2162.55.0000.3905.002	BHS Loan Payments Recapture Income	-	40,000	40,000	-	-	40,000
	Program Total: 0000 - Non Program Activity	232,235	80,000	80,000	33,751	-	80,000
	Department Total: 55 - Business & Housing Services	232,235	80,000	80,000	33,751	-	80,000
	REVENUES Total	232,235	80,000	80,000	33,751	-	80,000
EXPENSES							
Department: 55 - Business & Housing Services							
Program: 0000 - Non Program Activity							
2162.55.0000.5910.160	Transfers Out To BHS Development Svcs Fund	-	35,000	35,000	-	-	35,000
	Program Total: 0000 - Non Program Activity	-	35,000	35,000	-	-	35,000
Program: 4802 - Rebuild with Held Funds							
2162.55.4802.5290.290	Loan Programs BHS Loans	31,460	40,000	40,000	-	-	40,000
	Program Total: 4802 - Rebuild with Held Funds	31,460	40,000	40,000	-	-	40,000
Program: 4808 - First Time Home Buyer Program							
2162.55.4808.5290.290	Loan Programs BHS Loans	120,000	40,000	40,000	126,850	-	40,000
	Program Total: 4808 - First Time Home Buyer Program	120,000	40,000	40,000	126,850	-	40,000
	Department Total: 55 - Business & Housing Services	151,460	115,000	115,000	126,850	-	115,000
	EXPENSES Total	151,460	115,000	115,000	126,850	-	115,000
	Fund REVENUE Total: 2162 - BHS Home Loan Fund	232,235	80,000	80,000	33,751	-	80,000
	Fund EXPENSE Total: 2162 - BHS Home Loan Fund	151,460	115,000	115,000	126,850	-	115,000
	Fund Total: 2162 - BHS Home Loan Fund	80,775	(35,000)	(35,000)	(93,099)	-	(35,000)
Fund: 2163 - BHS CAL-HOME Loan Fund							
REVENUES							
Department: 55 - Business & Housing Services							
Program: 0000 - Non Program Activity							
2163.55.0000.3905.001	BHS Loan Payments Program Income	229,140	50,000	50,000	9,117	-	50,000
	Program Total: 0000 - Non Program Activity	229,140	50,000	50,000	9,117	-	50,000
	Department Total: 55 - Business & Housing Services	229,140	50,000	50,000	9,117	-	50,000
	REVENUES Total	229,140	50,000	50,000	9,117	-	50,000
EXPENSES							
Department: 55 - Business & Housing Services							
Program: 0000 - Non Program Activity							
2163.55.0000.5910.160	Transfers Out To BHS Development Svcs Fund	-	22,500	22,500	-	-	22,500

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	Program Total: 0000 - Non Program Activity	-	22,500	22,500	-	-	22,500
Program: 4802 - Rebuild with Held Funds							
2163.55.4802.5290.290	Loan Programs BHS Loans	25,125	-	-	-	-	-
	Program Total: 4802 - Rebuild with Held Funds	25,125	-	-	-	-	-
Program: 4805 - Housing Rehab							
2163.55.4805.5290.290	Loan Programs BHS Loans	158,232	222,500	222,500	9,953	-	222,500
	Program Total: 4805 - Housing Rehab	158,232	222,500	222,500	9,953	-	222,500
Program: 4808 - First Time Home Buyer Program							
2163.55.4808.5290.290	Loan Programs BHS Loans	40,000	-	-	-	-	-
	Program Total: 4808 - First Time Home Buyer Program	40,000	-	-	-	-	-
	Department Total: 55 - Business & Housing Services	223,357	245,000	245,000	9,953	-	245,000
	EXPENSES Total	223,357	245,000	245,000	9,953	-	245,000
	Fund REVENUE Total: 2163 - BHS CAL-HOME Loan Fund	229,140	50,000	50,000	9,117	-	50,000
	Fund EXPENSE Total: 2163 - BHS CAL-HOME Loan Fund	223,357	245,000	245,000	9,953	-	245,000
	Fund Total: 2163 - BHS CAL-HOME Loan Fund	5,783	(195,000)	(195,000)	(837)	-	(195,000)
Fund: 2204 - State SLESF Grant							
REVENUES							
Department: 30 - Police							
Program: 0000 - Non Program Activity							
2204.30.0000.3340.300	State Funding - Grants Police Grants	161,301	170,000	170,000	72,690	-	170,000
	Program Total: 0000 - Non Program Activity	161,301	170,000	170,000	72,690	-	170,000
	Department Total: 30 - Police	161,301	170,000	170,000	72,690	-	170,000
	REVENUES Total	161,301	170,000	170,000	72,690	-	170,000
EXPENSES							
Department: 30 - Police							
Program: 4520 - Police Operations							
2204.30.4520.5199.130	Other Payroll Expenses Interfund Payroll Transfers	86,985	93,478	93,478	-	-	93,478
2204.30.4520.5501	Debt Service Payment - Principal	24,064	-	-	-	-	-
	Program Total: 4520 - Police Operations	111,049	93,478	93,478	-	-	93,478
Program: 4530 - Public Safety Communications							
2204.30.4530.5199.130	Other Payroll Expenses Interfund Payroll Transfers	61,358	66,785	66,785	-	-	66,785
	Program Total: 4530 - Public Safety Communications	61,358	66,785	66,785	-	-	66,785
	Department Total: 30 - Police	172,407	160,263	160,263	-	-	160,263
	EXPENSES Total	172,407	160,263	160,263	-	-	160,263
	Fund REVENUE Total: 2204 - State SLESF Grant	161,301	170,000	170,000	72,690	-	170,000
	Fund EXPENSE Total: 2204 - State SLESF Grant	172,407	160,263	160,263	-	-	160,263
	Fund Total: 2204 - State SLESF Grant	(11,106)	9,737	9,737	72,690	-	9,737

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G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
Fund: 2298 - Grants Miscellaneous Federal							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2298.00.0000.3310.099	Federal Funding Federal Grants	-	615,000	615,000	-	-	615,000
	Program Total: 0000 - Non Program Activity	-	615,000	615,000	-	-	615,000
	Department Total: 00 - Non Department Activity	-	615,000	615,000	-	-	615,000
	REVENUES Total	-	615,000	615,000	-	-	615,000
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2298.00.0000.5910.105	Transfers Out To Camp Fire Recovery Projects	-	615,000	615,000	-	-	615,000
	Program Total: 0000 - Non Program Activity	-	615,000	615,000	-	-	615,000
	Department Total: 00 - Non Department Activity	-	615,000	615,000	-	-	615,000
	EXPENSES Total	-	615,000	615,000	-	-	615,000
	Fund REVENUE Total: 2298 - Grants Miscellaneous Federal	-	615,000	615,000	-	-	615,000
	Fund EXPENSE Total: 2298 - Grants Miscellaneous Federal	-	615,000	615,000	-	-	615,000
	Fund Total: 2298 - Grants Miscellaneous Federal	-	-	-	-	-	-
Fund: 2299 - Grants Miscellaneous One Time							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2299.00.0000.3345.200	State Revenues - Other Miscellaneous	-	134,816	134,816	-	-	134,816
2299.00.0000.3650.100	Donations Private Sources	115,204	-	-	-	-	-
	Program Total: 0000 - Non Program Activity	115,204	134,816	134,816	-	-	134,816
	Department Total: 00 - Non Department Activity	115,204	134,816	134,816	-	-	134,816
	REVENUES Total	115,204	134,816	134,816	-	-	134,816
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
2299.00.0000.5910.105	Transfers Out To Camp Fire Recovery Projects	25,000	134,816	134,816	-	-	134,816
	Program Total: 0000 - Non Program Activity	25,000	134,816	134,816	-	-	134,816
	Department Total: 00 - Non Department Activity	25,000	134,816	134,816	-	-	134,816
	EXPENSES Total	25,000	134,816	134,816	-	-	134,816
	Fund REVENUE Total: 2299 - Grants Miscellaneous One Time	115,204	134,816	134,816	-	-	134,816
	Fund EXPENSE Total: 2299 - Grants Miscellaneous One Time	25,000	134,816	134,816	-	-	134,816
	Fund Total: 2299 - Grants Miscellaneous One Time	90,204	-	-	-	-	-

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Fund: 2301 - CDBG-DR							
REVENUES							
Department: 55 - Business & Housing Services							
Program: 4812 - Multi-Family Homes							
2301.55.4812.3310.099	Federal Funding Federal Grants	95,286	260,000	260,000	-	-	260,000
	Program Total: 4812 - Multi-Family Homes	95,286	260,000	260,000	-	-	260,000
	Department Total: 55 - Business & Housing Services	95,286	260,000	260,000	-	-	260,000
Department: 65 - Emergency Mngmt & Disaster Recov							
Program: 4205 - Disaster Recovery							
2301.65.4205.3310.099	Federal Funding Federal Grants	-	5,207,993	5,207,993	-	-	5,207,993
	Program Total: 4205 - Disaster Recovery	-	5,207,993	5,207,993	-	-	5,207,993
	Department Total: 65 - Emergency Mngmt & Disaster Recov	-	5,207,993	5,207,993	-	-	5,207,993
	REVENUES Total	95,286	5,467,993	5,467,993	-	-	5,467,993
EXPENSES							
Department: 55 - Business & Housing Services							
Program: 4812 - Multi-Family Homes							
2301.55.4812.5199.130	Other Payroll Expenses Interfund Payroll Transfers	22,291	200,000	200,000	-	-	200,000
2301.55.4812.5213.100	Professional/Contract Services General	91,255	-	-	-	-	-
2301.55.4812.5218.100	Advertising General	354	-	-	-	-	-
2301.55.4812.5910.160	Transfers Out To BHS Development Svcs Fund	1,036	60,000	60,000	-	-	60,000
	Program Total: 4812 - Multi-Family Homes	114,936	260,000	260,000	-	-	260,000
	Department Total: 55 - Business & Housing Services	114,936	260,000	260,000	-	-	260,000
Department: 65 - Emergency Mngmt & Disaster Recov							
Program: 4205 - Disaster Recovery							
2301.65.4205.5213.100	Professional/Contract Services General	4,874	-	-	-	-	-
2301.65.4205.5910.090	Transfers Out To Camp Fire 2018 Recovery	4,580	309,511	309,511	-	-	309,511
2301.65.4205.5910.100	Transfers Out To Capital Projects	106,221	-	-	-	-	-
2301.65.4205.5910.105	Transfers Out To Camp Fire Recovery Projects	376,923	4,027,284	4,027,284	-	-	4,027,284
2301.65.4205.5910.120	Transfers Out To State Gas Tax Fund	24,132	19,911	204,381	-	-	204,381
2301.65.4205.5910.160	Transfers Out To BHS Development Svcs Fund	22	-	-	-	-	-
	Program Total: 4205 - Disaster Recovery	516,753	4,356,706	4,541,176	-	-	4,541,176
	Department Total: 65 - Emergency Mngmt & Disaster Recov	516,753	4,356,706	4,541,176	-	-	4,541,176
	EXPENSES Total	631,688	4,616,706	4,801,176	-	-	4,801,176
	Fund REVENUE Total: 2301 - CDBG-DR	95,286	5,467,993	5,467,993	-	-	5,467,993
	Fund EXPENSE Total: 2301 - CDBG-DR	631,688	4,616,706	4,801,176	-	-	4,801,176
	Fund Total: 2301 - CDBG-DR	(536,403)	851,287	666,817	-	-	666,817

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Fund: 2420 - BHS 2020 CalHome DA Grant							
REVENUES							
Department: 55 - Business & Housing Services							
Program: 0000 - Non Program Activity							
2420.55.0000.3340.100	State Funding - Grants BHS State Reimbursements	-	2,707,630	2,707,630	-	-	2,707,630
	Program Total: 0000 - Non Program Activity	-	2,707,630	2,707,630	-	-	2,707,630
	Department Total: 55 - Business & Housing Services	-	2,707,630	2,707,630	-	-	2,707,630
	REVENUES Total	-	2,707,630	2,707,630	-	-	2,707,630
EXPENSES							
Department: 55 - Business & Housing Services							
Program: 4805 - Housing Rehab							
2420.55.4805.5290.290	Loan Programs BHS Loans	2,082,352	2,250,000	2,250,000	711,935	-	2,250,000
2420.55.4805.5910.160	Transfers Out To BHS Development Svcs Fund	-	358,390	358,390	-	-	358,390
	Program Total: 4805 - Housing Rehab	2,082,352	2,608,390	2,608,390	711,935	-	2,608,390
	Department Total: 55 - Business & Housing Services	2,082,352	2,608,390	2,608,390	711,935	-	2,608,390
	EXPENSES Total	2,082,352	2,608,390	2,608,390	711,935	-	2,608,390
	Fund REVENUE Total: 2420 - BHS 2020 CalHome DA Grant	-	2,707,630	2,707,630	-	-	2,707,630
	Fund EXPENSE Total: 2420 - BHS 2020 CalHome DA Grant	2,082,352	2,608,390	2,608,390	711,935	-	2,608,390
	Fund Total: 2420 - BHS 2020 CalHome DA Grant	(2,082,352)	99,240	99,240	(711,935)	-	99,240
Fund: 2510 - Impact Fees Road Improvements							
REVENUES							
Department: 45 - Public Works							
Program: 0000 - Non Program Activity							
2510.45.0000.3405.100	Impact Fees Development Impact Fees	13,940	14,000	14,000	4,641	-	14,000
2510.45.0000.3610.100	Interest Revenue Investments	-	1,660	1,660	-	-	1,660
	Program Total: 0000 - Non Program Activity	13,940	15,660	15,660	4,641	-	15,660
	Department Total: 45 - Public Works	13,940	15,660	15,660	4,641	-	15,660
	REVENUES Total	13,940	15,660	15,660	4,641	-	15,660
	Fund REVENUE Total: 2510 - Impact Fees Road Improvements	13,940	15,660	15,660	4,641	-	15,660
	Fund EXPENSE Total: 2510 - Impact Fees Road Improvements						
	Fund Total: 2510 - Impact Fees Road Improvements	13,940	15,660	15,660	4,641	-	15,660
Fund: 2520 - Impact Fees Signal Improvements							
REVENUES							
Department: 45 - Public Works							
Program: 0000 - Non Program Activity							
2520.45.0000.3405.100	Impact Fees Development Impact Fees	1,204	1,150	1,150	393	-	1,150
	Program Total: 0000 - Non Program Activity	1,204	1,150	1,150	393	-	1,150

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	Department Total: 45 - Public Works	1,204	1,150	1,150	393	-	1,150
	REVENUES Total	1,204	1,150	1,150	393	-	1,150
Fund REVENUE	Total: 2520 - Impact Fees Signal Improvements	1,204	1,150	1,150	393	-	1,150
Fund EXPENSE	Total: 2520 - Impact Fees Signal Improvements						
	Fund Total: 2520 - Impact Fees Signal Improvements	1,204	1,150	1,150	393	-	1,150
Fund: 2521 - Signal Along SR 191 (Clark Rd)							
REVENUES							
Department: 45 - Public Works							
Program: 0000 - Non Program Activity							
2521.45.0000.3610.100	Interest Revenue Investments	-	25	25	-	-	25
	Program Total: 0000 - Non Program Activity	-	25	25	-	-	25
	Department Total: 45 - Public Works	-	25	25	-	-	25
	REVENUES Total	-	25	25	-	-	25
Fund REVENUE	Total: 2521 - Signal Along SR 191 (Clark Rd)	-	25	25	-	-	25
Fund EXPENSE	Total: 2521 - Signal Along SR 191 (Clark Rd)						
	Fund Total: 2521 - Signal Along SR 191 (Clark Rd)	-	25	25	-	-	25
Fund: 2540 - Impact Fees Police Facilities							
REVENUES							
Department: 30 - Police							
Program: 0000 - Non Program Activity							
2540.30.0000.3405.100	Impact Fees Development Impact Fees	2,176	2,300	2,300	711	-	2,300
2540.30.0000.3610.100	Interest Revenue Investments	-	200	200	-	-	200
	Program Total: 0000 - Non Program Activity	2,176	2,500	2,500	711	-	2,500
	Department Total: 30 - Police	2,176	2,500	2,500	711	-	2,500
	REVENUES Total	2,176	2,500	2,500	711	-	2,500
Fund REVENUE	Total: 2540 - Impact Fees Police Facilities	2,176	2,500	2,500	711	-	2,500
Fund EXPENSE	Total: 2540 - Impact Fees Police Facilities						
	Fund Total: 2540 - Impact Fees Police Facilities	2,176	2,500	2,500	711	-	2,500
Fund: 2550 - Impact Fees Fire Facilities							
REVENUES							
Department: 35 - Fire							
Program: 0000 - Non Program Activity							
2550.35.0000.3405.100	Impact Fees Development Impact Fees	1,897	2,000	2,000	485	-	2,000
2550.35.0000.3610.100	Interest Revenue Investments	-	200	200	-	-	200
	Program Total: 0000 - Non Program Activity	1,897	2,200	2,200	485	-	2,200
	Department Total: 35 - Fire	1,897	2,200	2,200	485	-	2,200
	REVENUES Total	1,897	2,200	2,200	485	-	2,200

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Fund REVENUE	Total: 2550 - Impact Fees Fire Facilities	1,897	2,200	2,200	485	-	2,200
Fund EXPENSE	Total: 2550 - Impact Fees Fire Facilities						
Fund Total: 2550 - Impact Fees Fire Facilities		1,897	2,200	2,200	485	-	2,200

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Fund: 2551 - Impact Fees - Drainage							
REVENUES							
Department: 45 - Public Works							
Program: 0000 - Non Program Activity							
2551.45.0000.3405.100	Impact Fees Development Impact Fees	15,374	15,500	15,500	2,499	-	15,500
2551.45.0000.3610.100	Interest Revenue Investments	-	1,500	1,500	-	-	1,500
	Program Total: 0000 - Non Program Activity	15,374	17,000	17,000	2,499	-	17,000
	Department Total: 45 - Public Works	15,374	17,000	17,000	2,499	-	17,000
	REVENUES Total	15,374	17,000	17,000	2,499	-	17,000
EXPENSES							
Department: 45 - Public Works							
Program: 0000 - Non Program Activity							
2551.45.0000.5910.100	Transfer out to Capital Projects Fund	-	-	-	-	250,000	250,000
	Program Total: 0000 - Non Program Activity	-	-	-	-	250,000	250,000
	Department Total: 45 - Public Works	-	-	-	-	250,000	250,000
	EXPENSES Total	-	-	-	-	250,000	250,000
	Fund REVENUE Total: 2551 - Impact Fees - Drainage	15,374	17,000	17,000	2,499	-	17,000
	Fund EXPENSE Total: 2551 - Impact Fees - Drainage	-	-	-	-	250,000	250,000
	Fund Total: 2551 - Impact Fees - Drainage	15,374	17,000	17,000	2,499	(250,000)	(233,000)
Fund: 2700 - SB-2 Building Homes and Jobs Act							
REVENUES							
Department: 55 - Business & Housing Services							
Program: 4800 - Development Services							
2700.55.4800.3345.200	State Revenues - Other Miscellaneous	15,050	-	-	-	-	-
	Program Total: 4800 - Development Services	15,050	-	-	-	-	-
	Department Total: 55 - Business & Housing Services	15,050	-	-	-	-	-
	REVENUES Total	15,050	-	-	-	-	-
EXPENSES							
Department: 55 - Business & Housing Services							
Program: 4800 - Development Services							
2700.55.4800.5213.100	Professional/Contract Services General	15,050	-	-	6,959	-	-
	Program Total: 4800 - Development Services	15,050	-	-	6,959	-	-
	Department Total: 55 - Business & Housing Services	15,050	-	-	6,959	-	-
	EXPENSES Total	15,050	-	-	6,959	-	-
	Fund REVENUE Total: 2700 - SB-2 Building Homes and Jobs Act	15,050	-	-	-	-	-
	Fund EXPENSE Total: 2700 - SB-2 Building Homes and Jobs Act	15,050	-	-	6,959	-	-

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	Fund Total: 2700 - SB-2 Building Homes and Jobs Act	-	-	-	(6,959)	-	-
Fund: 5900 - Transit Fund							
REVENUES							
Department: 40 - Community Development							
Program: 4820 - CDD - Transit Operations							
5900.40.4820.3345.001	State Revenues - Other LTF - Local Transit Funds	13,286	-	-	-	-	-
5900.40.4820.3902.201	Miscellaneous Revenue Paratransit Tickets	25	-	-	-	-	-
5900.40.4820.3902.202	Miscellaneous Revenues BC Transit Tickets	1,366	1,200	1,200	383	-	1,200
	Program Total: 4820 - CDD - Transit Operations	14,677	1,200	1,200	383	-	1,200
	Department Total: 40 - Community Development	14,677	1,200	1,200	383	-	1,200
	REVENUES Total	14,677	1,200	1,200	383	-	1,200
EXPENSES							
Department: 40 - Community Development							
Program: 4820 - CDD - Transit Operations							
5900.40.4820.5260	Miscellaneous	1,391	1,200	1,200	286	-	1,200
5900.40.4820.5910.110	Transfers Out To Local Transportation Fund	-	28,720	28,720	-	-	28,720
	Program Total: 4820 - CDD - Transit Operations	1,391	29,920	29,920	286	-	29,920
	Department Total: 40 - Community Development	1,391	29,920	29,920	286	-	29,920
	EXPENSES Total	1,391	29,920	29,920	286	-	29,920
	Fund REVENUE Total: 5900 - Transit Fund	14,677	1,200	1,200	383	-	1,200
	Fund EXPENSE Total: 5900 - Transit Fund	1,391	29,920	29,920	286	-	29,920
	Fund Total: 5900 - Transit Fund	13,286	(28,720)	(28,720)	98	-	(28,720)
Fund: 7611 - GASB 45 Retiree Medical Trust							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
7611.00.0000.3610.100	Interest Revenue Investments	12,336	20,000	20,000	-	-	20,000
	Program Total: 0000 - Non Program Activity	12,336	20,000	20,000	-	-	20,000
	Department Total: 00 - Non Department Activity	12,336	20,000	20,000	-	-	20,000
	REVENUES Total	12,336	20,000	20,000	-	-	20,000
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
7611.00.0000.5610	Trustee/Administrative Fees	572	450	450	-	-	450
7611.00.0000.5620.101	Loss on Investment or Sale of Assets GASB 45 Trust	39,135	-	-	-	-	-
	Program Total: 0000 - Non Program Activity	39,707	450	450	-	-	450
	Department Total: 00 - Non Department Activity	39,707	450	450	-	-	450

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	EXPENSES Total	39,707	450	450	-	-	450
Fund REVENUE	Total: 7611 - GASB 45 Retiree Medical Trust	12,336	20,000	20,000	-	-	20,000
Fund EXPENSE	Total: 7611 - GASB 45 Retiree Medical Trust	39,707	450	450	-	-	450
	Fund Total: 7611 - GASB 45 Retiree Medical Trust	(27,371)	19,550	19,550	-	-	19,550

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Fund: 7624 - SMIP Strong Motion Impl Prog							
REVENUES							
Department: 40 - Community Development							
Program: 4730 - Building and Onsite Inspections							
7624.40.4730.3401.335	CDD Building S.M.I.P. Fees	1,075	1,900	1,900	753	-	1,900
	Program Total: 4730 - Building and Onsite Inspections	1,075	1,900	1,900	753	-	1,900
	Department Total: 40 - Community Development	1,075	1,900	1,900	753	-	1,900
	REVENUES Total	1,075	1,900	1,900	753	-	1,900
	Fund REVENUE Total: 7624 - SMIP Strong Motion Impl Prog	1,075	1,900	1,900	753	-	1,900
	Fund EXPENSE Total: 7624 - SMIP Strong Motion Impl Prog						
	Fund Total: 7624 - SMIP Strong Motion Impl Prog	1,075	1,900	1,900	753	-	1,900
Fund: 7627 - Tech Equip Replacement/Update							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
7627.00.0000.3406.101	Surcharge Tech Equip Replacement/Update	471,679	465,000	465,000	113,345	-	465,000
	Program Total: 0000 - Non Program Activity	471,679	465,000	465,000	113,345	-	465,000
	Department Total: 00 - Non Department Activity	471,679	465,000	465,000	113,345	-	465,000
	REVENUES Total	471,679	465,000	465,000	113,345	-	465,000
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
7627.00.0000.5199.199	Other Fund Support IT-Serv from Tech Fee	380,902	463,123	463,123	167,837	-	463,123
7627.00.0000.5910.203	Transfers Out Building Safety & WW Services	-	116,000	116,000	-	-	116,000
	Program Total: 0000 - Non Program Activity	380,902	579,123	579,123	167,837	-	579,123
	Department Total: 00 - Non Department Activity	380,902	579,123	579,123	167,837	-	579,123
	EXPENSES Total	380,902	579,123	579,123	167,837	-	579,123
	Fund REVENUE Total: 7627 - Tech Equip Replacement/Update	471,679	465,000	465,000	113,345	-	465,000
	Fund EXPENSE Total: 7627 - Tech Equip Replacement/Update	380,902	579,123	579,123	167,837	-	579,123
	Fund Total: 7627 - Tech Equip Replacement/Update	90,777	(114,123)	(114,123)	(54,492)	-	(114,123)
Fund: 7628 - General Plan Update							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
7628.00.0000.3345.200	State Revenues - Other Miscellaneous	124,679	65,000	65,000	-	-	65,000
7628.00.0000.3406.100	Surcharge General Plan Fees	383,833	385,000	385,000	92,405	-	385,000
	Program Total: 0000 - Non Program Activity	508,512	450,000	450,000	92,405	-	450,000

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	Department Total: 00 - Non Department Activity	508,512	450,000	450,000	92,405	-	450,000
	REVENUES Total	508,512	450,000	450,000	92,405	-	450,000
EXPENSES							
Department:	**00 - Non Department Activity**						
Program:	**0000 - Non Program Activity**						
7628.00.0000.5910.010	Transfers Out To General Fund	201,178	800,000	800,000	-	-	800,000
	Program Total: 0000 - Non Program Activity	201,178	800,000	800,000	-	-	800,000
	Department Total: 00 - Non Department Activity	201,178	800,000	800,000	-	-	800,000
	EXPENSES Total	201,178	800,000	800,000	-	-	800,000
	Fund REVENUE Total: 7628 - General Plan Update	508,512	450,000	450,000	92,405	-	450,000
	Fund EXPENSE Total: 7628 - General Plan Update	201,178	800,000	800,000	-	-	800,000
	Fund Total: 7628 - General Plan Update	307,333	(350,000)	(350,000)	92,405	-	(350,000)
Fund:	**7650 - TOP as Successor RDA**						
REVENUES							
Department:	**60 - RDA**						
Program:	**4975 - Successor RDANH Operations**						
7650.60.4975.3610.100	Interest Revenue Investments	117	-	-	87	-	-
7650.60.4975.3910.010	Transfers In From General Fund	-	40,500	40,500	-	-	40,500
7650.60.4975.3910.924	Transfers In From RDA Obligation Retirement	28,674	-	-	-	-	-
	Program Total: 4975 - Successor RDANH Operations	28,791	40,500	40,500	87	-	40,500
	Department Total: 60 - RDA	28,791	40,500	40,500	87	-	40,500
	REVENUES Total	28,791	40,500	40,500	87	-	40,500
EXPENSES							
Department:	**60 - RDA**						
Program:	**4975 - Successor RDANH Operations**						
7650.60.4975.5213.100	Professional/Contract Services General	16,800	18,300	18,300	2,713	-	18,300
7650.60.4975.5500	Bond Payments - Fiscal Agent	8,500	6,000	6,000	-	-	6,000
7650.60.4975.5502	Debt Service Payment - Interest	297,759	146,149	146,149	-	-	146,149
7650.60.4975.5910.010	Transfers Out To General Fund	16,200	16,200	16,200	-	-	16,200
	Program Total: 4975 - Successor RDANH Operations	339,259	186,649	186,649	2,713	-	186,649
	Department Total: 60 - RDA	339,259	186,649	186,649	2,713	-	186,649
	EXPENSES Total	339,259	186,649	186,649	2,713	-	186,649
	Fund REVENUE Total: 7650 - TOP as Successor RDA	28,791	40,500	40,500	87	-	40,500
	Fund EXPENSE Total: 7650 - TOP as Successor RDA	339,259	186,649	186,649	2,713	-	186,649
	Fund Total: 7650 - TOP as Successor RDA	(310,468)	(146,149)	(146,149)	(2,625)	-	(146,149)

TOWN OF PARADISE

Budget Worksheet Report as of October 20, 2022

G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
Fund: 7700 - PG&E Settlement Fund							
REVENUES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
7700.00.0000.3610.100	Interest Revenue Investments	1,185,490	1,100,000	1,100,000	381,490	-	1,100,000
7700.00.0000.3615.100	Gain / Loss on Investments - Realized General	(225,803)	-	-	(112,013)	-	-
7700.00.0000.3616.100	Change in Investment Value - Unrealized Gain/Loss General	(10,994,594)	-	-	1,286,703	-	-
7700.00.0000.3901.100	Refunds and Reimbursements Miscellaneous	-	-	-	2,227,843	2,227,843	2,227,843
	Program Total: 0000 - Non Program Activity	(10,034,907)	1,100,000	1,100,000	3,784,023	2,227,843	3,327,843
	Department Total: 00 - Non Department Activity	(10,034,907)	1,100,000	1,100,000	3,784,023	2,227,843	3,327,843
	REVENUES Total	(10,034,907)	1,100,000	1,100,000	3,784,023	2,227,843	3,327,843
EXPENSES							
Department: 00 - Non Department Activity							
Program: 0000 - Non Program Activity							
7700.00.0000.5213.100	Professional/Contract Services General	83,286	84,000	84,000	7,062	-	84,000
7700.00.0000.5910.010	Transfers Out To General Fund	5,996,186	10,985,377	11,131,247	4,687,925	44,050	11,175,297
	Program Total: 0000 - Non Program Activity	6,079,472	11,069,377	11,215,247	4,694,987	44,050	11,259,297
	Department Total: 00 - Non Department Activity	6,079,472	11,069,377	11,215,247	4,694,987	44,050	11,259,297
	EXPENSES Total	6,079,472	11,069,377	11,215,247	4,694,987	44,050	11,259,297
	Fund REVENUE Total: 7700 - PG&E Settlement Fund	(10,034,907)	1,100,000	1,100,000	3,784,023	2,227,843	3,327,843
	Fund EXPENSE Total: 7700 - PG&E Settlement Fund	6,079,472	11,069,377	11,215,247	4,694,987	44,050	11,259,297
	Fund Total: 7700 - PG&E Settlement Fund	(16,114,379)	(9,969,377)	(10,115,247)	(910,964)	2,183,793	(7,931,454)
Fund: 7808 - Canine Protection Unit Donations							
REVENUES							
Department: 30 - Police							
Program: 0000 - Non Program Activity							
7808.30.0000.3610.100	Interest Revenue Investments	-	175	175	-	-	175
7808.30.0000.3650.100	Donations Private Sources	9,516	5,000	5,000	1,504	-	5,000
	Program Total: 0000 - Non Program Activity	9,516	5,175	5,175	1,504	-	5,175
	Department Total: 30 - Police	9,516	5,175	5,175	1,504	-	5,175
	REVENUES Total	9,516	5,175	5,175	1,504	-	5,175
EXPENSES							
Department: 30 - Police							
Program: 4520 - Police Operations							
7808.30.4520.5202.100	Operating Supplies General	5,355	2,000	2,000	-	-	2,000
	Program Total: 4520 - Police Operations	5,355	2,000	2,000	-	-	2,000
	Department Total: 30 - Police	5,355	2,000	2,000	-	-	2,000

TOWN OF PARADISE

Budget Worksheet Report as of October 20, 2022

G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
	EXPENSES Total	5,355	2,000	2,000	-	-	2,000
Fund REVENUE	Total: 7808 - Canine Protection Unit Donations	9,516	5,175	5,175	1,504	-	5,175
Fund EXPENSE	Total: 7808 - Canine Protection Unit Donations	5,355	2,000	2,000	-	-	2,000
	Fund Total: 7808 - Canine Protection Unit Donations	4,161	3,175	3,175	1,504	-	3,175

TOWN OF PARADISE

Budget Worksheet Report as of October 20, 2022

G/L Account Number	Account Description	FY 2021-22 Unaudited Actual Amount	FY 2022-23 Adopted Budget	FY 2022-23 Amended Budget	FY 2022-23 Actual to Date	FY 2022-23 Proposed Amendments	FY 2022-23 Proposed Amended Budget
Fund: 7811 - Animal Control Misc Donations							
REVENUES							
Department: 30 - Police							
Program: 4540 - Police - Animal Control							
7811.30.4540.3610.100	Interest Revenue Investments	-	100	100	-	-	100
7811.30.4540.3650.100	Donations Private Sources	16,669	3,400	3,400	3,285	-	3,400
7811.30.4540.3695.100	Private Grants Animal Control	-	-	-	5,000	-	-
	Program Total: 4540 - Police - Animal Control	16,669	3,500	3,500	8,285	-	3,500
	Department Total: 30 - Police	16,669	3,500	3,500	8,285	-	3,500
	REVENUES Total	16,669	3,500	3,500	8,285	-	3,500
EXPENSES							
Department: 30 - Police							
Program: 4540 - Police - Animal Control							
7811.30.4540.5910.070	Transfers Out To Animal Control Fund	3,500	6,917	6,917	-	-	6,917
	Program Total: 4540 - Police - Animal Control	3,500	6,917	6,917	-	-	6,917
	Department Total: 30 - Police	3,500	6,917	6,917	-	-	6,917
	EXPENSES Total	3,500	6,917	6,917	-	-	6,917
	Fund REVENUE Total: 7811 - Animal Control Misc Donations	16,669	3,500	3,500	8,285	-	3,500
	Fund EXPENSE Total: 7811 - Animal Control Misc Donations	3,500	6,917	6,917	-	-	6,917
	Fund Total: 7811 - Animal Control Misc Donations	13,169	(3,417)	(3,417)	8,285	-	(3,417)

Town of Paradise

Council Agenda Summary **Agenda Item: 6(d)**

Date: November 7, 2022

ORIGINATED BY: Jessica Erdahl, Sr. Capital Projects Manager

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Emergency Relief Project: 2023 On-System Road Rehabilitation – PSE Approval and Authorize Advertisement for Bids.

LONG TERM RECOVERY PLAN: Yes, Tier 1

COUNCIL ACTION REQUESTED:

1. Consider adopting Resolution No.2022- __, A Resolution of the Town Council of the Town of Paradise approving the plans and specifications for the 2023 On-System Road Rehabilitation Project and authorizing advertisement for bids on the project. (ROLL CALL VOTE)

Background:

Due to the ongoing recovery effort and debris removal operations within the Town and Butte County, the Town's on-system roadway infrastructure sustained heavy damage in the wake of the Camp Fire. The pavement structural sections were damaged in two ways:

1. Pavement Scarring due to Car Fires – On the day of the Camp Fire, several motorists were required to abandon their vehicles and continue evacuating on foot. The subsequent car fires damaged the pavement, justifying the need for repair.

2. Pavement Structural Section Damage due to Heavy Truck Traffic – Following the Camp Fire, the Town has experienced a staggering level of truck traffic. During the CALOES Debris Removal effort, over 3.7 million tons of material was removed, equivalent to approximately 300,000 truckloads. During that same period, PG&E, Comcast, and AT&T have restored the distribution infrastructure. PG&E has already removed over 92,000 trees, and an additional 100,000 trees are estimated for removal in 2020. The volume of trucks using the Town's on-system roads has resulted in damage to the pavement structural section, justifying the need for rehabilitation.

The Town coordinated with Caltrans and Federal Highways Administration (FHWA) to secure Emergency Relief permanent restoration funding to repair damaged on-system roads town wide. Through the Emergency Relief Program, the Town of Paradise has been approved for $55,439,200 for the on-system road rehabilitation project. The approved project is located on Federal-Aid "On-System" roads – meaning the Town's primary collectors and arterials such as Skyway, Clark, Pearson, Elliott, Bille, Wagstaff, Pentz, etc.

On November 10, 2020, Paradise Town Council awarded master on-call contracts to Mark Thomas, Dokken Engineering, GHD, Inc., Wood Rodgers, Inc. and Dewberry Drake Haglan to perform on-call professional civil engineering services for a variety of local, state, and federally-funded projects. Subsequently, in January 2021, task orders were issued to Mark Thomas,

Dokken Engineering, and Wood Rodgers, Inc. to perform civil design services on the on-system road rehabilitation project.

The overall scope of work for the Project can be summarized as follows:

- Repair Camp Fire damaged on-system roads to achieve a pre-fire condition.

On June 14, 2022 Paradise Town Council awarded Contract No. 7303.1.CON, 2022 On-System Roadway Rehabilitation –Skyway (Project 1) to Baldwin Contracting Company, Inc. dba Knife River Construction in the amount of their base bid plus additive bid #1,$5,069,864.78.

A vicinity map of the town wide on-system road project limits, as well as the proposed 2023 project limits are provided in this Agenda Summary.

Analysis:
The on-system road rehabilitation project is consistent with priorities identified in the Paradise Long-Term Recovery Plan prepared in response to the 2018 Camp Fire and necessary to restore roadway infrastructure to a pre-fire condition.

Road rehabilitation projects will be identified based on utility undergrounding completion. As segments of utilities are nearing completion, the Town of Paradise will identify and bid specific segments of roadways as individual projects. The goal of this approach is to maximize efficiency, partnership and remain good stewards of precious public funds and community impacts by reducing excavations into recently rehabilitated roadways.

With Council approval of the plans and specifications and authorization to advertise for bids, staff proposes the following schedule:

Project No. 2 (2023) – Dean Road, Merrill Road, Wagstaff Road, Bille Road, Elliott Rd, Sawmill Road, Pearson Road, S Libby Road, Stearns Road, and Country Club Drive (8.5 miles).

Advertise for bid:	November 2022
Award Contract:	January 2023
Construction:	Spring 2023

Future Projects – 2024-2025

Financial Impact:
FHWA Emergency Relief funds have been authorized as Advance Construction (AC) for the construction and construction engineering phases. Advance Construction is a project authorization technique that allows FHWA to authorize a project phase without obligating Federal funds. Projects authorized under Advance Construction procedures will not receive federal reimbursement until Federal funds become available and are obligated on a subsequent sequence. The Town will use local funds to perform the construction and construction engineering phases for future federal reimbursement. Emergency Relief AC funding is typically obligated as federal funds within 6 months following federal authorization to proceed.

The total estimated construction and construction engineering cost for on-system roads town wide is $51,935,200 and $8,8550,50.80 for the 2023 project. The estimated funding breakdown is shown below. A detailed project accounting description for each project bid will be made available at the time of contract award.

2023 On-System Road Rehabilitation Project

Contract Items	Total Estimated Cost	Total Participating Cost	Emergency Relief (AC) 75.25 %	Local Match 24.75%	Non-Participating (Utility Adjustments)
Construction Project 2 - 2023	$ 7,379,209.00	$ 6,962,209.00	$ 5,239,062.27	$ 1,723,146.73	$ 417,000.00
Contingency (10%)	$ 737,920.90	$ 737,920.90	$ 555,285.48	$ 182,635.42	
Construction Management (10%)	$ 737,920.90	$ 737,920.90	$ 555,285.48	$ 182,635.42	$ -
Total	**$ 8,855,050.80**	**$ 8,438,050.80**	**$ 6,349,633.23**	**$ 2,088,417.57**	**$ 417,000.00**
Total Available Funding	$ 46,907,348.74	$ 46,066,861.66	$ 34,665,313.40	$ 11,401,548.26	$ 840,487.08
Balance	**$ 38,052,297.94**	**$ 37,628,810.86**	**$ 28,315,680.17**	**$ 9,313,130.69**	**$ 423,487.08**

Required matching funds, $2,088,417.57 (24.75%), are anticipated to be awarded through the Community Development Block Grant-Disaster Recovery fund allocation process.

Environmental Review:

The project is exempt under State CEQA Guidelines [Section 15269(a)], which states:

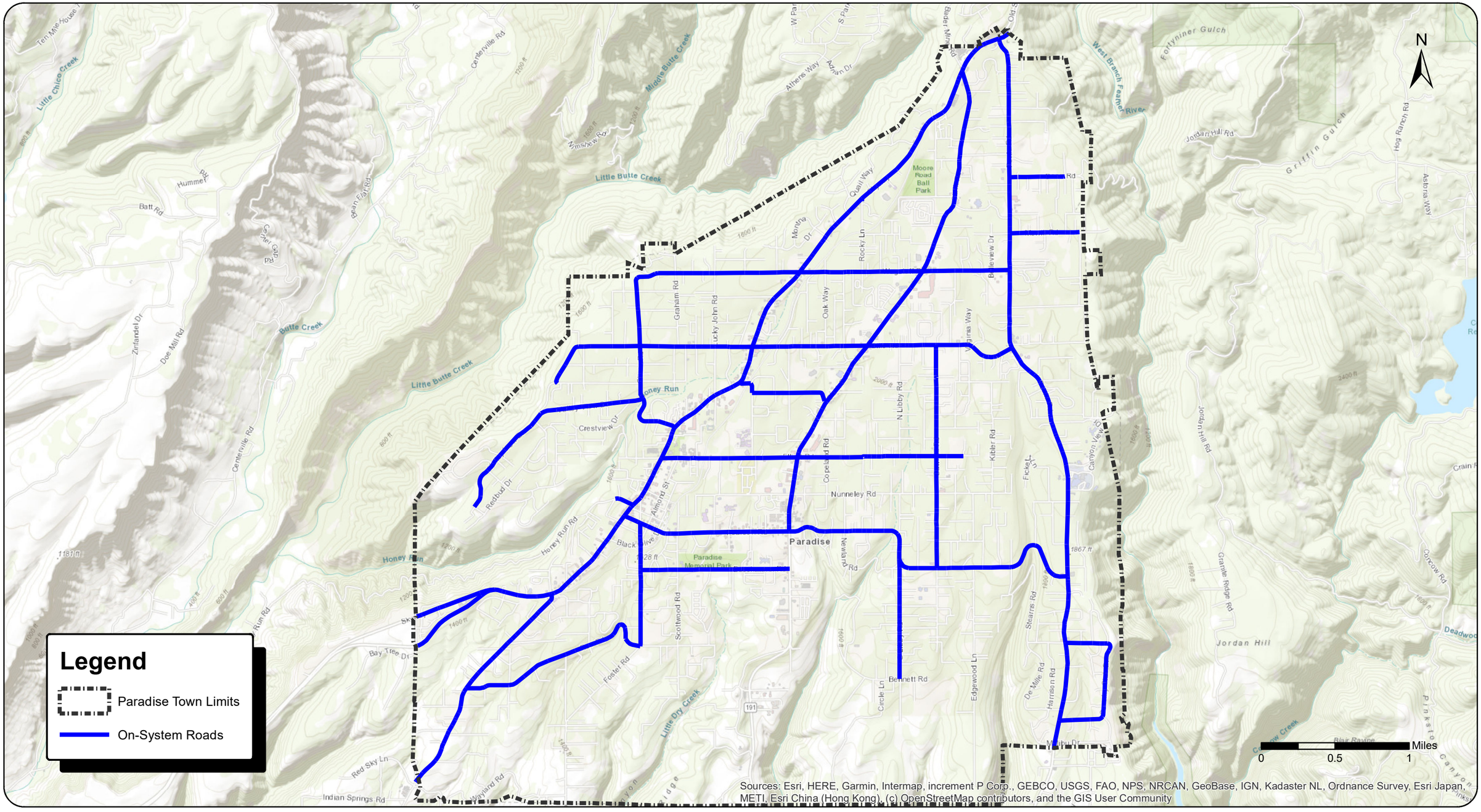
The following emergency projects are exempt from the requirements of CEQA.

(a) Projects to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed as a result of a disaster in a disaster-stricken area in which a state of emergency has been proclaimed by the Governor pursuant to the California Emergency Services Act, commencing with Section 8550 of the Government Code. This includes projects that will remove, destroy, or significantly alter an historical resource when that resource represents an imminent threat to the public of bodily harm or of damage to adjacent property or when the project has received a determination by the State Office of Historic Preservation pursuant to Section 5028(b) of Public Resources Code.

The project location is a disaster-stricken area, proclaimed as a major disaster by the President on November 12, 2018 (FEMA-4407-DR) and as a State of Emergency by the State of California on November 8, 2018. The purpose of the project is to repair existing infrastructure damaged by the Camp Fire. No further environmental review is necessary for this project.

Attachments:

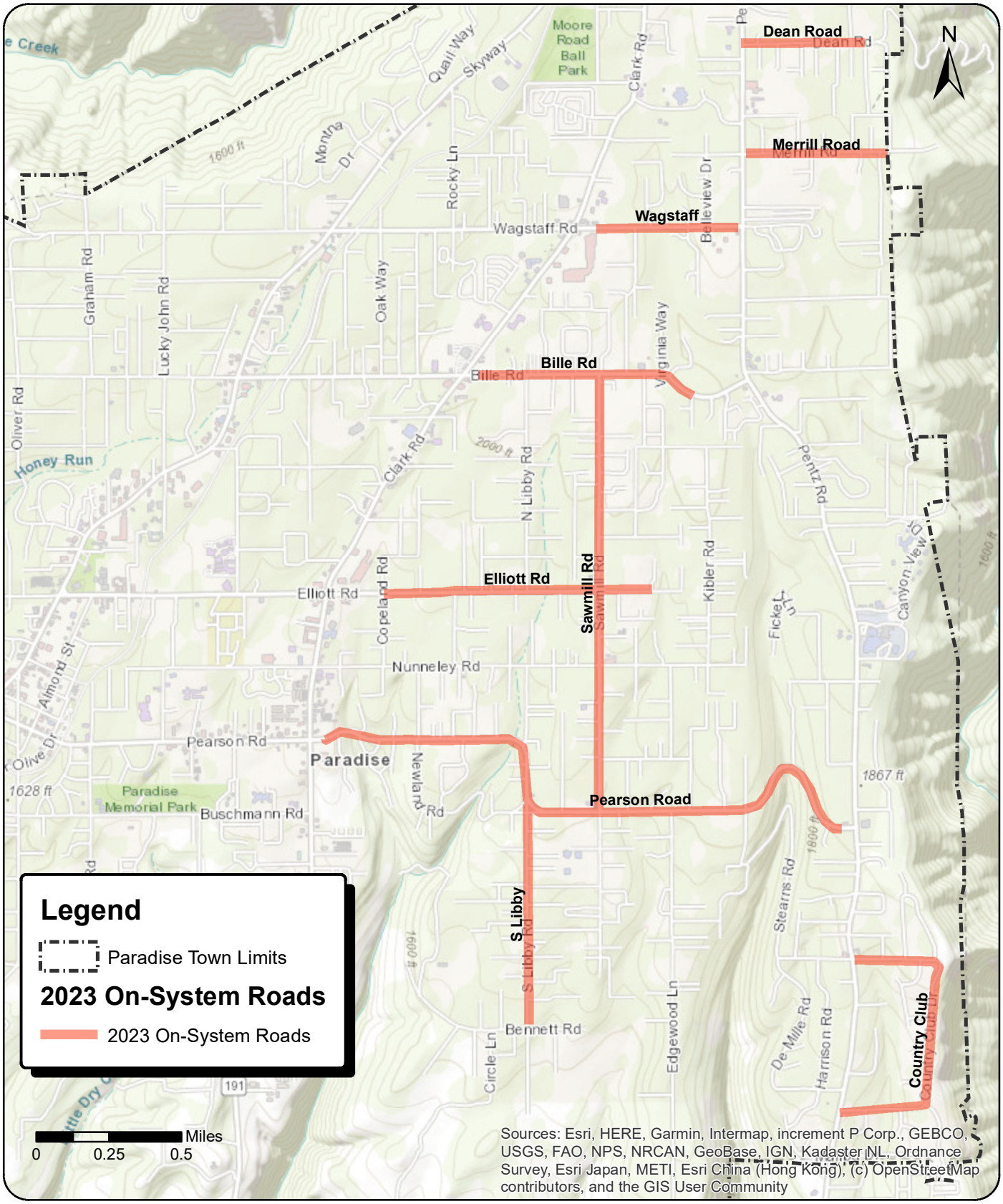
A. On-System Road Vicinity Map
B. Project Map 2023
C. Resolution



TOWN OF PARADISE
PUBLIC WORKS DEPARTMENT
5555 Skyway Road
Paradise, California 95969

ON-SYSTEM ROAD
REHABILITATION PROJECT
FEDERAL-AID NO. ER38Y0(012)

PROJECT LOCATION MAP
J ERDAHL
OCT 2022



TOWN OF PARADISE
PUBLIC WORKS DEPARTMENT
5555 Skyway Road
Paradise, California 95969

PROJECT NOTIFICATION MEMO NO. 2
2023 ON-SYSTEM ROAD REHABILITATION PROJECT
FEDERAL-AID NO. ER38Y0(012)

PROJECT LOCATION MAP

J ERDAHL
OCT 2022

TOWN OF PARADISE
RESOLUTION NO. 2022-____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE APPROVING THE PLANS, SPECIFICATIONS AND ESTIMATES FOR THE 2023 ON-SYSTEM ROAD REHABILITATION PROJECT AND AUTHORIZING ADVERTISEMENT FOR BIDS ON THE PROJECT.

WHEREAS, on-system roads sustained damage as a result of the Camp Fire; and,

WHEREAS, the Town of Paradise has received a $55,439,200 allocation of Federal Highway Administration Emergency Relief Program funds; and,

WHEREAS, the purpose of the Emergency Relief Program is Repair or reconstruction of Federal-aid highways and roads ("On-System") which have suffered serious damage as a result of natural disasters.

WHEREAS, eligible repairs may include, but are not limited to, damage occurring to pavement or other surface courses, shoulders, embankments, cut slopes, roadside development, and stream channels, whether man-made or natural. Pavement repairs or reconstruction may also include rock slope protection, cribbing, or other stream bank control features, bridges, retaining walls, culverts and debris removal, including other deposits from roadway drainage channels and the traveled way.

WHEREAS, the 2023 On-System Road Rehabilitation Project is consistent in scope with the approved emergency relief funds: and,

WHEREAS, the 2023 On-System Road Rehabilitation Project is consistent with priorities identified in the Paradise Long-Term Recovery Plan prepared in response to the 2018 Camp Fire.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. The design, plans, specifications and estimates for the 2023 On-System Road Rehabilitation Project described in the Town Council Agenda Summary for this Resolution are hereby approved.

Section 2. The Public Works Department is authorized to advertise the 2023 On-System Road Rehabilitation Project.

Section 3. The 2023 On-System Road Rehabilitation Project is exempt from the provisions of the California Environmental Quality Act pursuant to State CEQA Guidelines [Section 15269(a)] Emergency Projects.

PASSED AND ADOPTED by the Town Council of the Town of Paradise on this 7th day of November 2022, by the following vote:

//

AYES:
NOES:
ABSENT:
ABSTAIN:

By:_____
Steve Crowder, Mayor

ATTEST:

_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

Town of Paradise

Council Agenda Summary **Agenda Item: 6(e)**

Date: November 7, 2022

ORIGINATED BY: Marc Mattox, Public Works Director/Town Engineer

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Off-System Road Rehabilitation Project– PSE Approval and Authorize Advertisement for Bids.

LONG TERM RECOVERY PLAN: Yes, Tier 1

COUNCIL ACTION REQUESTED:

1. Consider directing staff to submit a formal request to FEMA designating FEMA-4407-DR-CA PA ID: 007-55520-00 PW 363 as an Improved Project. (ROLL CALLVOTE)

Background:

Due to the ongoing recovery effort and debris removal operations within the Town and Butte County, the Town's off-system roadway infrastructure sustained heavy damage in the wake of the Camp Fire. The pavement structural sections were damaged in two ways:

1. Pavement Scarring due to Car Fires – On the day of the Camp Fire, several motorists were required to abandon their vehicles and continue evacuating on foot. The subsequent car fires damaged the pavement, justifying the need for repair.

2. Pavement Structural Section Damage due to Heavy Truck Traffic – Following the Camp Fire, the Town has experienced a staggering level of truck traffic. During the CALOES Debris Removal effort, over 3.7 million tons of material was removed, equivalent to approximately 300,000 truckloads. During that same period, PG&E, Comcast, and AT&T have restored the distribution infrastructure. PG&E has already removed over 92,000 trees, and an additional 100,000 trees are estimated for removal in 2020. The volume of trucks using the Town's on-system roads has resulted in damage to the pavement structural section, justifying the need for rehabilitation.

The Town coordinated with the Federal Emergency Management Agency (FEMA) to secure Public Assistance permanent restoration funding to repair damaged off-system roads town wide. Through the Public Assistance Program, the Town of Paradise has been approved for $38,290,000 for the off-system road rehabilitation project. The approved project is located on "Off-System" roads. Off-system roadway rehabilitation include roadways that are not on the on-system roadways and will be funded by FEMA.

On November 10, 2020, Paradise Town Council awarded master on-call contracts to Mark Thomas, Dokken Engineering, GHD, Inc., Wood Rodgers, Inc. and Dewberry Drake Haglan to perform on-call professional civil engineering services for a variety of local, state, and federally-funded projects. Subsequently, in January 2021, task orders were issued to GHD, Dokken Engineering, and Dewberry to perform civil design services on the off-system road rehabilitation project.

Analysis:

During the design process, engineering design and code requirements required several modifications of the approved scope of work listed in the FEMA Public Assistance Project Worksheet. This cost-neutral scope change was submitted to CalOES and FEMA in March of 2022. The primary transmittal is attached to this Agenda Summary which explains the scope changes required, including approval of new road rehabilitation techniques, upgrades to pedestrian access ramps and monument preservation.

In recent weeks in coordination with CalOES and FEMA, a recommendation has been made for the Town to make a request for a conversion to an Improved Project in accordance with 44 CFR 206.203(d)(1), copied below:

> ***Improved projects.*** *If a subrecipient desires to make improvements, but still restore the predisaster function of a damaged facility, the recipient's approval must be obtained. Federal funding for such improved projects shall be limited to the Federal share of the approved estimate of eligible costs.*

This designation would allow the Town and FEMA to avoid arduous reviews and clarifications on the requested scope change and move forward towards completion. The major caveat with an Improved Project is that in the event project work exceeds the original allocation amount, no additional funds may be awarded – meaning potential cost increases would be borne by the Town of Paradise. Unchanged, however, only incurred actual costs up to the approved amount could be reimbursed.

Staff has reviewed the impacts of this potential action and is requesting Council approval to formally request the Improved Project designation for this work effort. In forecasting future project implementation based on current construction costs and potential global economic changes, staff believes the risk associated with the action is outweighed by the benefits of streamlining the project process and scope revisions needed.

If approved, staff will submit the Improved Project request immediately aiming for a quick approval to ensure no delays are incurred in delivering the 2023 Off-System Paving Project.

Financial Impact:

The total estimated construction and construction engineering cost for off-system roads town wide is $38,290,000. The estimated funding breakdown is shown below.

Off-System Road Rehabilitation Project

Phase	Total Estimated Cost	Total Participating Cost	FEMA/CalOES 93.75 %	Local/CDBG-DR Match 6.25%
Preliminary Engineering	$3,064,000.00	$ 3,064,000.00	$ 2,872,500.00	$ 191,500.00
Construction	$30,631,000.00	$ 30,631,000.00	$ 28,716,562.50	$ 1,914,437.50
Construction Management	$4,595,000.00	$ 4,595,000.00	$ 4,307,812.50	$ 287,187.50
Total	**$ 38,290,000.00**	**$ 38,290,000.00**	**$ 35,896,875.00**	**$ 2,393,125.00**

Required matching funds, $2,393,125 (6.25%), are planned for approved Paradise Community Development Block Grant-Disaster Recovery Infrastructure fund allocations.

Finally, staff recommends the addition of a contingency fund using Paradise Community Development Block Grant-Disaster Recovery Infrastructure fund allocations. Based on recent grant award announcements, staff is planning a CDBG-DR Action Plan Amendment in December 2022 which will allow for additional projects to be funded – including increasing the fund's commitment from just the minimum match requirement to include a $5M contingency reserve. This reserve will offset the risk of an Improved Project designation in the event construction costs exceed original approved funding amounts.

Environmental Review:

The project is exempt under State CEQA Guidelines [Section 15269(a)], which states:

The following emergency projects are exempt from the requirements of CEQA.

(a) Projects to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed as a result of a disaster in a disaster-stricken area in which a state of emergency has been proclaimed by the Governor pursuant to the California Emergency Services Act, commencing with Section 8550 of the Government Code. This includes projects that will remove, destroy, or significantly alter an historical resource when that resource represents an imminent threat to the public of bodily harm or of damage to adjacent property or when the project has received a determination by the State Office of Historic Preservation pursuant to Section 5028(b) of Public Resources Code.

The project location is a disaster-stricken area, proclaimed as a major disaster by the President on November 12, 2018 (FEMA-4407-DR) and as a State of Emergency by the State of California on November 8, 2018. The purpose of the project is to repair existing infrastructure damaged by the Camp Fire. No further environmental review is necessary for this project.

Attachments:

- FEMA Scope Change Request Memo

Town of Paradise
Public Works Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

March 10, 2022

Mr. David Gillings
Public Assistance Officer
California Office of Emergency Services
3650 Schriever Avenue
Mather, CA 95655

Subject: Scope Change Request, FEMA-4407-DR-CA PA ID: 007-55520-00

Dear Mr. Gillings:

The Town of Paradise requests a scope of work change for the uncompleted permanent work under PW#363 as a result of the Camp Fire. PW#363 aims to repair surface and structural damage to "Off-System" (non-Federal Highways Administration/National Highway System) roadways in the Town of Paradise. This scope of work change does not increase the overall cost of the project. The following scope of work is currently included in the approved Project Report:

- Replace asphalt concrete pavement
- Replace of hot mix asphalt (.25' Depth)
- Replace of hot mix asphalt (Digouts w/.25' Depth)
- Replace of aggregate base
- Remove roadway
- Replace thermoplastic traffic stripe
- Replace Inductive loop detector

The proposed scope of work change includes the above list as well as the following items of work:

- Pavement Structural Section Repairs
  - Full-Depth Reclamation – Cement
  - Pulverized Roadbed
- ADA Curb Ramp Reconstruction
- Utility and Monument Adjustments
  - Adjust Utilities/Monuments to Grade
  - Re-establish Monument

Introduction

Since the Project Worksheet was approved, the Town has retained a team of highly qualified civil engineering team to prepare plans, specifications, and estimates for the off-system road rehabilitation project. Final plans, specifications and estimates were recently completed in January 2022. These plans were prepared with the benefit of proper design using supplemental topographic surveys and detailed geotechnical field investigations, which were not available when the original project was created. These critical items assisted the design process to ensure damage repair techniques are both efficient and effective.

This letter aims to document the repair techniques to be utilized in the revised project, summarized below:

1. **Pavement Structural Section Design** – Additional geotechnical data has been gathered, including R-Values and pavement cores for the various segments of roadways. Generally, R-Values were lower and pavement sections were thinner than what was assumed in original scope request. The road rehabilitation strategies changed as a result.
2. **ADA Curb Ramp Reconstruction** – Department of Justice requires all curb ramps to be upgraded to meet ADA standards in conjunction with pavement rehabilitation projects. This work was not included in the original scope.
3. **Utility and Monument Adjustments** – Paradise Irrigation District, a California Special Public Utility District has approximately 791 utility covers in the pavement structural section requiring adjustment during paving operations. The Town of Paradise also has town owned storm drain infrastructure requiring adjustment to accommodate paving operations. Additionally, monument protection and re-establishment, governed by Section 8771 and Section 8725 of the Business and Professions Code and Section 605 of the California Penal Code, need to be included as items of work.

Background

Due to the ongoing recovery effort and debris removal operations within the Town and Butte County, the Town's roadway infrastructure sustained heavy damage in the wake of the Camp Fire. A vicinity map showing off-system road routes within the Town is included within **Attachment 1**.

As result of the Camp Fire, the pavement structural sections on Off-System roads were damaged in two major ways:

1. **Pavement scarring due to vehicle fires** – On the day of the Camp Fire, several motorists were required to abandon their vehicles and continue evacuating on foot. The subsequent vehicle fires damaged the pavement, justifying the need for repair.
2. **Pavement structural section damage due to heavy truck traffic** – Following the Camp Fire, the Town has experienced a staggering level of truck traffic. During the CALOES Debris Removal effort, over 3.7 million tons of material was removed, equivalent to approximately 300,000 truckloads. During that same period, PG&E, Comcast, and AT&T have restored the distribution infrastructure. PG&E has already removed over 92,000 trees, and an additional 100,000 trees were estimated for removal in 2020. The volume of trucks using the Town's off-system roads has resulted in damage to the pavement structural section, justifying the need for rehabilitation.

Immediately following the Camp Fire, Town staff worked with FHWA and FEMA to develop a strategy for rehabilitation of all on-system and off-system roads within the Town limits. The direction was to demonstrate "visible evidence" of pavement damage related to the incident, specifically to capture damage due to debris hauling. In response, the Town has performed two road condition surveys. The first survey was performed in January 2019, and the second was performed in September 2019. The timing of the surveys was to document the pavement condition immediately following the fire and then provide evidence of damage after 8 months of intense hauling. The visual evidence suggests that all off-system roads need rehabilitation because of the Camp Fire and are eligible for Public Assistance and Emergency Relief Program funds through FEMA and FHWA, respectively.

The Town prepared a funding request to justify the pavement rehabilitation required for all off-system roads within the Town limits. The request included technical information requested by FEMA, including explicit criteria justifying full-depth pavement reconstruction (Digouts), traffic counts, and Traffic Index (TI) calculations.

Based on the condition surveys, the most apparent evidence of pending pavement failure is due to increased cracking and rutting. An increase in the longitudinal and transverse cracking, with isolated areas of alligator cracking was observed when the two roadway surveys were compared. An increase in rutting, especially in the areas where trucks start and stop was also observed throughout the roadway network.

Based on the evidence provided by the road condition surveys and limited information regarding the existing soil conditions, the Town of Paradise proposed a rehabilitated pavement section including two primary components:

- Full Depth Pavement Reconstruction (Digouts) (3" Hot Mix Asphalt over 4" Aggregate Base) – Digouts will be constructed where changes in cracking and rutting are severe.
- Cold Plane and Overlay (2" Cold Plane and 3" Hot Mix Asphalt Overlay) – The grind and overlay will be applied to the entire roadway surface (including digout locations).

When these treatment techniques were selected limited geotechnical data was available and the existing pavement structural sections were unknown. Given the timeframe required to submit the request within the PA program, detailed analysis was deferred to the preliminary engineering and design phase.

Item 1 - Pavement Repair Techniques including FDR and Pulverization

Following the completion of required studies and design, critical factors were discovered which require a modified approach to pavement repairs, explained further below.

Traffic Volumes

The original funding application used traffic counts from BCAG's Post Camp Fire Population Study conducted in November 2019. This scope change request proposes using average daily traffic estimates from BCAG's regional traffic model developed 2017/2018 (pre-Camp Fire). While traffic volumes are slightly higher in the pre-Camp Fire estimates, the truck ratios are much lower than what was observed in the Post Camp Fire Population Study.

Traffic Index Calculations

Originally calculated TIs using traffic data from the Post Camp Fire Population Study ranged from 8.5 to 10.7. For funding estimate purposes, a TI of 8 was used for all off-system roads in the original funding application. A TI of 8 was intended to provide a resilient pavement section that would serve the town beyond the immediate recovery period.

During preparation of the geotechnical reports, it was observed that using a TI of 8 was too conservative for many of the low-volume off-system roads. The calculated TI's, using the revised traffic volumes (pre-camp Fire) ranged from 5 to 7, lower than originally estimated. The reduced TI's included in the final geotechnical reports helped off-set a portion of the construction cost increases discussed later in this memorandum.

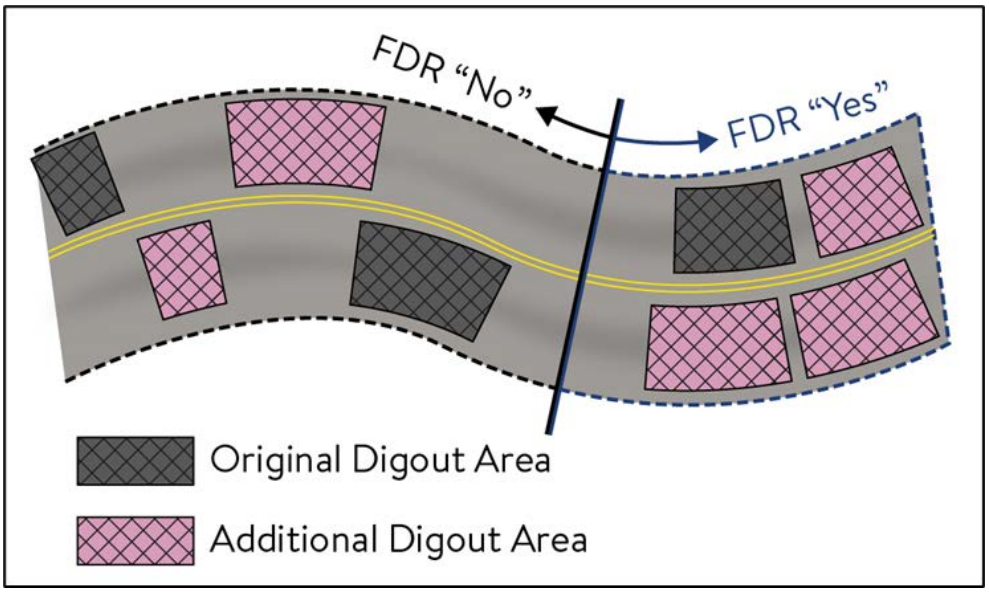
Resistance Values (R Values)

When the original funding application as prepared, an R-Value of 23 was assumed based on available geotechnical testing provided by Butte County. As part of the 100% plans, detailed subsurface geotechnical investigations were performed, and the true R-values were determined. The calculated R-values ranged from 8 to 47. However, in order to reduce the number of pavement structural sections required for the project, the R-Values used for final design ranged from 15 to 30. Setting the minimum R-value to 15 resulted in a cost saving measure as well.

After the geotechnical field investigations and lab analysis was complete, the pavement rehabilitation strategies proposed in the original project worksheet need to be expanded. In areas where the estimated digout surface area exceeds 20% of the total surface area of a logical roadway segment, the design team considered the use of Full Depth Reclamation (FDR) or pulverization in lieu of the pavement digout / overlay strategy. Roads with HMA or chip seal surfaces that were less than 0.15 feet thick and are supported on either subgrade soils or relatively thin sections of AB are not suitable for FDR, therefore pulverization was the selected roadway rehabilitation treatment.

Within these roadway segments, the cost of constructing the digouts would be equivalent to or more expensive than placing FDR or pulverizing for the following reasons:

- Labor costs for saw cutting, excavating, placing material, and compaction are eliminated.
- Construction process for FDR or pulverization reduces contract working days
- Reduced working days results in lower traffic control costs and minimizes disturbance to the travelling public.



The Town understands the need to avoid betterments under the FEMA Public Assistance program. The use of FDR or pulverization will provide a superior product when compared to the digouts for a reduced cost. The proposal for FDR and pulverization was considered very carefully by Town staff and the civil engineering team, and it was determined these strategies represented the most efficient and effective use of critical funding.

Item 2 - ADA Curb Ramp Reconstruction

Title II of the Americans with Disabilities Act (ADA) requires that state and local governments ensure that persons with disabilities have access to the pedestrian routes in the public right of way. An important part of this requirement is the obligation whenever streets, roadways, or highways are altered to provide compliant curb ramps where street level pedestrian walkways cross curbs. This requirement is intended to ensure the accessibility and usability of the pedestrian walkway for persons with disabilities.

Based on guidance from the Department of Justice and Department of Transportation dated July 8, 2013 (**See Attachment 5**), curb ramps shall be included or upgraded to current standards in conjunction with pavement rehabilitation projects. It is the responsibility of the Town to meet these requirements and remain compliant with Title II of the Americans with Disabilities Act . This work was not included in the original funding

documentation. The Town's civil engineering team prepared ADA Assessment memorandums (**See Attachment 4**) to document existing conditions, non-compliant curb ramps, and identify construction costs. This scope change request to upgrade ramps to meet current standards does not increase the overall funding request, due to cost saving measure discussed previously in this memorandum.

Item 3 - Utility and Monument Adjustments

Paradise Irrigation District, a California Special Public Utility District has approximately 791 utility covers in the pavement structural section. The off-system road rehabilitation project work necessitates the adjustment of PIDs utility lids below grade (for milling operations) and back to new finished grade following the installation of the roadway treatment. PID is a special public utility district eligible to receive FEMA funding and was also impacted by the Camp Fire. Correspondence with Cal OES on February 16, 2022 indicated that PID utility adjustments are a FEMA reimbursable eligible expense. Further, the Town of paradise owns and maintains storm drain infrastructure. These covers will also require adjustment to accommodate paving operations and have been included in this scope change request.

Section 8771 and section 8725 of the Business and Professions Code and Section 605 of the California Penal Code governs perpetuating, preserving and re-establishing all survey monumentation. Any monuments to be disturbed as a result of construction activities, will require re-establishment under the direction of a Licensed Surveyor. Monuments located in existing well, will require adjustments to grade, similar to the above utilities.

This scope change request to adjust utilities and monuments does not increase the overall funding request, due to cost saving measure discussed previously in this memorandum.

Summary

Leadership from the Town of Paradise, Caltrans, FHWA, FEMA and CalOES have been working together closely to ensure the Camp Fire recovery is a success. Repairing the Town's roadway network is critical to this objective. These repairs must be completed as soon as possible and sequenced in the recovery to prevent further damage and costs to the recovery.

We hope this letter provides a clear justification for the scope of work change request. For the sake of consistency amongst other federal recovery partners, a comparable modification request was made to FWHA and subsequently approved on October 7, 2021. This approved request did expand the repair techniques available for the project.

If you would like to meet or require additional information, please let us know. Thank you for effort in helping rebuild Paradise.

This scope of work change request applies to the project listed below according to the FEMA Grants Portal project number:

#132422 - P/W0363	DR4407 - Town of Paradise – Road Damages Occurring During the performance of Emergency Work (PPDR and Hazardous Tree Removal)

Sincerely,

Marc Mattox
Public Works Director/Town Engineer

Attachments

1. Project Vicinity Map
2. 100% Plans and Cost Estimate
3. Geotechnical Design Reports
4. ADA Assessment Memorandum
5. Department of Justice Memorandum

Town of Paradise

Council Agenda Summary **Agenda Item: 6(f)**

Date: November 7, 2022

ORIGINATED BY: Jessica Erdahl, Sr. Capital Projects Manager

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Off-System Road Rehabilitation Project– PSE Approval and Authorize Advertisement for Bids.

LONG TERM RECOVERY PLAN: Yes, Tier 1

COUNCIL ACTION REQUESTED:

1. Consider adopting Resolution No.2022- __, A Resolution of the Town Council of the Town of Paradise approving the plans and specifications for the Off-System Road Rehabilitation Project and authorizing advertisement for bids on the project. (ROLL CALL VOTE)

Background:

Due to the ongoing recovery effort and debris removal operations within the Town and Butte County, the Town's off-system roadway infrastructure sustained heavy damage in the wake of the Camp Fire. The pavement structural sections were damaged in two ways:

1. Pavement Scarring due to Car Fires – On the day of the Camp Fire, several motorists were required to abandon their vehicles and continue evacuating on foot. The subsequent car fires damaged the pavement, justifying the need for repair.

2. Pavement Structural Section Damage due to Heavy Truck Traffic – Following the Camp Fire, the Town has experienced a staggering level of truck traffic. During the CALOES Debris Removal effort, over 3.7 million tons of material was removed, equivalent to approximately 300,000 truckloads. During that same period, PG&E, Comcast, and AT&T have restored the distribution infrastructure. PG&E has already removed over 92,000 trees, and an additional 100,000 trees are estimated for removal in 2020. The volume of trucks using the Town's on-system roads has resulted in damage to the pavement structural section, justifying the need for rehabilitation.

The Town coordinated with the Federal Emergency Management Agency (FEMA) to secure Public Assistance permanent restoration funding to repair damaged off-system roads town wide. Through the Public Assistance Program, the Town of Paradise has been approved for $38,290,000 for the off-system road rehabilitation project. The approved project is located on "Off-System" roads. Off-system roadway rehabilitation include roadways that are not on the on-system roadways and will be funded by FEMA.

On November 10, 2020, Paradise Town Council awarded master on-call contracts to Mark Thomas, Dokken Engineering, GHD, Inc., Wood Rodgers, Inc. and Dewberry Drake Haglan to perform on-call professional civil engineering services for a variety of local, state, and federally-funded projects. Subsequently, in January 2021, task orders were issued to GHD, Dokken Engineering, and Dewberry to perform civil design services on the off-system road rehabilitation project.

The overall scope of work for the Project can be summarized as follows:

- Repair Camp Fire damaged off-system roads to achieve a pre-fire condition.

A vicinity map of the town wide off-system road project limits, as well as the proposed 2023 project limits are provided in this Agenda Summary.

Analysis:
The off-system road rehabilitation project is consistent with priorities identified in the Paradise Long-Term Recovery Plan prepared in response to the 2018 Camp Fire and necessary to restore roadway infrastructure to a pre-fire condition.

Road rehabilitation projects will be identified based on utility undergrounding completion. As segments of utilities are nearing completion, the Town of Paradise will identify and bid specific segments of roadways as individual projects. The goal of this approach is to maximize efficiency, partnership and remain good stewards of precious public funds and community impacts by reducing excavations into recently rehabilitated roadways.

With Council approval of the plans and specifications and authorization to advertise for bids, staff proposes the following schedule:

Project No. 1 (2023) – 12.5 miles

Advertise for bid:	December 2022
Award Contract:	February 2023
Construction:	Spring 2023

Future Projects – 2023-2025

Financial Impact:
FEMA Public Assistance funds have been authorized for construction and construction engineering phases at actual documented cost incurred. However, a concurrent agenda item will be presented requesting authorization to request an Improved Project though FEMA.

The total estimated construction and construction engineering cost for off-system roads town wide is $35,226,000 and $8,305,947 for the 2023 project. The estimated funding breakdown is shown below. A detailed project accounting description for each project bid will be made available at the time of contract award.

Off-System Road Rehabilitation Project

Staff Report- Phase

Phase	Total Estimated Cost	Total Participating Cost	FEMA/CalOES 93.75 %	Local Match 6.25%
Preliminary Engineering	$3,064,000.00	$ 3,064,000.00	$ 2,872,500.00	$ 191,500.00
Construction	$30,631,000.00	$ 30,631,000.00	$ 28,716,562.50	$ 1,914,437.50
Construction Management	$4,595,000.00	$ 4,595,000.00	$ 4,307,812.50	$ 287,187.50
Total	**$ 38,290,000.00**	**$ 38,290,000.00**	**$ 35,896,875.00**	**$ 2,393,125.00**

Required matching funds, $2,393,125 (6.25%), are anticipated to be awarded through the Community Development Block Grant-Disaster Recovery fund allocation process.

Staff Report- 2023 Project
Construction and CM

Construction/CM	Total Estimated Cost	Total Participating Cost	FEMA/CalOES 93.75 %	Local Match 6.25%
Construction Project 1 - 2023	$ 6,921,622.27	$ 6,921,622.27	$ 6,489,020.88	$ 432,601.39
Contingency (10%)	$ 692,162.23	$ 692,162.23	$ 648,902.09	$ 43,260.14
Construction Management (10%)	$ 692,162.23	$ 692,162.23	$ 648,902.09	$ 43,260.14
Total	**$ 8,305,946.72**	**$ 8,305,946.72**	**$ 7,786,825.05**	**$ 519,121.67**
Total Available Funding	$ 35,226,000.00	$35,226,000.00	$ 33,024,375.00	$ 2,201,625.00
Balance	**$ 26,920,053.28**	**$ 26,920,053.28**	**$ 25,237,549.95**	**$ 1,682,503.33**

Environmental Review:

The project is exempt under State CEQA Guidelines [Section 15269(a)], which states:

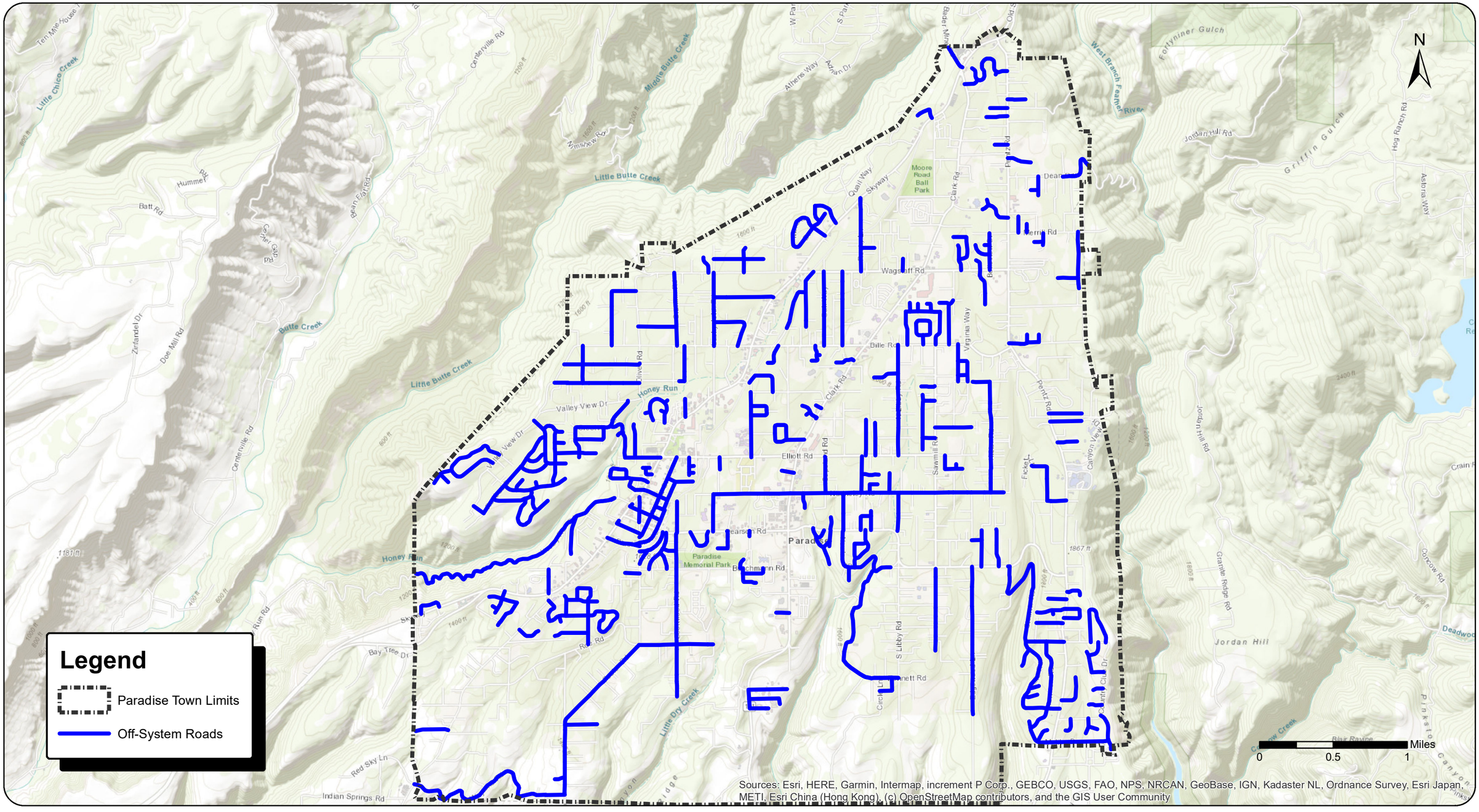
The following emergency projects are exempt from the requirements of CEQA.

(a) Projects to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed as a result of a disaster in a disaster-stricken area in which a state of emergency has been proclaimed by the Governor pursuant to the California Emergency Services Act, commencing with Section 8550 of the Government Code. This includes projects that will remove, destroy, or significantly alter an historical resource when that resource represents an imminent threat to the public of bodily harm or of damage to adjacent property or when the project has received a determination by the State Office of Historic Preservation pursuant to Section 5028(b) of Public Resources Code.

The project location is a disaster-stricken area, proclaimed as a major disaster by the President on November 12, 2018 (FEMA-4407-DR) and as a State of Emergency by the State of California on November 8, 2018. The purpose of the project is to repair existing infrastructure damaged by the Camp Fire. No further environmental review is necessary for this project.

Attachments:

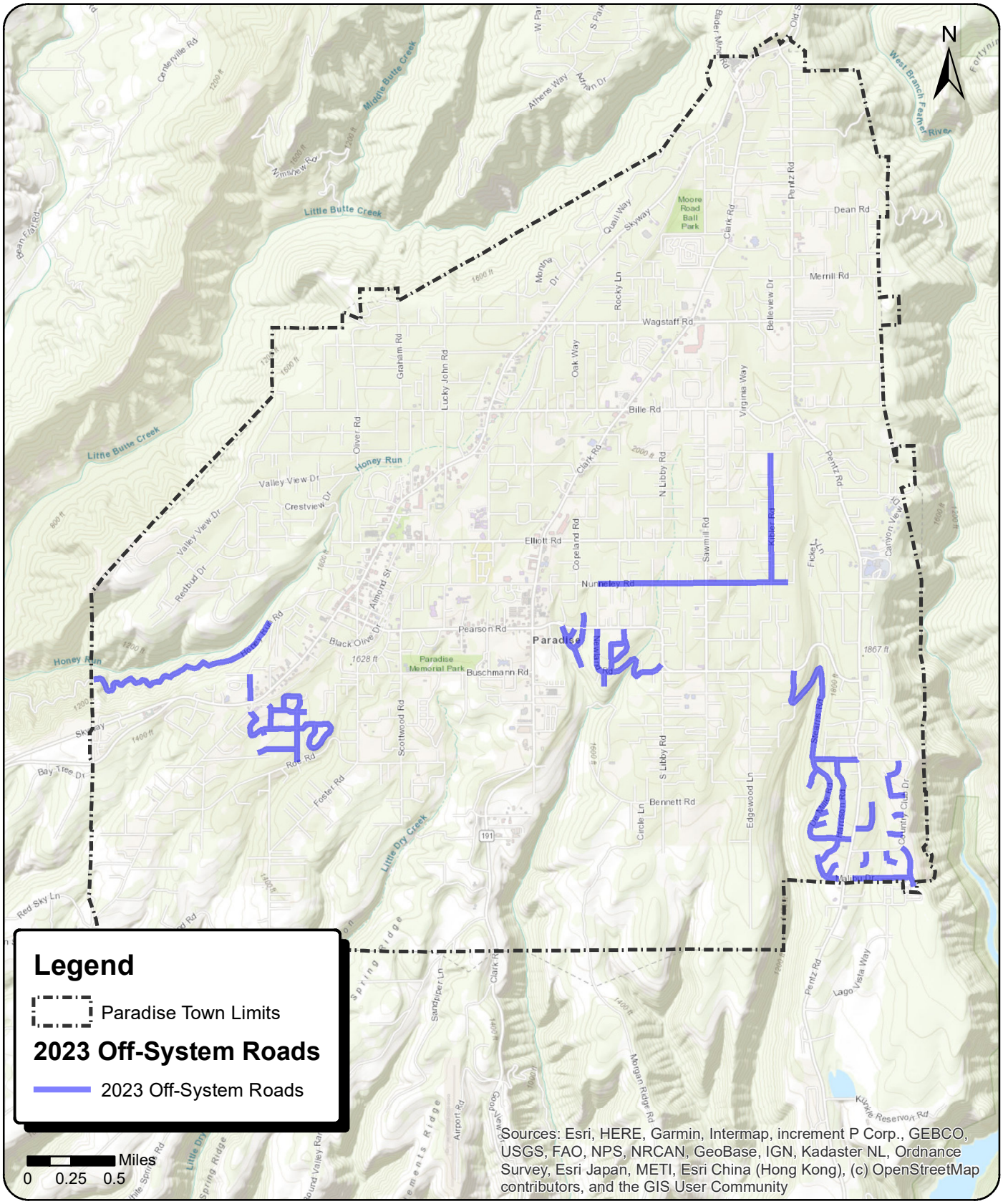
A. Vicinity Map
B. Project Map 2023
C. Resolution



TOWN OF PARADISE
PUBLIC WORKS DEPARTMENT
5555 Skyway Road
Paradise, California 95969

OFF-SYSTEM ROAD
REHABILITATION PROJECT

PROJECT LOCATION MAP
J ERDAHL
OCT 2022



TOWN OF PARADISE
PUBLIC WORKS DEPARTMENT
5555 Skyway Road
Paradise, California 95969

PROJECT NOTIFICATION MEMO NO. 1
2023 OFF-SYSTEM ROAD REHABILITATION PROJECT

PROJECT LOCATION MAP

J ERDAHL
OCT 2022

TOWN OF PARADISE
RESOLUTION NO. 2022-____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE APPROVING THE PLANS, SPECIFICATIONS AND ESTIMATES FOR THE OFF-SYSTEM ROAD REHABILITATION PROJECT AND AUTHORIZING ADVERTISEMENT FOR BIDS ON THE PROJECT.

WHEREAS, off-system roads sustained damage as a result of the Camp Fire; and,

WHEREAS, the Town of Paradise has received a $38,290,000 allocation of Federal Emergency Management Agency Public Assistance funds; and,

WHEREAS, the purpose of the Public Assistance Program is to Repair or reconstruct Non-Federal aid highways and roads ("Off-System") which have suffered serious damage as a result of natural disasters.

WHEREAS, eligible repairs may include, but are not limited to, damage occurring to pavement or other surface courses, shoulders, embankments, cut slopes, roadside development, and stream channels, whether man-made or natural. Pavement repairs or reconstruction may also include rock slope protection, cribbing, or other stream bank control features, bridges, retaining walls, culverts and debris removal, including other deposits from roadway drainage channels and the traveled way.

WHEREAS, the Off-System Road Rehabilitation Project is consistent in scope with the approved Public Assistance funds: and,

WHEREAS, the Off-System Road Rehabilitation Project is consistent with priorities identified in the Paradise Long-Term Recovery Plan prepared in response to the 2018 Camp Fire.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. The design, plans, specifications and estimates for the Off-System Road Rehabilitation Project described in the Town Council Agenda Summary for this Resolution are hereby approved.

Section 2. The Public Works Department is authorized to advertise the Off-System Road Rehabilitation Project.

Section 3. The Off-System Road Rehabilitation Project is exempt from the provisions of the California Environmental Quality Act pursuant to State CEQA Guidelines [Section 15269(a)] Emergency Projects.

PASSED AND ADOPTED by the Town Council of the Town of Paradise on this 7th day of November 2022, by the following vote:
//
//

AYES:
NOES:
ABSENT:
ABSTAIN:

By:_____
Steve Crowder, Mayor

ATTEST:

_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

Town of Paradise

Council Agenda Summary **Agenda Item: 6(g)**

Date: November 7, 2022

ORIGINATED BY:	Marc Mattox, Public Works Director/Town Engineer Ashley Stanley, Engineering Division Manager
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	2022 Transportation Master Plan-Honey Run Road
LONG TERM RECOVERY PLAN:	Yes, Tier 1 – Multiple

COUNCIL ACTION REQUESTED:

Upon conclusion of public discussion of the findings of the Transportation Master Plan supplemental Honey Run Road analysis, relating to the Honey Run Road reopening, consider a resolution, or an alternative action:

1. Consider adopting Town of Paradise Resolution No. 2022-____, "A Resolution of the Town Council of the Town of Paradise expressing a desire to reopen Honey Run Road between Town Limits and Honey View Terrace as a Historical Community Route with vehicular speed, weight, and length restrictions;" or
2. Provide alternative action (ROLL CALL VOTE)

Background:

Funded by a United States Economic Development Administration (EDA) grant, the Town of Paradise (Town) has developed the Town of Paradise Transportation Management Plan (TMP). Approved by the Town Council in 2022, the TMP is a comprehensive effort to evaluate transportation and economic needs and develop recommendations to support recovery following the 2018 Camp Fire. The TMP included extensive public engagement and ranges in topics including daily and emergency evacuation traffic needs, transportation safety, active transportation, economic analysis, community design standards, engineering details and re-establishment of survey monuments and benchmarks.

The compiled TMP includes reports and plans developed through the EDA grant, that will guide the Town's Camp Fire recovery by recommending transportation initiatives and strategies consistent with the Town of Paradise Long Term Community Recovery Plan (LTCRP) and updates. The supplemental tasks to the TMP included an analysis of the alternatives to Honey Run Road for consideration in evaluating the re-opening of the roadway.

Due to safety impacts on the roadway following the 2018 Camp Fire, Honey Run Road has remained closed post-fire. Although the historic road was already in poor condition due to lack of funding for maintenance, it's historic nature, and limited access pre-fire, the roadway was further impacted by post-fire hazardous tree removal and associated heavy equipment loading on the road. As the Town performed studies and sought funding to repair roadways, Honey Run

Road remained open within Butte Creek Canyon in Butte County limits only, where the roadway was not impacted.

In alignment with the Long-Term Community Recovery Plan (LTCRP), the Transportation Master Plan (TMP) surveyed the community to determine the desired use of Honey Run Road. Re-opening Honey Run Road was identified as the priority (with safety improvements of approximately $80,000, which garnered 63% of the responses), over the other presented alternatives (restrictions on lanes (13%), limit direction of travel (13%), full road closure (6%), "other" (6%)).

Staff engaged the Transportation Master Plan consultants to prepare a memorandum presenting the improvements that could be made to increase safety on Honey Run Road. Initially, the team evaluated the minimal safety improvements in the estimated range of $80,000. This option included evaluation of guardrail at the five narrowest sections of Honey Run Road within the Town limits. The repaving costs already funded in the Off System Roads project were not included in the cost estimate; the Off System Road repaving separately rehabilitates Honey Run Road to pre-fire widths of approximately nine feet of travelled way, through the FHWA funded project (2023 Town Paving Plan). Although establishing guardrail at these five narrow sections would increase safety in those roadway cross sections only and is in alignment with the survey response and estimated costs, these minimal improvements are not feasible due to current standards for guardrail termination/safety. Sufficient length and width on the roadway are required to terminate the guardrail before and after the narrow sections. This is required to ensure the guardrail is not a safety hazard. Thus, the desired, minimal improvement of $80,000 was determined by Staff to be infeasible due to the additional improvements and costs that are necessary for increased guardrail lengths and roadway width improvements it would trigger to maintain two-way traffic (guardrail would narrow the road without additional wall/embankment improvements and costs).

Staff directed the TMP consultants to evaluate additional alternatives to compare to re-opening Honey Run in its existing condition. These alternatives are presented in the Honey Run TMP memorandum.

To meet current roadway design and safety requirements, the following options were presented:

	Alternative Roadway Option	Estimated Cost	Stakeholder Support
1.	Two-Way Roadway	$6.1M	Yes
2.	One-Way Southbound Only Roadway	$4.4M	No
3.	Emergency Roadway Only	$4.4M	No
4.	Motor Vehicle Traffic Prohibited	$1.9M	No

The alternatives presented are significantly more expensive than the community identified desire to re-open Honey Run road with an investment of $80,000 (estimated at the time of the survey, which included guardrail at only the narrow sections). It was determined by Staff that the costs in the alternatives are not in alignment with the survey responses received and level of investment desired by the community, and the alternatives are not supported by other

stakeholders (County residents, Butte County Public Works, Cal Fire, Paradise Police Department). Additionally, it should be noted that the Town staff heard from the biking community via Chico Velo, who utilizes Honey Run Road as a cycling route, that their preference was to limit local traffic by establishing two-way bicycle traffic only, or two-way bicycle traffic with emergency vehicle access. These suggested options did not have stakeholder support at the Town, County or other stakeholder level, and were not carried forward, but are feasible to pursue if additional support for these options were presented by project stakeholders.

Please see the September 16, 2022 Honey Run Roadway Alternatives Evaluation by Mark Thomas.

On October 11, 2022, Paradise Town Council heard staff updates and public comments on the issue and directed staff to continue forward and request Butte County partner with the Town for the proposed resolution adoption for the Honey Run corridor between Merlin Lane and Town Limits as well as a collaborative approach to properly install signage regulating size, weight and speed restrictions of the roadway.

Analysis:

Following direction given by the Paradise Town Council on October 11, 2022, staff immediately contacted Butte County Public Works to explore feasibility of a concurrent action by the County Board of Supervisors. Butte County Public Works indicated a strong commitment to work with Town staff and install specialty advanced signage, including turnaround warnings for large trucks, to protect the safety of all roadway users. Butte County also indicated their section of Honey Run Road does not require a special designation due to the potential of setting unnecessary precedence in comparison to other active County roads.

With this information in mind, staff proposes the following course of action:

1. Paradise Town Council adopts a resolution expressing a desire to reopen Honey Run Road between Town Limits and Honey View Terrace as a Historical Community Route with vehicular speed, weight, and length restrictions
2. Town of Paradise finalizes bid packages to advertise planned road rehabilitation, including Honey Run Road between Town Limits and Honey View Terrace
3. Paradise and Butte County Public Works collaboratively design and install a series of signs leading to entrances of the Honey Run corridor between Merlin Lane and Honey View Terrace which provide opportunities for turnarounds, advanced warning and regulations of speed, weight and length restrictions
4. Town of Paradise performs road rehabilitation activities
5. Paradise and Butte County jointly reopen Honey Run Road, estimated mid-2023.

Environmental Analysis:

The Town of Paradise Transportation Master Plan is considered exempt from CEQA pursuant to Public Resources Code 21080(b)(3) Projects undertaken, carried out, or approved by a public agency to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed as a result of a disaster in a disaster-stricken area in which a state of emergency has been proclaimed by the Governor pursuant to Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code.

Financial Impact:

There is no financial impact by passing this Resolution. Existing Town Staff will implement the Resolution within the FHWA funded and locally matched Off System Roadway repaving project.

MARK THOMAS

MEMORANDUM

To:	Marc Mattox, PE	Project No.:	SA-21111
Cc:	Ashley Stanley, PE		
From:	Paul Martin, PE, TE		
Date:	September 16, 2022		
RE:	**Honey Run Roadway Alternatives Evaluation**		

As requested by the Town of Paradise, we have prepared this memorandum discussing the current conditions of Honey Run Road and engineering considerations to re-open the roadway to public use following the 2018 Camp Fire.

Study Area

Honey Run Road parallels Skyway, traveling within Butte Creek Canyon and adjacent to Butte Creek, before ascending in grade to the elevated ridge area where the Town of Paradise is located. Honey Run Road traverses a length of approximately 9.75 miles between Skyway in unincorporated Butte County near State Route 99 (SR-99), at its west end, and Skyway in the Town of Paradise north of Pearson Road, at its east end. The westerly 6.5 miles of the roadway parallels the creek with gentle curves and minor grades. Around mile 6.5, the roadway narrows, and the centerline striping is omitted to convey slower travel speeds and heightened caution for opposing traffic.

The roadway begins to rise in grade higher than Little Butte Creek as it ascends towards the Town of Paradise with curves becoming sharper and more frequent. Around 8.0 miles, the roadway enters the Town of Paradise, and around mile 9.75, Honey Run terminates at Skyway north of Pearson Road. This memorandum focuses on the 1.75-mile length of Honey Run within the Town of Paradise. Refer to Attachment A showing the project study location.

Current Roadway Layout

Honey Run Road before the Camp Fire typically has provided for two-way vehicular travel linking unincorporated Butte County with the Town of Paradise. The roadway is historically popular with cyclists given the length, natural beauty, and low motor vehicle traffic volumes.

Honey Run Road is an older roadway and has not been constructed to modern engineering standards; as a result, it is typically lacking the following elements:

1. Structural base under the asphalt paving.
2. Guardrails to minimize severity of potential errant vehicles leaving the roadway. Note that prior to the Camp Fire, trees provided a de-facto guardrail treatment. These trees were impacted by the fire or post fire hazard removal and are no longer providing slope stabilization or protection from leaving the roadway.
3. Graded or paved shoulders.
4. Motorist turnaround areas to change direction.
5. Wider roadway areas for passing of stopped, parked, or immobilized vehicles.

There is currently a soft closure in effect via signage at the intersection of Honey Run Road and Honey View Terrace within the Town of Paradise, for traffic leaving town and traveling westerly towards Butte County. The road closure is in place due to the Camp Fire impacts to the road and trees. Since the roadway has been signed as closed, typical daily traffic volumes cannot be measured.

While the roadway has a "soft closure" through signage, members of the public have continued to utilize the roadway infrequently. It should be noted that the Butte County portion of the road remains open and is scheduled for repaving. In addition, increased graffiti along the roadway has been observed, with graffiti painted directly upon the asphalt.

Within the Town limits, paving rehabilitation on Honey Run Road has been designed, funded, and is scheduled for implementation in 2025. However, stormwater flows have been modified due to changes to the area natural landscape following the Camp Fire devastation and the dead tree removal program. This modified stormwater flow activity has caused rapid erosion of the hillside and drainage areas along and across the roadway. The modified stormwater drainage patterns are believed to cause rapid failure of pavement in vulnerable areas and the road will need additional mitigating improvements to position for any potential paving project.

Current Roadway Dimensions

Recent measurements at five Honey Run road locations indicate the roadway varies in width between 10.5 feet and 18.8 feet, and clear zone width ranges between 0 and 3.4 feet. Where the clear zone is narrow or near zero feet, there is inadequate room to install standard guardrails. Refer to Attachment B showing recent photographs of Honey Run Road.

Typical Two-Lane Roadway Dimensions

Town of Paradise, Butte County, and American Association of State Highway and Transportation Officials (AASHTO) standards were reviewed to evaluate the design of the two-lane roadway. Roadway dimensions account for the following criteria:

1. Roadway classification and designation (includes public and private roadways)
2. Provision of two-way motor vehicle travel, or one-way travel
3. Existing or anticipated traffic volumes

Table 1 provides a summary of engineering standards with guidance for typical dimensions of a two-lane roadway.

Table 1 – Typical Dimensions for Two-Lane Roadway

Source	Roadway Type	Minimum Paved Road Width (feet)	Minimum Clear Zone (feet)
Town of Paradise (2022)	Local Road	24	4
Town of Paradise (1971)	Interior Street, Residential-Public Maintained (Standard B-1)	24	0-2.5
AASHTO[1]	Low-Volume Road in Rural Area (400 Vehicles per day or less)	18	0-6
Butte County[2]	Rural Subdivision Private Road (Standard RS-7)	20	6
Butte County[2]	Paradise Sphere of Influence Private Drive-Double Dwelling (Standard PS-2)	16	2

1. AASHTO Guidelines for Geometric Design of Low-Volume Roads, Second Edition, 2019
2. Butte County Public Works Improvement Standards, v20200219

The minimum paved area is intended for vehicle travel, while the clear zone is an area that is free of obstruction and sufficiently flat to enable an errant vehicle to encroach without overturning. The clear zone width is measured from the edge of traveled way to the nearest obstruction or the beginning of a non-traversable slope. Shoulders are part of the clear zone. The clear zone can also often allow for temporary parking or disabled vehicles to park to reduce roadway blockage. Where clear zone cannot be provided, a guardrail may be installed to prevent errant off-road travel when adjacent to steep hillsides.

Alternatives for Consideration

Given the Honey Run Road is currently closed, an opportunity exists to consider other layouts serving a variety of multimodal needs such as:

- Public motor vehicle traffic
- Emergency only traffic
- Active transportation travel (cycling and walking)

Based on the review of existing conditions, roadway standards, and needed improvements, the following Honey Run Road alternatives are presented for consideration:

1. **Alternative 1: Two-Way Roadway:** Improve Honey Run Road to include a minimum paved road width of 20 feet, and a minimum unpaved clear zone of 2 to 6 feet in both directions, with guardrails and turnaround areas as needed.
2. **Alternative 2: One-Way Southbound Only Roadway:** Improve Honey Run Road to include a minimum paved road width of 16 feet. The roadway could include a 6-feet wide striped left shoulder and a 10-feet wide travel lane, with guardrails and pullout areas as needed. The roadway would facilitate motor vehicle traffic in the southbound direction only, and cyclists can ride downhill in the travel lane and uphill in the shoulder.
3. **Alternative 3: Emergency Only Roadway:** Improve Honey Run Road to include a minimum paved road width of 16 feet. The roadway could include a 6-feet wide striped left shoulder and a 10-feet wide travel lane, with guardrails and pullout areas as needed. The roadway would facilitate emergency vehicle traffic only, and cyclists can ride downhill in the travel lane and uphill in the shoulder.

4. Alternative 4: Motor Vehicle Traffic Prohibited: Close Honey Run Road to all motor vehicle traffic and provide minor improvements with fencing and asphalt improvements to accommodate walking and cycling activity only.

Refer to Attachment C showing cross-sections for the Honey Run Road alternatives presented above.

Construction Cost Estimate Parameters

We have prepared a conceptual construction cost estimate for the alternatives based on the following parameters:

1. Alternative 1: Two-Way Roadway:
    a. Paved roadway width of 20 feet
    b. Shoulders/Clear Zone of 2 feet on both sides
    c. Guardrail installation for 3,000 feet
    d. 10 feet of widening into the hillside (opposite creek side)
    e. Lump sum of $1,000,000 for retaining walls
    f. Contingency of 25%
    g. Cost for minor or miscellaneous items of 10%
2. Alternative 2: One-Way Southbound Only Roadway:
    a. Paved roadway width of 16 feet
    b. Shoulders of 2 feet on both sides
    c. Guardrail installation for 3,000 feet, including 1000 feet of cast-in-place/precast concrete beams
    d. 6 feet of widening into the hillside (opposite creek side)
    e. Lump sum of $500,000 for retaining walls
    f. Contingency of 25%
    g. Cost for minor or miscellaneous items of 10%
3. Alternative 3: Emergency Only Roadway:
    a. Same parameters as Alternative 2
4. Alternative 4: Motor Vehicle Traffic Prohibited:
    a. Paved roadway width of 12 feet
    b. Shoulders of 2 feet on both sides
    c. Guardrail installation for 5,280 feet
    d. Contingency of 25%
    e. Cost for minor or miscellaneous items of 10%

The conceptual cost estimate for improving Honey Run Road is only provided within the Town of Paradise, and a similar funding amount would need to be provided by Butte County to provide consistency in the improvements within the unincorporated County area.

Alternatives Evaluation

Any selected Honey Run Road alternative would need to be coordinated with Butte County for consistency including paving and other engineering improvements. Potential roadway widening within Butte County likely would need to be implemented for approximately 1.5 miles in length.

Table 2 provides an evaluation of various alternatives for the traffic operations and layout of Honey Run Road and the anticipated costs for construction and ongoing maintenance.

Table 2 – Alternatives Evaluation

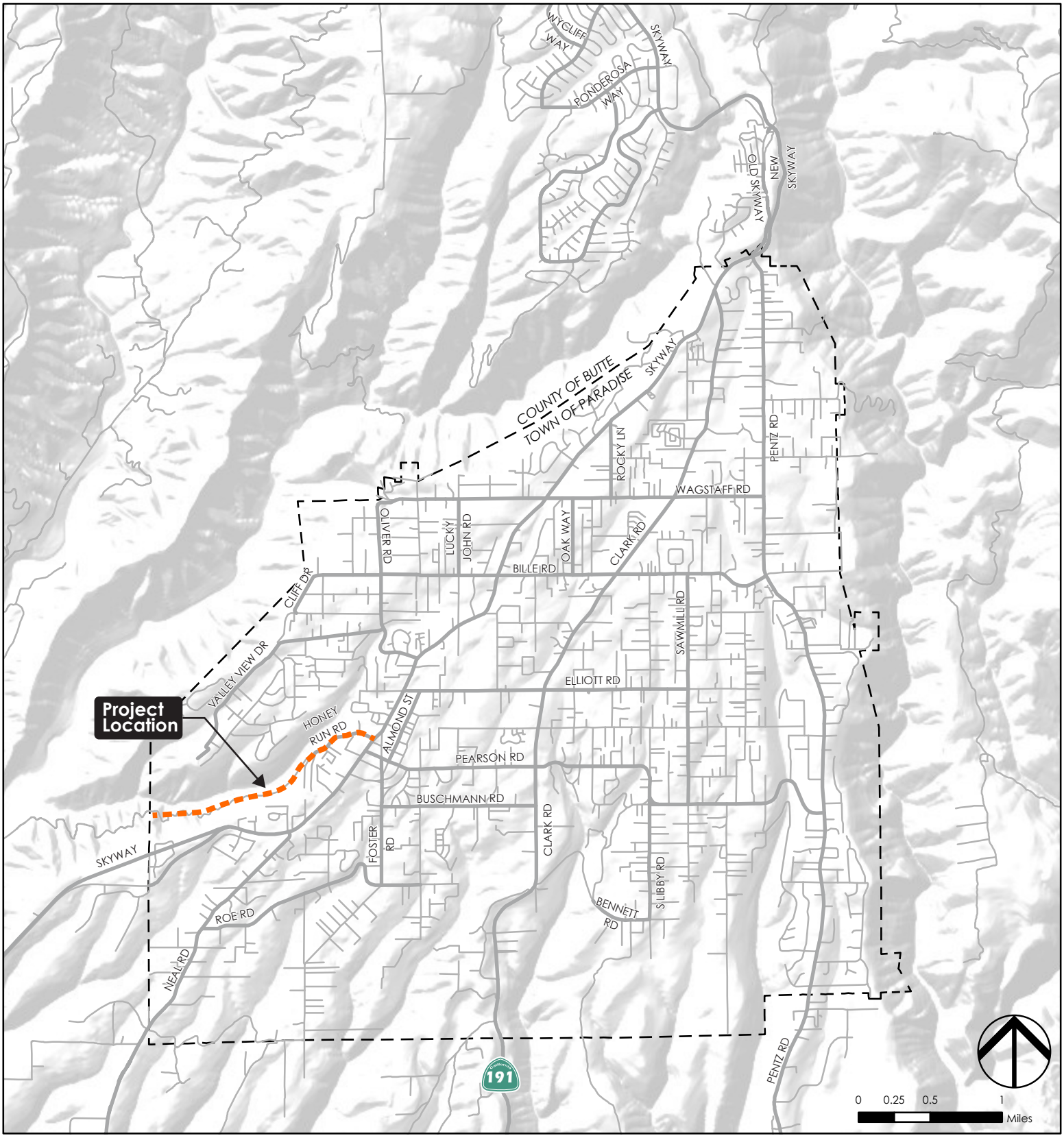
Alternative	Motor Vehicle Traffic Served?	Emergency Traffic Served?	Comfort for Bicycle and Pedestrian Traffic?	Estimated Construction Cost	Anticipated Annual Maintenance Cost
1 - Two-Way Roadway	Two-Way Daily	Yes	Low	$6.1 million	Highest
2 - One-Way Southbound Only Roadway	Southbound Only	Yes	Low	$4.4 million	Moderate
3 - Emergency Only Roadway	Emergency Only	Yes	High	$4.4 million	Moderate
4 - Motor Vehicle Traffic Prohibited	None	No	High	$1.9 million	Lowest

As shown above, the alternatives provide a range of multi-modal and emergency accommodations; funding for implementation and ongoing maintenance would need to be identified and balanced with other community priorities.

Recommendations

Based on review of current conditions and applicable standards, this memorandum has evaluated various improvement alternatives for Honey Run Road. Given the roadway has been effectively closed to regular motor vehicle traffic, and the high cost for improvements to restore daily operations, we recommend the Town consider on-way southbound travel only or permanent closure; Alternatives 2-4. Limited available capital funding can be applied to other roadways within the community to serve both daily traffic needs as well as emergency evacuation needs.

ATTACHMENT A – PROJECT STUDY LOCATION



Honey Run Road

Project Location

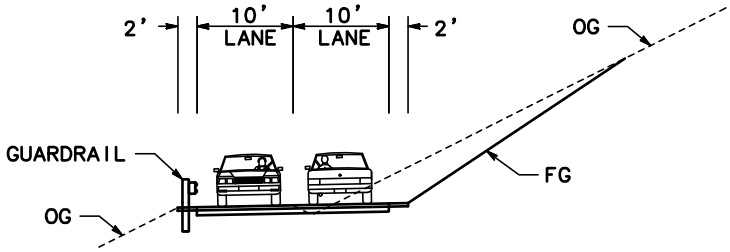
1898

ATTACHMENT B – RECENT SITE PHOTOGRAPHS

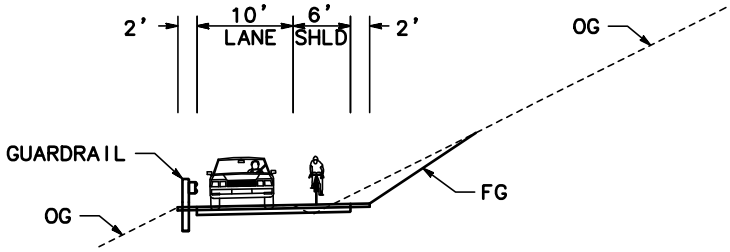
Honey Run Road – Existing Conditions

Honey Run Road – Graffiti and pavement failure along downhill edge

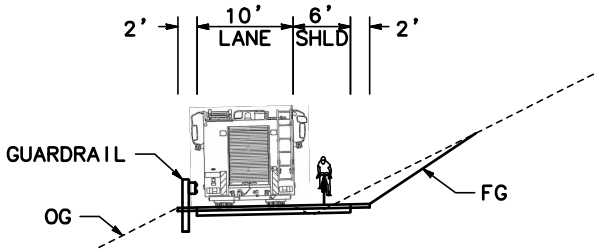
ATTACHMENT C –ALTERNATIVES CROSS-SECTIONS



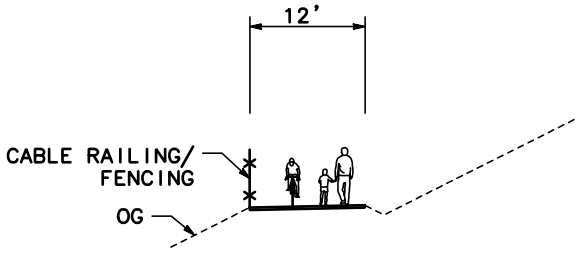
ALTERNATIVE 1
TWO–WAY ROADWAY
(LOOKING NORTH)



ALTERNATIVE 2
ONE–WAY SOUTHBOUND ONLY ROADWAY
(LOOKING NORTH)



ALTERNATIVE 3
EMERGENCY ONLY ROADWAY
(LOOKING NORTH)



ALTERNATIVE 4
MOTOR VEHICLE TRAFFIC PROHIBITED
(LOOKING NORTH)

HONEY RUN ROAD
IMPROVEMENT ALTERNATIVES

TOWN OF PARADISE

MARK THOMAS

TOWN OF PARADISE
RESOLUTION NO. 2022-___

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE EXPRESSING A DESIRE TO REOPEN HONEY RUN ROAD BETWEEN TOWN LIMITS AND HONEY VIEW TERRACE AS A HISTORIC RURAL COMMUNITY ROUTE WITH VEHICULAR SPEED, WEIGHT AND LENGTH RESTRICTIONS

WHEREAS, the United States and Butte County possess a rich collection of historic roads that range from scenic overlooks to utilitarian routes that embody local craftsmanship and environmental accommodation; and

WHEREAS, many of these historic roads offer a unique contribution to the historic fabric of communities and regions, including the Town of Paradise and Butte County; and

WHEREAS, Honey Run Road is a historic road with a legacy that has permitted its travelers to access and experience unique and remote portions of the Town of Paradise and Butte County that cannot be experienced in any other location; and

WHEREAS, the Town and adjacent Butte County residents and Butte County desire the road to be open for vehicular and bike travel; and

WHEREAS, Honey Run Road is not a Town of Paradise evacuation route due to its discharge into Butte Creek Canyon; and

WHEREAS, the road parallels Skyway in a circuitous route because it winds to the canyon floor and hugs the hillside; and

WHEREAS, as a result, the road is narrow and does not comply with current Federal, State or Local transportation safety standards, resulting in dangerous circumstances for vehicular traffic if appropriate caution is not undertaken while traveling this route; and

WHEREAS, the road was significantly damaged during the Camp Fire; and

WHEREAS, Town staff has analyzed the feasibility of rehabilitating and reconstructing Honey Run Road and determined that it would require substantial road widening to establish current roadway and safety standards, and other significant improvement measures that would only benefit a low volume of daily traffic, are a significant cost, and would only improve the portion of the road in the Town of Paradise; and

WHEREAS, the Town desires to honor the historical quality to which Honey Run Road contributes and to enable Town and County residents to utilize the road for infrequent scenic trips or to access specific remote areas in as safe a manner as possible.

NOW THEREFORE, BE IT RESOLVED by the Town Council of the Town of Paradise as follows:

SECTION 1. The above facts are true and correct and are incorporated by reference as if fully set forth herein.

SECTION 2. Honey Run Road between Town Limits and Honey View Terrace should be reopened as an historical "Historic Rural Community Route" in the future, following pavement restoration by the Town to establish a minimum width of nine feet of travelled way in conjunction with new vehicular speed, weight and length restrictions, which is estimated to occur in 2023.

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 7th day of November, 2022 by the following vote:

AYES:

NOES:

ABSENT:

NOT VOTING:

_____
Steve Crowder, Mayor

ATTEST:

_____
Dina Volenski, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Scott E. Huber, Town Attorney

Town of Paradise

Council Agenda Summary **Agenda Item: 6(h)**

Date: November 7, 2022

ORIGINATED BY: Marc Mattox, Public Works Director / Town Engineer

REVIEWED BY: Kevin Phillips, Town Manager

SUBJECT: Town of Paradise Facilities Update & Budget Adjustment

LONG TERM RECOVERY PLAN: No

COUNCIL ACTION REQUESTED:

1. Consider awarding Contracts 9419.TH, 9419.FD, and 9419.PD for various improvements to Town Hall, Station 81 and Police Department buildings to the lowest, responsible, responsive bidder (actual bid results to be presented at Council meeting).(ROLL CALL VOTE)

Background:

At the October 11, 2022 Paradise Town Council meeting, Council approved budget modifications and authorized staff to advertise for bids for the performance of various facilities improvements at Town Hall, Fire Station 81 and Police Department buildings. Improvements for these facilities include modifications for increased staffing, restroom improvements and adjustments to support restoration of dispatch services. Since the Council meeting, staff has issued Notices to Contractors, held mandatory pre-bid meetings and hosted requested tours of the facilities to assist potential bidders.

Analysis:

Staff anticipates publicly opening bids for the Fire Station 81 and Town Hall projects on November 3, 2022 and Police Department project on November 7, 2022. Full bid results and award recommendations will be presented to the Town Council during the Agenda Summary presentation for consideration.

Financial Impact:

The proposed projects have approved Engineer's Estimates and funding sources, described below:

Contract	Estimates	Funding Source
9419.TH	$200,000	Previously unassigned American Rescue Plan Act funds
9419.FD	$300,000	Previously unassigned American Rescue Plan Act funds ($250,000), Measure V Reserves ($50,000)
9419.PD	$50,000	Previously unassigned American Rescue Plan Act funds

Final bid results and project costs will be presented at the Council meeting for consideration of approval and award.

Town of Paradise

Council Agenda Summary

Date: November 7, 2022

Agenda Item: 6(i)

ORIGINATED BY:	Colette Curtis, Recovery and Economic Development Director
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	Review and Adopt Long Term Recovery Plan Update
LONG TERM RECOVERY PLAN:	Yes

COUNCIL ACTION REQUESTED:

1. Consider reviewing and adopting the Long-Term Recovery Plan Update, prepared by Urban Design Associates. (ROLL CALL VOTE)

Background:

Following the 2018 Camp Fire, the Town of Paradise was gifted a contract with Urban Design Associates (UDA) through the North Valley Community Foundation and Butte Strong Fund to prepare a Community Long Term Recovery Plan (LTRP). The development of the LTRP represented one of the most comprehensive planning and response efforts to have occurred as an immediate response to a community disaster – capturing the intensity and need of public participation and visioning for a path forward.

Since the adoption of the 2019 Long Term Community Recovery Plan, the Town of Paradise in partnership with countless organizations and individuals have been working towards the goals established in the Plan. In October 2021, Town Council directed staff to contract with UDA once again to draft an update to the 2019 Long Term Community Recovery Plan to document the progress made to date, and to reach back out to our community for guidance on any changes needed to the plan three years into recovery.

Analysis:

Over the last year, UDA met with stakeholders, held community meetings, and took surveys in order to draft the update to the Long Term Community Recovery Plan. Feedback from residents, stakeholders, and town leadership provided a status update for original recovery projects and helped pinpoint gaps that informed next steps for both old and new projects. Acting as building blocks for rebuilding, the recovery projects in the document respect the huge impacts that have already been made since the original 2019 LTCR Plan. In the update, all of the original projects are listed but re-organized to better reflect the evolving needs of the community. Some projects have been completed; others have been retired if no longer applicable to residents. Over a dozen new projects are proposed to achieve the community's vision.

On October 22, 2022, UDA presented the draft Long Term Community Recovery Plan Update to Town Council during the regular Town Council meeting. Council comments made during the meeting and directly to UDA were incorporated into the draft, and tonight the Final Long Term Community Recovery Plan Update is complete.

Financial Impact:

The Town of Paradise's contract with UDA for $110,000 is funded by the North Valley Community Foundation ($25,000), Feather River Foundation ($25,000) and the Town's general fund ($60,000). It is anticipated the updated plan will enable the Town to continue to compete at a high level for future grant opportunities as the time from the initial wave of support received following the fire increases.

Attachments:

Final Long Term Community Recovery Plan Update 2022

November 2022

LONG-TERM RECOVERY PLAN UPDATE

PROGRESS & NEW PRIORITIES

Paradise, California

Photo provided by Stephen Klessel

©2022 URBAN DESIGN ASSOCIATES

BACK COVER — INTENTIONALLY LEFT BLANK

LONG-TERM RECOVERY PLAN UPDATE

LEAD

The Town of Paradise

FUNDED BY

Town of Paradise
Adventist Health Foundation
Butte Strong Fund

PARTNERS

Academic Partners
Butte College
Chico State University
Sacramento State University

Arts and Culture
Butte County Library
Chico Arts Commission
Chico Arts/Culture Foundation
Gold Nugget Museum
Northern California Ballet
Norton Buffalo Hall
Paradise Community Guilds
Paradise Performing Arts Center
Theater on the Ridge

Churches
First Baptist Church Paradise
Paradise Alliance Church
Paradise Evangelical Free Church
Paradise Ridge Southern Baptist
Paradise Seventh Day Adventist Church

Community Partners
Butte Strong Fund
Camp Fire Long-Term Recovery Group
North Valley Community Foundation
Paradise Citizens' Alliance
Rebuild Paradise Foundation

Economic Development
3CORE
Adventist Health/Feather River Hospital
Alliance for Workforce Development
Blue Zones
Chabin Concepts
Golden Valley Bank
NoRTEC
Paradise Ridge Chamber of Commerce
Wells Fargo

Elected Official Offices
Congressman Doug LaMalfa
Assemblyman James Gallagher
Senator Jim Nielsen

Housing Partners
Butte County Housing Authority
Community Housing Improvement Program
Habitat for Humanity

Public Agencies
Butte County
Butte County Fire Safe Council
California Department of Forestry and Fire Protection
California Department of Housing and Community Development
California Department of Insurance
California Governor's Office of Emergency Services
Federal Emergency Management Agency
Paradise Recreation & Park District
U.S. Department of Agriculture
U.S. Department of Housing and Urban Development

Schools and Youth
Achieve Charter School
Adventist Academy
Boys & Girls Club of North Valley
Butte County Office of Education
Children's Community Charter School
Core Butte Charter School
Home Tech Charter
Paradise Charter Middle School
Paradise e-Learning
Paradise Unified School District
Youth for Change

Utilities
AT&T
Comcast
Northern Recycling and Waste Services
Paradise Irrigation District
PG&E

PLANNING CONSULTANT WORKING IN SUPPORT OF THE TOWN-LED PROCESS

Urban Design Associates

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EXECUTIVE SUMMARY

Forever changed by the Camp Fire, the Paradise community has worked tirelessly to rebuild and resume life on the Ridge. Priorities have shifted from immediate needs to long-term visions to maintain a resilient community.

Rebuilding update 3 years from the first building permit issued on February 20, 2019

	SINGLE FAMILY HOMES IN DEVELOPMENT	MULTI-FAMILY HOMES IN DEVELOPMENT
Building Permit Applications Received	2,179	427
Building Permits Issued	1,984	313
Homes Rebuilt and Certificate of Occupancies Issued	1,243	257

On November 8, 2018, California's deadliest and the world's most expensive wildfire to date destroyed Paradise. The town was the epicenter of the fire, with every property and every resident affected in some capacity. The massive impact of this scale of destruction is still visible today, four years later.

But the residents of Paradise responded to this tragedy with strength and unity. Alongside first-responders and with the aid of the State of Emergency and Major Disaster declarations for Butte County and the Butte Strong Fund, the Town of Paradise was able to lead a team of federal, state, and local partners to kick off the original long-term recovery process in 2019. Slowly but

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Community Development Block Grant Award

On August 22, 2022, the Town of Paradise received a $199,000,000 Community Development Block Grant Disaster Recovery (CDBG-DR) award from the California Department of Housing and Community Development. This funding was listed as a potential source to cover the unmet need in many of the original recovery projects. It will go a long way in supporting the rebuilding of Paradise.

surely, Paradise began to grow back. Residents returned, businesses reopened, and life resumed.

Paradise's beauty is its unity and resilience.

Now, just four years since the original long-term recovery plan, Paradise has made huge strides in rebuilding: many residents have come back, rebuilding and repairing their community anchors. This was no small feat: the remarkable alignment and actions of community leaders, town leadership, for-profit and non-profit organizations, state and federal partners, and individual residents cannot be understated.

This evolution represents a changed landscape from which new recovery priorities have emerged. Town leadership identified the need to revisit the Long-Term Recovery Plan (LTRP) completed in 2019 to continue momentum into the future.

This document is the product of a second round of targeted community engagement. This Long-Term Recovery Plan Update (LTRPU) features the status of all the original recovery projects as reported by designated local partners, provides updates and new projects to reflect the changed environment, and celebrates other related initiatives.

Document Overview

The plan is divided into the following three sections: Engagement Process, Recovery Projects, Parallel Initiatives, and Appendix.

Engagement Process

A second, robust community engagement process advanced the consensus vision. Feedback from residents, stakeholders, and town leadership provided a status update for original recovery projects and helped pinpoint gaps that informed next steps for both old and new projects.

Recovery Projects

Acting as building blocks for rebuilding, the recovery projects in this document respect the huge impacts that have already been made since the original 2019 LTRP. All of the original projects are listed and supplemented to better reflect the evolving needs of the community. Some projects have been completed; others have been updated or superseded; some have been retired if no longer applicable to residents. And, approximately a dozen new projects are proposed to achieve the community's vision.

In support of this vision are five goals, which establish the framework for each of the subsequent recovery projects.

- Make Paradise Safer
- Rebuild Paradise's Range of Housing and Welcome Residents Home
- Rebuild Paradise's Economy
- Make Paradise Better
- Make Paradise Greener

This section also includes a description of what defines a recovery project: recovery priority, project description, lead, partners, action steps, etc.

Parallel Initiatives

There are many local organizations aligned with this planning effort that have worked tirelessly to return life to the Ridge. These remarkably robust efforts are recorded and celebrated in this document as proof of the immense scale of work done by the Paradise community.

Extraordinary tenacity and resourcefulness define the Paradise community.

Appendix

The appendix includes a summary of the entire community engagement process: strengths, weaknesses, and opportunities analysis; dot exercise; survey results; and recovery project preference feedback. Additionally, the Community Development Block Grant-Disaster Recovery (CDBG-DR) Priority Projects are listed for reference.

WILDFIRE ADAPTATION PRINCIPLES

Successful disaster relief efforts rely on organization and planning. Considering basic principles at each stage of the recovery process can help structure the complex, difficult task of adapting while rebuilding.

Communities that experience any type of disaster know the arduous and complex nature of recovery well. No matter the type and scale of disaster, the impact of the ensuing chaos and tragedy cannot be overstated. Additionally, all communities are entirely unique in layout, governance, demographics, and more. This means every recovery is unique.

There is no easy one-size-fits all methodology for wildfire resiliency.

This list of Wildfire Adaptation Principles is intended to work as a overarching priority list to help organize the massive task of recovery, focusing on a broad stroke of topics spanning from immediate post-disaster pressure relief to long-term resiliency projects. Considering these aspects of recovery have helped Paradise in its short- and long-term recovery and will continue to be applicable in the future for other communities that face similar wildfire threats.

Wildfire Adaptation Principles

Categorized by scale, each of the following principles should be considered to help mitigate wildfire risk.

Community Scale

1. **Manage public lands**
   Reduce wildfire risk by actively managing the fuel load in the wildlands.

2. **Create firebreaks**
   Interrupt the potential spread of wildfire by creating separations around urbanized areas.

3. **Harden infrastructure (electrical, water, sewer, storm)**
   Strengthen critical infrastructure systems so that they can be quickly returned to service after a fire with only minimal repairs/cost.

4. **Create redundant emergency notification systems**
   Implement both voluntary and audible notification systems to supplement first responders and neighbors going door to door.

5. **Provide multiple ingress and egress routes and a regional emergency evacuation plan**
   Ensure the safety of residents by providing multiple ways to evacuate supported by cross jurisdiction coordination.

Neighborhood Scale

6. **Minimize dead-end streets**
   Promote a connected street grid as two ways out increase public safety.

7. **Foster places of refuge and neighborhood fuel reduction**
   Identify sites to shelter in place, such as local parks, and actively reduce the fuel load across neighborhoods.

Lot Scale

8. **Require defensible space**
   Minimize combustible material within 100 feet of homes and other primary structures.

9. **Codify fire resistant construction (thermal shell)**
   Mandate fire hardening for residences, businesses, and institutions.

10. **Encourage aggressive code enforcement**
    Support the detection of unnecessary wildfire risk (fuel buildup) and enforcement of violations per local codes.

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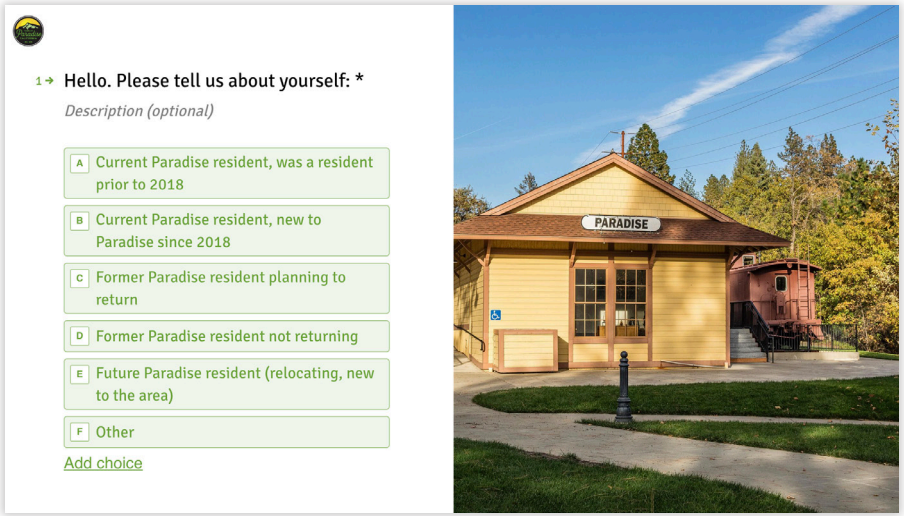
Engagement Process



Screenshot from the Online Survey

ENGAGEMENT RECAP

Community is at the heart of the recovery process with residents paving the way to rebuilding.

In the four years since the 2018 Camp Fire, residents, community leaders, and Town of Paradise staff have worked diligently to rebuild their beloved community with the Long-Term Recovery Plan (LTRP) as the guiding document. To honor the huge impacts of individual and community rebuilding work, this update to the LTRP is intended to parallel the original process with an extensive, resident-driven engagement and planning effort.

The plan updates and proposed new recovery projects included in this document are a product of community and stakeholder input received during an extensive engagement process that included an online survey, stakeholder and town staff interviews, a virtual listening session, and a drop-in open house.

Documentation of this engagement process and the specific survey responses received from residents can be found in the appendix.

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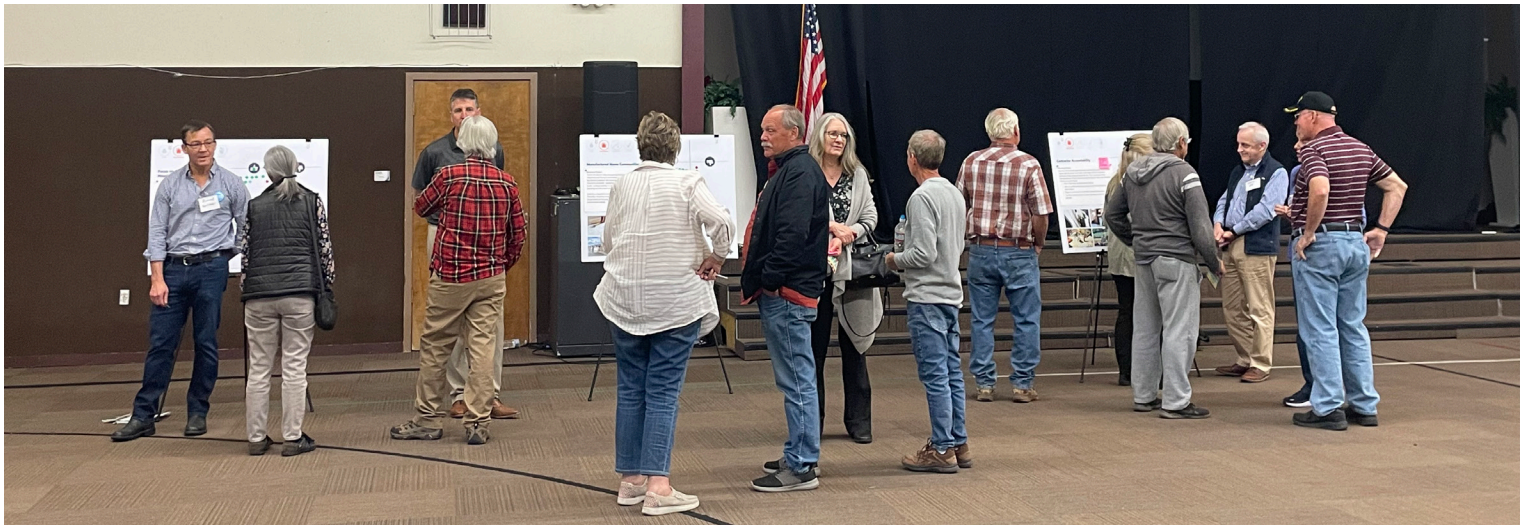
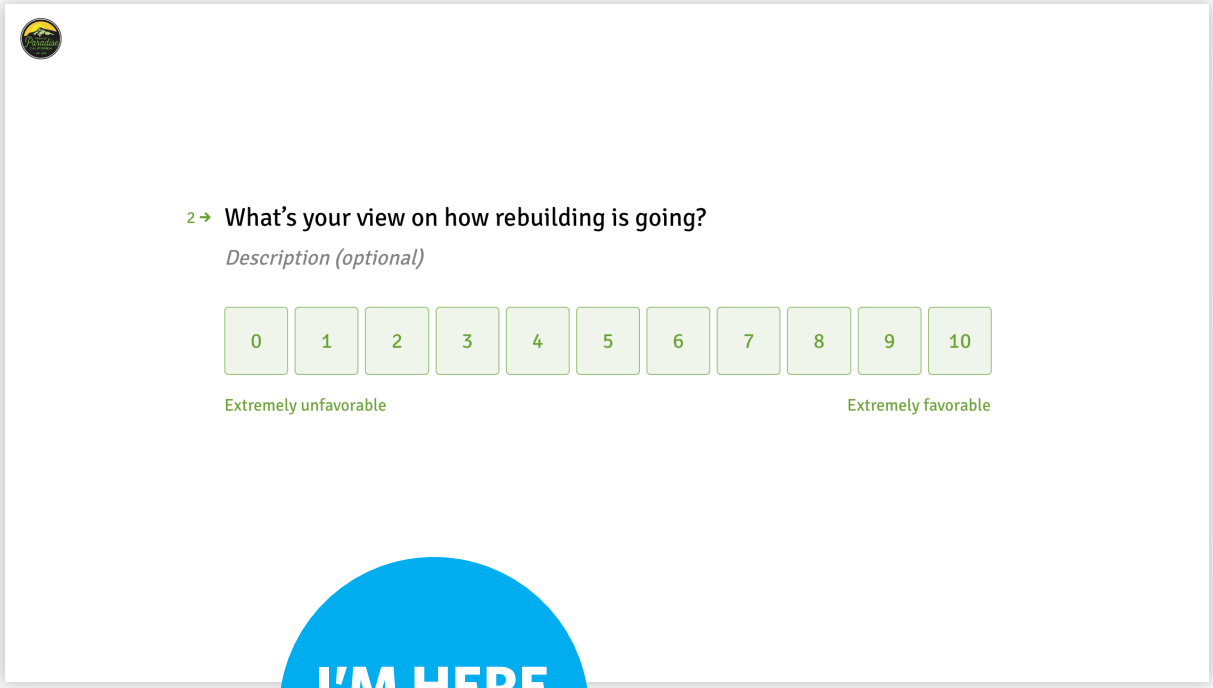


In-Person Open House
April 28, 2022



Screenshot from the Online Survey

The Planning Process

The planning process utilized in developing the LTRPU included three steps:

1. Listening
2. Testing
3. Deciding

Step 1 – Listening utilized several strategies for reaching and engaging the public in a conversation regarding the recovery efforts of the last three years and any additional new priorities moving forward. The purpose of this step was to establish a robust repository of work completed to date, identify gaps still existing today, and pinpoint what must be done to continue the momentum in the future. Community engagement during this step included several town staff, stakeholder interviews, and an online survey for residents.

Step 2 – Testing continued the engagement process by solidifying the resident, stakeholder, and local leadership vision into a series of proposed additional recovery projects that build on the work of the original LTRP. Each proposed new recovery project is related to one of the five categories from the 2019 vision — Safer, Welcoming, Stronger, Better, and Greener. During this step, the new projects were made public to residents and stakeholders through a virtual public meeting and an in-person open house to gather feedback and propose additional ideas.

Step 3 – Deciding is the final step, where proposed recovery projects were refined based on resident feedback and follow-up stakeholder interviews. As a result, this document captures residents' ideas, visions, and goals for the future of Paradise and is accompanied by a series of actionable recovery projects that will continue to push the Town of Paradise forward and build on the incredible work of the last three years.

The town would like to acknowledge and thank the many volunteers, residents, and local leaders that made the community engagement process a success and made it possible to continue growing and moving forward.

1922

Approaches to Engagement

The planning process utilized several engagement methods to involve residents, stakeholders, and local leadership in the LTRP process in 2022.

Stakeholder Interviews

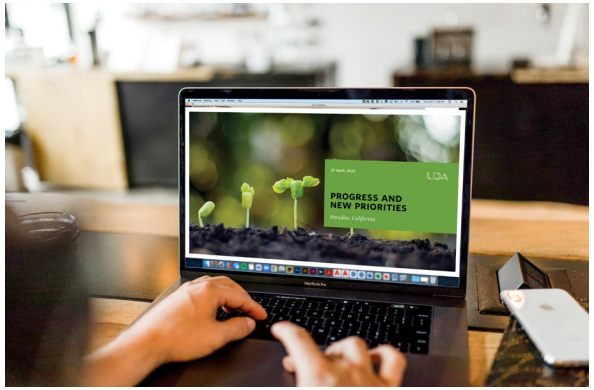
Stakeholder interviews were conducted with town staff, local leadership, and community stakeholders during the Listening and Deciding phases of the process. In the Listening Phase, stakeholders helped to provide insight on the work completed to date, offered updates to the original 39 recovery projects, and proposed new projects for the update. Over 25 stakeholder interviews were conducted with individuals identified as Leads or Supporting Partners for one or more of the initial 39 recovery projects. In the Deciding Phase, stakeholders reviewed the refined recovery projects, offered recommendations for intended partnerships and funding sources, and established timelines for projected completion.

Online Survey

While the last four years have brought many residents back to the Town of Paradise and a few new residents who did not live in town before the Camp Fire, many residents are still displaced as they work to rebuild their homes. Additionally, the COVID-19 Pandemic reshaped community engagement processes globally. Therefore, an online survey was distributed to connect with existing and potential future residents to maximize virtual engagement. This survey was distributed during the Listening Phase of the process. It included over 30 questions on various topics, including status as a resident of Paradise, reflections on the rebuilding to date, top priorities for rebuilding into the future, and unmet needs. Just under 1,200 responses were received; 75% of those responses were from current Paradise residents or former residents planning on returning.

Virtual Listening Session and In-Person Drop-In Open House

During the Testing Phase of the engagement process, two public meeting options were offered — one as a virtual meeting via Zoom and the other as an in-person drop-in open house. Over 250 residents were engaged across both meetings, with the assistance of over a dozen facilitators. Conversations during the Virtual Public Meeting focused on presenting the survey results from the Listening Phase. In contrast, the In-Person Drop-In Open House focused on gathering input on the proposed new recovery projects. Feedback from both of these public meetings helped shape and refine the proposed recovery projects while adding to the list of necessary action items to see the town continue to recover and flourish.



1924
Photo Provided by Stephen Klessel of Rebuild Paradise Foundation

Recovery Projects

1925

Photo Provided by Stephen Kissel of Rebuild Paradise Foundation

MAKE IT PARADISE

OVERVIEW OF RECOVERY PROJECTS

The Long-Term Recovery Plan Update (LTRPU) is a guide for the Town of Paradise to use throughout the continuation of the recovery effort. The following pages contain the recovery projects, which make up the LTRPU. These projects have been identified by the town and its residents as vital and necessary for the rebuilding and recovery of the community.

Each of the projects has a project lead and additional project partners where applicable. The project lead acts as a champion for the initiative, charged with the task of seeing the project through implementation and coordinating the necessary partners, funding sources, and action steps required to reach completion. In this document, recovery projects are organized based on where the town will continue to focus their attention:

- **Town-led Recovery Projects** are those which town staff are responsible for taking action on. These projects are largely Tier 1 priority, meaning that they are most critical to the town's long-term recovery.
- **Partner-led Recovery Projects** are those which are being championed by various individuals, agencies, and organizations whose knowledge is directly applicable to each respective project. These projects range from Tier 1 to Tier 3 level of priority. Where the town is involved, these projects are a secondary focus.

In addition to being organized based on project leads, recovery projects are keyed to the five categories of the Community Vision. A colored circle in the upper right-hand corner of each recovery project page identifies which of the five categories the project falls under. Those categories are as follows:

- Welcoming (Red)
- Safer (Yellow)
- Stronger (Purple)
- Better (Blue)
- Greener (Green)

The LTRPU should be viewed as an overall conceptual community vision and blueprint for rebuilding the town. While the recovery projects have all been identified as potential avenues for recovery and rebuilding, the specifics and designs of each have and will evolve over time.

1926

WELCOMING

After the Camp Fire, Paradise's residents faced tough decisions to return and rebuild their community or, in some cases, relocate elsewhere. Those that have returned have made enormous strides in rebuilding damaged and lost homes, advocating for affordability, and implementing better safety measures. As Paradise looks to the future and begins to grow with new residents, the types of support needed must evolve. Focusing on the future of homeownership, rentership, and housing affordability is paramount in creating a welcoming Paradise.

1927

PARADISE, CALIFORNIA

SAFER

Reducing Paradise's vulnerability by making the environment safer will always be a top priority following the Camp Fire. The original recovery plan focused primarily on the immediate safety needs of residents; today, many efforts to make Paradise safer continue or have evolved to meet residents' changing needs.

This category of Recovery Projects continues to prioritize the safety of Paradise residents and acts as a model of a progressive, resilient, fire safe California town.

1928

STRONGER

As residents return to Paradise, the need for a stronger business community has grown. Supporting local small businesses and providing job training are new priorities in addition to strengthening and diversifying the local economy.

1929

PARADISE, CALIFORNIA

BETTER

Many new opportunities to improve Paradise have emerged due to the rebuilding process that has been underway since the Camp Fire. Addressing old and new cultural and infrastructural challenges is a critical aspect in recovery, creating a healthier, more resilient Paradise for residents.

1930

GREENER

The beauty, strength, and endurance of Paradise are unparalleled. As rebuilding efforts progress, sustainability has emerged as a top priority, with Paradise at the forefront of innovative resiliency projects nationwide. Small changes can have big impacts, so the focus of this section has evolved from more technological solutions to behavioral and beautification efforts.

1931

PARADISE, CALIFORNIA

TOWN-LED PROJECTS

Town-led projects are those which the town leadership has identified as a responsibility of the local government to champion and support through completion. The majority of these projects have a Tier 1 recovery priority.

Recommended Recovery Projects

- Building Resiliency Center (BRC)
- Supporting Homeowners
- Residential Codes and Standards
- **New Insurance Alternatives**
- **Support for First-Time Homebuyers**
- **Focus on Attainable Housing**
- Standing Burned Trees on Private Property
- Emergency Notification System
- Evacuation Routes
- Interconnected Path System
- Missing Road Segments
- Long Dead-End Streets
- Underground Utilities
- Fuels Management Plan
- Facilities Maintenance and Upgrades (New Fire Station 82)
- **Prioritizing Road Reconstruction**
- **Firesafe Building Standards**
- Sustainable Fiscal Model
- Sewer System
- Walkable Downtown
- Planning and Zoning
- **Walkability & Bikability**
- **Beautification And Ecology**
- **Contractor Accountability**
- Resident Fire Safe Education
- Economic Development Strategy
- High-Speed Data Network
- **Support for Mom-and-Pop Businesses**
- 2019 Building Energy Efficiency Standards
- Sustainable Stormwater and Drainage
- Sustainable Development
- Sustainable Building Programs
- New Civic Center
- Opportunity Zone

Bold indicates added recovery project

1932

COMPLETED

RP01

BUILDING RESILIENCY CENTER (BRC)

The building which houses the Building Resiliency Center (BRC), was donated to the town by Bank of America. The structure sustained only minor roof damage during the Camp Fire but has since been repaired and undergone modest improvements.

The BRC, or "Brick" as it's been nicknamed, is a one-stop shop for all building resources. It allows residents and contractors to talk face-to-face with experts to get questions answered on the spot. Since opening, representatives from the Town of Paradise, Butte County, Cal OES, the State Licensing Board, PG&E, and several other agencies have been available on various days to answer questions and process permits and forms. In addition, resources are available to assist with financing and grant applications, as well as representatives of the Housing Advocacy Center. Rebuild Advocates have also offered free-of-charge services to assist with rebuilding, insurance, and finances.

Cost Estimate

- Butte Strong $346,953
- USDA Grant $148,300
- ATT $20,000
- **Total** **$515,253**

Resources

- USDA
- EDA
- North Valley Community Foundation

RESILIENCY PERMIT & HOUSING RESOURCE CENTER

RP 01

Recovery Priority

Tier 1
This project focuses on providing help to homeowners during the rebuilding process and has a Tier 1 recovery priority. Housing reconstruction can be optimized if residents have access to comprehensive housing services at a single location, including information on permitting, counseling, financing, inspection, and rebuilding options.

Project Description
Paradise should create a "one-stop shop" for permits and housing resources.

The town is increasing the capacity of the building permit department. Plans will be evaluated for ordinance, building code, and Wildland-Urban Interface compliance. The goal is to respond to building permits within an average of five days.

In support of the expanded permit counter, housing counseling and finance specialists, such as HUD and other funding/granting stakeholders, should be co-located.

Lead
- Town of Paradise

Action Steps
- Retrofit the former Bank of America building to accommodate the Resiliency Permit & Housing Resource Center
- Hire a coordinator to run the facility and help shepherd residents through the rebuilding process
- Relocate appropriate town and 4Leaf staff (initial 4Leaf contract term is for 3 years) from Town Hall to the new facility
- Invite the appropriate governmental agencies and private stakeholders to share the office space

Cost Estimate

Increased permit center capacity	To be determined
Coordinator position	To be determined
Retrofit former Bank of America building	To be determined
Furniture, fixtures, and equipment	To be determined

Potential Resources
- Banking Partners
- Butte Strong Fund
- California Governor's Office of Emergency Services (Cal OES)
- CalHome Program
- Community Development Block Grants (CDBG) Home
- Federal Emergency Management Agency (FEMA)
- Small Business Administration (SBA)
- State Insurance Commissioner
- Town of Paradise
- U.S. Department of Agriculture (USDA)
- U.S. Department of Housing and Urban Development (HUD)

Return on Investment
Residents will benefit from the simplified access to resources, added transparency and improved convenience. Also, the town should see accelerated home starts and enhanced coordination among the housing partners.

Timeline
0 to 2 years

PARADISE, CALIFORNIA

Recovery Projects / Town-Led Projects 35

1933

SUPERSEDED

RP02

SUPPORTING HOMEOWNERS

Update

This recovery project has been superseded by Firesafe Building Standards.

SUPPORTING HOMEOWNERS

RP 02

Recovery Project Priority

Tier 1

This project focuses on aiding homeowners to make homes more ignition-resistant. The project has a Tier 1 recovery priority. Community-wide resilience can be increased if more buildings in Paradise exceed the fire regulations.

Project Description

The Town of Paradise should apply for funding to make grants available to homeowners and property owners to rebuild homes and buildings with ignition resistant building materials that exceed the minimum standards and requirements. Eligible projects (such as roofs, windows, siding, or foundations) would need to exceed current applicable federal, state, and local regulations. Funding would be dependent on the state (Cal OES) being awarded a federal FEMA Hazard Mitigation Grant. If successful, grants of up to $25,000 per household could be available, depending on the federal and state award.

Lead

- Town of Paradise

Action Steps

- Submit a notice of interest to Cal OES (complete)
- Submit a sub-application to Cal OES, so that Cal OES can apply for the grant from FEMA (in process)
- If the grant is awarded:
  - Work with Cal OES and FEMA to determine what types of projects and improvements will be eligible for funding
  - Establish an intake, vetting, and approval process for applications
  - Advertise the available funding and application process to residents

Cost Estimate

Available grant funding (max)	$25,000/homeowner
Cost of application	Minimal to the town

Return on Investment

Assists homeowners in exceeding the building standards, resulting in a stronger, more fire-resilient community.

Potential Resources

- Federal Emergency Management Agency (FEMA)
- Hazard Mitigation Grant Program (HMGP)

Timeline

1 year

1934

UPDATED

RP03

RESIDENTIAL CODES AND STANDARDS

Recovery Priority

Tier 1

The level of priority remains Tier 1. Hardening building envelopes combined with aggressive fuel reduction both increases safety and reduces insurance premiums.

Project Description

Residential codes and standards have been updated and additional measures are planned. This includes:

- Addition to the Paradise code of the Wildfire Prepared Home Standard
- Planned consideration for addition to the code of IBHS Wildfire Prepared Multifamily and Wildfire Prepared Community Standards when completed
- Pending completion of updated design standards for downtown and other commercially zoned properties

Funding for inspection and enforcement has been elusive. The town applied for a Hazard Mitigation Grant from FEMA but did not receive an award. Current funding to hire off-duty firefighters as inspectors is set to expire. However, a new opportunity is available through the USDA: the Community Wildfire Defense Grant is for inspection and enforcement of fuel reduction for residential and commercial defensible space. The Town of Paradise plans to apply.

Lead

Town of Paradise

Additional Action Steps

- Council to consider adoption of Wildfire Prepared Multifamily and Wildfire Prepared Community Standards
- Continue to seek long-term funding for increased code inspection and enforcement
- Use town staff or a grant to develop/update landscape design guidelines

Cost Estimate (Spent and Projected)

- Updated design guidelines $150,000
- Inspection & enforcement $10M

Potential Resources

- Transportation Master Plan Grant (design standards)
- USDA Community Wildfire Defense Grant

Return on Investment

Certainty about future standards, resiliency through maintenance, and increased safety through education.

Timeline (2022 and forward)

0 to 3 years

ADDED

RP04

NEW INSURANCE ALTERNATIVES

Recovery Priority

Tier 1
The lack of insurance alternatives and rising insurance costs make New Insurance Alternatives a Tier 1 recovery priority.

Project Description
Identify new insurance alternatives beyond the California Fair Plan. The town was awarded a grant from the Bay Area Foundation's California Resiliency Challenge (CRC) program to do a Resiliency/Mitigation Plan for the town. Proceeds were used to procure RCAC and a supporting team of experts to work on this initiative. Goals include reduction of wildfire risk, developing insurance alternatives, and pushing for supporting legislation. Key components of this study include risk analysis and modeling to establish a direct correlation between Paradise's fire safe measures and reduced wildfire risk. Recommendations are due in February 2023. One new insurance option being considered is community-based insurance (self-insurance pool).

California's Insurance Commissioner is advancing legislation related to the IBHS Prepared Home Standards that would further broaden insurance choices for homeowners.

Long-term inspection and enforcement must also be addressed as fire risk can increase over time without proper maintenance.

Lead
Town of Paradise

Partner
RCAC

Action Steps
- Complete RCAC study
- Continue risk modeling to measure metrics that support reduced fire risk
- Implement risk reduction projects at the building and community scale
- Track and support state legislation related to expanding insurance options
- Identify sources of subsidy for long-term inspection and enforcement

Cost Estimate

Long-term inspection and enforcement	To be determined

Potential Resources
- California Resiliency Challenge Grant, managed by RCAC
- FEMA HMGP
- USDA Community Wildfire Defense Grants
- USDA AIM Grants
- CalFire Grants
- Fire Wise Grants
- Initiating a Special Fire Protection District

Return on Investment
Removing a major hurdle to rebuilding.

Timeline
0 to 5 years

CALIFORNIA FAIR PLAN PROPERTY INSURANCE

1936

ADDED

RP05

SUPPORT FOR FIRST-TIME HOMEBUYERS

Recovery Priority

Tier 1
Restoring options for first time homebuyers is a Tier 1 recovery priority.

Project Description
Find new tools to allow first-time homebuyers to purchase a home. Traditional first-time homebuyer programs are limited to acquisition of an existing unit that meets health and safety code standards and to households earning 120% or less of local Area Median Income (AMI). Most available units in Paradise are newly built and priced above 120% of Butte County AMI. This mismatch is stifling aspiring first-time home buyers in Paradise.

The town oversees a variety of programs for first-time homebuyers, including down payment assistance. Additionally, HUD and the state provided the town with a down payment assistance waiver to increase assistance limits in recognition of higher post-fire home prices. CalHome disaster loan assistance is also available for qualifying fire affected renters and owners, with priority up to 120% AMI.

Under the DCTA HUD/LISC Grant (capacity building project), RCAC & LISC proposed a program to help first time home buyers, who may already own or have inherited property in the Town of Paradise, but were not in possession before the fire. It involves having a foundation (or an entity established for the purpose of land banking) act as a holding entity for the property during construction, until the foundation is built. A philanthropic entity would have funds available at a nominal interest rate to reduce the risk for local mortgage lenders.

The tools exist to help would-be buyers if regulations and home inventory can be brought into aligned.

Note that the Community Housing Improvement Program (CHIP) and Habitat for Humanity both have programs for households earning less than 60% AMI.

Lead
Town of Paradise

Action Steps
- Town to continue working with HCD to find a solution to the acquisition of an existing home requirement
- Town to encourage contractors to offer smaller, more affordable homes that fall at or below 120% of AMI

Cost Estimate

Retrofits	To be determined

Potential Resources
- HUD
- CalHome
- Foundations

Return on Investment
Expanding housing opportunities and choices.

Timeline
0 to 3 years

ADDED

RP06

FOCUS ON ATTAINABLE HOUSING

Recovery Priority

Tier 1
This is a Tier 1 recovery priority due to the lagging recovery of relatively affordable housing.

Project Description
Support the restoration of attainable housing. Before the fire, Paradise was filled with relatively affordable housing for working families and residents on fixed incomes. The re-creation of these options has been impeded by relatively high stick-built home prices, hurdles to redeveloping manufactured home parks, increased material/labor costs, skyrocketing insurance and mortgage rates, delayed PG&E settlements, the lack of a sewer system, as well as other factors.

Affordability in Paradise are generally falls into the following segments:

- Affordable Housing: up to 80% AMI
- Attainable Housing: 80% to 120% AMI
- Workforce Housing: 120% to 180% AMI

Per the online survey, Paradise residents identified the attainable housing segment as their top priority. There are both Owner Occupied Rehab/Reconstruction (OOR) and ReCoverCA funds to tackle this problem as well as other potential resources. The challenge is available home inventory in the $250,000 to $350,000 range. The town should work with housing developers on creative ways to bring the price point into this range. Reducing the square footage to approximately 1,000 square feet and splitting attached units, such as duplexes, into condominiums are two initial options.

There is also a CDBG-DR Small MF Projects Funding Program for up to seven units. These can be scattered site, individual units or duplexes, fourplexes, etc. and there are several applications being submitted.

It should be noted that existing newly built homes are being offered in the workforce housing segment and non-profit developers are using their tools to target the affordable housing up to 60% of AMI. The town has established a Housing Advisory Committee to work make recommendations to Town Council on all housing types, issues associated with each type, and potential locations.

Lead
Town of Paradise

Partners
- CHIP
- Mercy Housing
- Developers
- Contractors

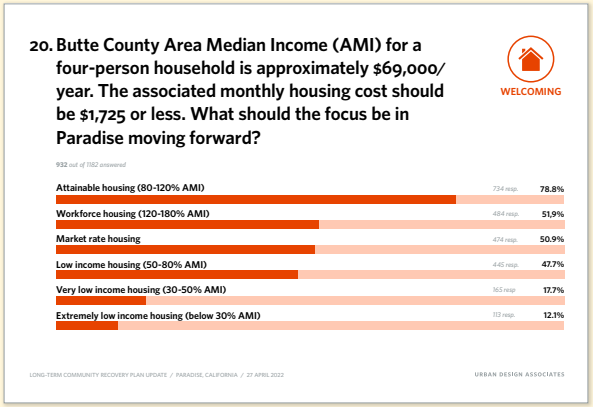
Action Steps
Housing Advisory Committee to meet and make recommendations

Cost Estimate
To be determined

Potential Resources
- Owner Occupied Rehab/Reconstruction (OOR) loans
- ReCoverCA (CDBG DR grant funds)
- Septic Replacement Grant (Town of Paradise)
- Rebuild Paradise Foundation
  - Septic Grant (reimbursement)
  - Missing Middle (reimbursement)
- USDA
  - Direct 502 Loan Program (for lower income households)
  - Guaranteed Loan Program (for higher income households)
- Conventional financing

Return on Investment
Expanding housing opportunities and choices.

Timeline
0 to 5 years



1938

UPDATED

RP07

HAZARD TREES

Recovery Priority

Tier 1
Hazard trees are still Tier 1 priority.

Project Description
Since the 2019 LTRP Report, the hazard tree and debris removal programs oversaw the removal of millions of tons of debris and thousands of hazardous trees that were a threat to fall into public and eligible private roads. Of the thousands of standing burned trees have been felled, some still await removal. Others remain standing, posing a threat to the safety of residents. It is imperative to the safety and beauty of Paradise that hazard trees be removed.

There are four categories of hazard trees that must be considered separately.

Category 1: Hazard trees on public property that are a threat to the public/public improved property. Category 1 trees were mostly removed in the immediate emergency response to the Camp Fire to allow safe repopulation.

Category 2: Hazard trees on private property that are a threat to the CalRecycle debris removal effort and/or the CalRecycle crews and the public right-of-way. Category 2 trees were mostly removed in the secondary response to the Camp Fire to allow for the safe removal of fire debris.

Category 3: Hazard trees on private property that are a threat to the public right-of-way/improved property and private roads that are served by Northern Recycling and Waste Services (NRWS). These trees were removed through the FEMA Public Assistance "Government Hazard Tree Removal Program" or the Private Hazard Tree Removal Program.

Category 4: Hazard trees on private property that constitute a threat to abutting or private property. The Category 4 tree removal program phase 1 (assessment) was recently approved through FEMA/CalOES. Category 4 trees are a very broad range of trees. The category is defined as hazard trees on private property that constitute a fire hazard and includes trees that are a threat to rights-of-way on private roads not served by NRWS, trees that are a threat to living or work areas, and trees that are on the "back forty" of private property, which greatly increase the risk of fire in the community as well as the risk of bark beetle infestation.

Lead
Town of Paradise

Additional Action Steps
Continue efforts to remove standing burned trees with the Public Assistance Program, the Hazard Mitigation Grant Program, and the Right of Entry program

Cost Estimate (Spent and Projected)
- Category 1: $509,932
- Category 2: $17,573
- Category 3: $1,200,655 (Town's cost, not overall program cost)
- Category 4: Total requested: $11,747,128
  - Phase 1 (Assessment) approved $801,082
  - Phase 2 (removal) pending approval

Potential Resources
- Public Assistance (PA): Categories 1-3
- Hazard Mitigation Grant Program (HMGP): Category 4

Return on Investment
- Removing an obstacle to reconstruction
- Reduction of an extreme fire hazard
- Health and safety of the region

Timeline
0 to 2 years

GreenBiz

UPDATED

RP08

EMERGENCY NOTIFICATION SYSTEM

Recovery Priority

Tier 1
The Emergency Notification System recovery project remains a Tier 1 priority.

Project Description
Establish a multi-layered/redundant emergency notification system in addition to the existing voluntary Code Red notification system. The phase I feasibility study, environmental clearance, and CEQA are all completed. Also, the town has received federal approval from FEMA that has launched the project toward construction. 21 towers will be constructed across the town as the basis of an audible system. Residents will be able to hear it from anywhere in Paradise – could be a horn blast or an audible signal. The operational target date is summer 2023.

Lead
Town of Paradise

Additional Action Steps
Construction

Cost Estimate
- Not to exceed $2.9 million

Potential Resources
- Federal Hazard Mitigation Grant Program (HMGP) administered in partnership with CalOES (75%)
- CDBG-DR Infrastructure funding 25% match

Return on Investment
Regaining public trust and the built-in safety that comes with a redundant system

Timeline (2022 and forward)
0 to 1 year

1940

UPDATED

RP09

EVACUATION ROUTES

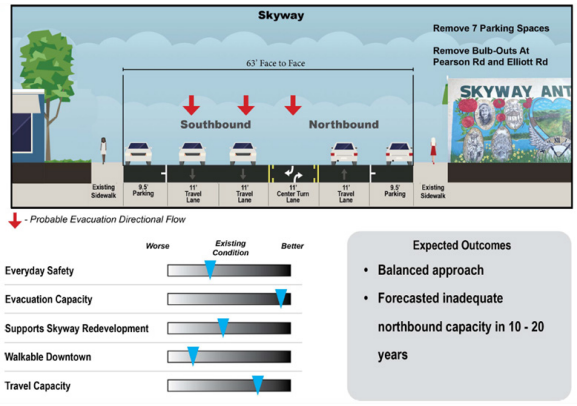
Recovery Priority

Tier 1

Evacuation routes in Paradise are the main roads into and out of town. They were tested in the Camp Fire. Residents ranked improvements as a Tier 1 priority.

Project Description

All roads in Paradise serve as either primary or secondary ingress/egress routes. The Town of Paradise, through a $1.8M grant funded by the Economic Development Administration, commissioned a comprehensive Transportation Master Plan (TMP) between 2020 and 2022. The TMP combined community feedback, regional coordination and independent technical analysis to formulate appropriate recommendations which could benefit the town in future evacuation scenarios.



Specifically, the TMP recommended over 50 infrastructure projects which could benefit emergency evacuation in some manner. These projects are estimated to exceed $600M in total cost. Further the TMP also identified crucial policies and programs the town could implement. Two such decisions include the removal of roadway medians/islands where appropriate and the reconfiguration of Skyway between Pearson Road and Elliott Road.

The Transportation Master Plan also positioned the Town of Paradise to submit projects for consideration in the 2018 CDBG-DR Infrastructure Program administered by California Housing & Community Development (HCD). This program made $317M available to 2018 Wildfire affected communities for the purposes of supporting recovery through the implementation of critically needed projects. In late August 2022, the Town of Paradise was notified its allocation of these funds would be $199M. In September, the Town Council approved a plan to fund the development of specific evacuation route projects, highlighted below:

- Pentz Road Widening, $73M: Widens Pentz Road between Pearson Road and Skyway complete with center two-way left turn lane and Class I multi-use bike path, which can double as an evacuation asset.
- Skyway Widening, $15M: Widens Skyway between Bille Road and Wagstaff Road to increase overall capacity of the critical arterial.

These projects each require extensive work to advance to construction, however, if maintained as a community priority could reach completion milestones between 2025–2028.

Lead

Town of Paradise

Action Steps

- Implement CDBG-DR Infrastructure projects
- Secure additional funding for future efforts

Cost Estimate

$500M+ for remaining projects and recommendations

Potential Resources

- California Department of Transportation (Caltrans)
- Federal Highways Administration (FHWA)
- Economic Development Administration (EDA)

Return on Investment

Increased life safety and housing activity

Timeline

Approved projects	2022–2028
Future projects	2022–2052

UPDATED

RP10

INTERCONNECTED PATH SYSTEM

Recovery Priority

Tier 1
The proposed path system focuses on increasing capacity along main ingress and egress routes in the event of an emergency evacuation. The level of priority is Tier 1.

Project Description
Immediately following the 2018 Camp Fire, it was recognized that Class I multi-use bike paths should be incorporated into future infrastructure plans for the town. These paths support daily activities in community living for pedestrians and bicyclists alike while also serving as potential evacuation assets in future emergencies.

Through a $1.8M grant funded by the Economic Development Administration, the Town of Paradise commissioned a comprehensive Transportation Master Plan (TMP) between 2020 and 2022. The TMP combined community feedback, regional coordination, and independent technical analysis to formulate appropriate recommendations which could benefit the town in future evacuation scenarios and create an interconnected path system. The TMP recommends Class I bike-ped pathways along the following critical corridors: Skyway, Clark, Sawmill Pentz, Wagstaff, Bille, Elliott, Valley View, Pearson, Roe, Oliver, and Neal.

The TMP's overall interconnected path recommendation map can be found to the right:

The Transportation Master Plan also positioned the Town of Paradise to submit projects for consideration in the 2018 CDBG-DR Infrastructure Program administered by California Housing & Community Development (HCD).

This program made $317M available to 2018 Wildfire affected communities to support recovery by implementing critically needed projects. In late August 2022, the Town of Paradise was notified that its allocation of these funds would be $199M. In September, the Town Council approved a plan to fund the development of specific evacuation route projects, highlighted below:

- Pentz Road Widening, $73M: Widens Pentz Road between Pearson Road and Skyway, complete with center two-way left turn lane and Class I multi-use bike path.
- The Town of Paradise also has four pending applications through the Active Transportation Program administered by Caltrans — proposing Class I Bike Paths along Oliver, Neal, Pentz, and Skyway.

Lead
Town of Paradise

Action Steps
- Implement CDBG-DR Infrastructure projects
- Secure additional funding for future efforts

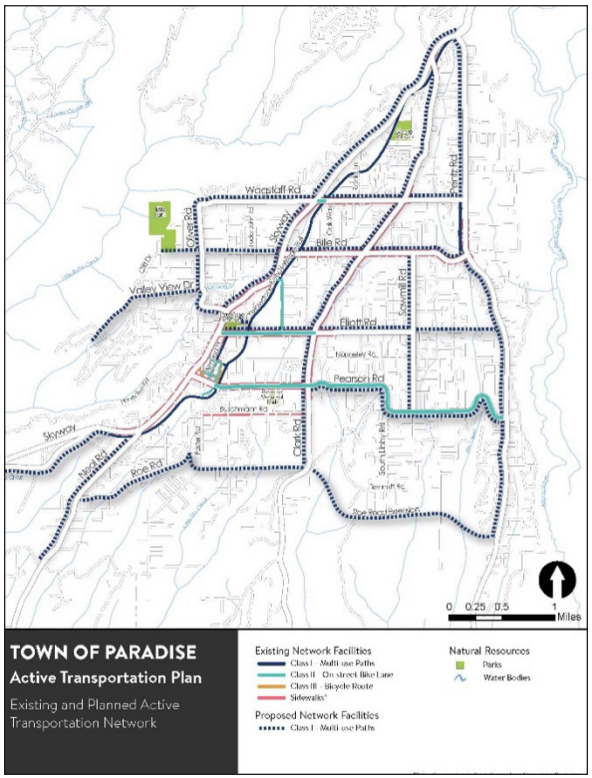
Cost Estimate
$200M+ for remaining projects and recommendations

Potential Resources
- California Department of Transportation (Caltrans)
- Federal Highways Administration (FHWA)
- Economic Development Administration (EDA)

Return on Investment
Increased life safety and housing activity

Timeline

Approved projects	2022–2028
Future projects	2022–2052



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UPDATED

RP11

MISSING ROAD SEGMENTS

Recovery Priority

Tier 1
Completing the primary road network is a Tier 1 priority as it is central to improving evacuation alternatives.

Project Description
All roads in Paradise serve as either primary or secondary ingress/egress routes. The Town of Paradise, through a $1.8M grant funded by the Economic Development Administration, commissioned a comprehensive Transportation Master Plan (TMP) between 2020 and 2022. The TMP combined community feedback, regional coordination and independent technical analysis to formulate appropriate recommendations which could benefit the town in future evacuation scenarios.

Specifically, the TMP recommended over 50 infrastructure projects which could benefit emergency evacuation in some manner. These projects are estimated to exceed $600M in total cost.

The Transportation Master Plan also positioned the Town of Paradise to submit projects for consideration in the 2018 CDBG-DR Infrastructure Program administered by California Housing & Community Development (HCD). This program made $317M available to 2018 Wildfire affected communities for the purposes of supporting recovery through the implementation of critically needed projects. In late August 2022, the Town of Paradise was notified its allocation of these funds would be $199M. In September, the Town Council approved a plan to fund the development of specific missing road segment projects, highlighted below:

- Roe Road Phase 1, $60.4M: Connects Pentz Road to Edgewood Lane, Sawmill Road and South Libby Road.
- Elliott/Nunneley Road Extension, $7M: Extends one of the two roadways from easterly terminus to Pentz Road, providing critical circulation benefits in future emergencies from or to the Pentz Road corridor.
- Forest Service Lane Extension, $1.7M: Converts an existing private road to public road standards and extension to Skyway benefiting daily emergency response from CalFire as well as improved circulation during emergencies.

These projects each require extensive work to advance to construction, however, if maintained as a community priority could reach completion milestones between 2025–2028.

Lead
Town of Paradise

Action Steps
- Implement CDBG-DR Infrastructure projects
- Secure additional funding for future efforts

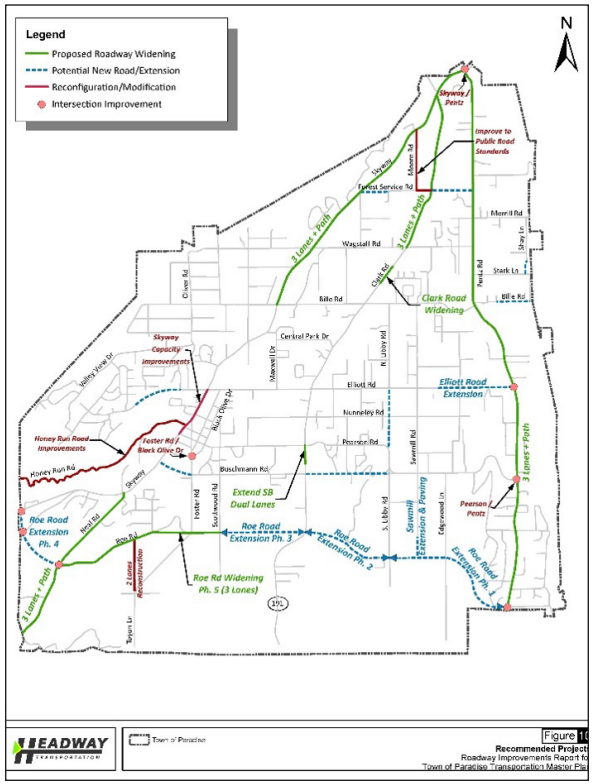
Cost Estimate
$500M+ for remaining projects and recommendations

Potential Resources
- California Department of Transportation (Caltrans)
- Federal Highways Administration (FHWA)
- Economic Development Administration (EDA)

Return on Investment
Increased life safety and housing activity

Timeline

Approved projects	2022–2028
Future projects	2022–2052



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RP12

LONG DEAD-END STREETS

Recovery Priority

Tier 1
Establishing projects addressing long, dead end roads are crucial to the town's recovery. In addition, a policy related to long dead-end streets goes hand in hand with fire and life safety. This is a Tier 1 priority.

Project Description
All roads in Paradise serve as either primary or secondary ingress/egress routes. The Town of Paradise, through a $1.8M grant funded by the Economic Development Administration, commissioned a comprehensive Transportation Master Plan (TMP) between 2020 and 2022. The TMP combined community feedback, regional coordination and independent technical analysis to formulate appropriate recommendations which could benefit the town in future evacuation scenarios.

Specifically, the TMP recommended over 50 infrastructure projects which could benefit emergency evacuation in some manner. These projects are estimated to exceed $600M in total cost. Further the TMP also identified crucial policies and programs the town could implement.

The Transportation Master Plan also positioned the Town of Paradise to submit projects for consideration in the 2018 CDBG-DR Infrastructure Program administered by California Housing & Community Development (HCD). This program made $317M available to 2018 Wildfire affected communities for the purposes of supporting recovery through the implementation of critically needed projects. In late August 2022, the Town of Paradise was notified its allocation of these funds would be $199M. In September, the Town Council approved a plan to fund the Roe Road Phase 1 Project at $60.4M. This project connects Pentz Road to Edgewood Lane, Sawmill Road and South Libby Road, three of the town's longest dead-end roads in Paradise. This project requires extensive work to advance to construction, however, if maintained as a community priority could reach completion milestones in 2028.

From a policy perspective staff will continue to review and advocate for incoming development projects to provide maximum ingress and egress.

Lead
Town of Paradise

Action Steps
- Implement CDBG-DR Infrastructure projects
- Secure additional funding for future efforts

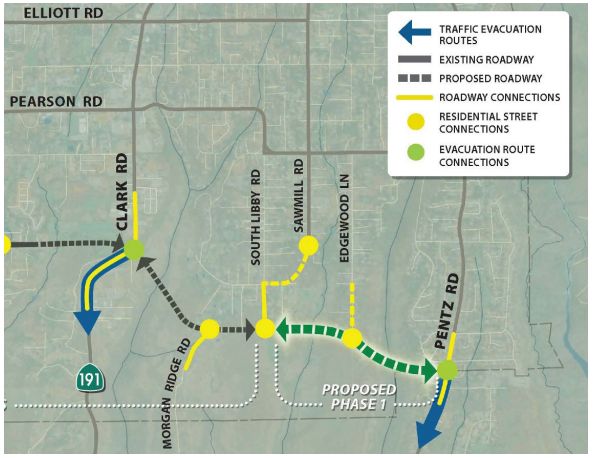
Cost Estimate
$200M+ for remaining projects and recommendations

Potential Resources
- California Department of Transportation (Caltrans)
- Federal Highways Administration (FHWA)
- Economic Development Administration (EDA)

Return on Investment
Increased life safety and housing activity

Timeline

Approved projects	2022–2028
Future projects	2022–2052



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UPDATED

RP13

UNDERGROUND UTILITIES

Recovery Priority

Tier 1
Overhead electric and communication lines were severely damaged in the fire. Undergrounding utilities to harden against future disasters is a Tier 1 community priority.

Project Description
In May 2019, Pacific Gas & Electric (PG&E) announced their intention to underground all distribution facilities in Paradise. In 2021, telecommunications companies further agreed to jointly trench with PG&E. This activity has a three-fold benefit to Paradise:

- Overall risk reduction of wildfire ignition as a result of wind, vehicle collisions or other events, and
- Improved evacuation certainty with no combustible poles near road edges in the event of a wildfire
- Reduces the likelihood and/or impact of future Public Safety Power Shutoff events

Undergrounding of utilities in Paradise has mad significant progress in the last two years. Over 80 miles of work in Paradise has been complete and is nearing 50% completion overall. 2025 remains the overall completion objective for the program.

The Town of Paradise remains in constant communication for the organization and sequencing of undergrounding efforts while working to ensure future road projects are not adversely affected.

Lead
Town of Paradise

Partners
PG&E, Comcast, AT&T

Action Steps
Facilitate completion of the overall program while ensuring temporary construction impacts are minimized

Cost Estimate
$200M+

Return on Investment
Increased life safety and utility resiliency

Timeline
Completion in 2025

UPDATED

RP14

FUELS MANAGEMENT PLAN

Recovery Priority

Tier 1
Fuels management is a primary tool in reducing fire risk. The direct link to fire safety means that this will always be a Tier 1 priority.

Project Description
This project called for updating the forest management plan and implementing a town-wide fuels management plan to lower the fire risk by reducing the fuel load. It also highlighted the need for sustainable ongoing funding.

The Paradise Ridge and Butte County Fire Safe Council, along with the Paradise Fire Department, have taken the local lead in aggressively tackling fuels management. One example is the Paradise Grazing Management Plan. The primary goal of this plan is to establish a sustainable, fire safe landscape that balances vegetation growth and removal to manage undesirable, invasive, flammable plant species. Historically, this was done with grazing or frequent, low-intensity fires. It notes that managing vegetation with grazing is a lower risk practice for wildland urban interface areas that prescribed fire.

The balance of this recovery project remains as originally written.

Lead
- Cal FIRE
- Paradise Fire Department
- Town of Paradise
- ISO (Insurance Service Office)
- Paradise Ridge Fire Safe Council
- Butte County Fire Safe Council
- Paradise Zone Captains
- Civic Groups
- Butte County Office of Emergency Management

Action Steps
- Establish program parameters
  - goals of the program
  - structure of the program
  - organizational responsibilities
  - Establish funding source or incentive programs to offset costs to property owners
- Increase staffing in code enforcement
- Create a GIS database of active, in progress fuels reduction projects
- Partnership/contract with private vegetation management business
- Collaborate with Fire Safe Councils, USFS, Cal FIRE and other governmental agencies
- Education program reinforcing community involvement and responsibility
- Review current abatement process for efficiency and effectiveness

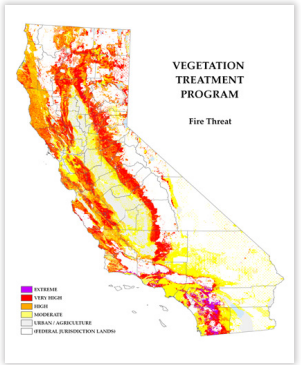
Cost Estimate

Code enforcement positions 2 or 3 x $50,000/each	$100,000–$150,000
Staff support cost	$30,000
Fuels reduction implementation costs	TBD
Voucher program for free green waste drop-off days once a week when facility is working again 40 people x 2/mo x $10 average x 12 mo	$9,600
Elderly low income and disabled defense space assistance program (can be volunteer driven or paid contractor) 200 homes/year x 5 hrs/home x $150/hr	$150,000
Fuels reduction and forest thinning program 200 acres x $1,400/acre	$280,000
Grazing 300 acres x $800/acre	$240,000

Potential Resources
- Town of Paradise
- Fire Safe Council
- Vegetation Management Industry Professional
- USDA
- Cal FIRE
- Butte County Community Wildfire Protection Plan
- Butte County Hazard Mitigation Plan
- Hazard Mitigation Grant Program (HMGP)

Return on Investment
Reduction in fire risk through the management and lessening of combustible materials (fuel).

Timeline
0 to 3 years



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UPDATED

RP15

FACILITIES MAINTENANCE AND UPGRADES (New Fire Station 82)

Recovery Priority

Tier 1
This project remains a Tier 1 priority project as the need is the same.

Project Description
The town has purchased a property at the corner of Pearson and Sawmill Roads. The goal is to locate New Station 82 on this site and potentially co-locate the public works corp yard. The town needs to first go through a process to strategically spend insurance proceeds before committing to a plan as funds are limited.

It should be noted that Town Hall, the Police Department, and Fire Station No. 1, all of which survived the Camp Fire, will require maintenance and upgrades over time. Fire hardening is a primary concern as all three buildings predate current firesafe best practices/codes. Ideally, at some point in the future, these facilities could be collocated for operational and emergency management efficiencies if/when they become obsolete.

Lead
Town of Paradise

Additional Action Steps
- Town process to confirm allocation of insurance proceeds
- Design and construction

Cost Estimate (Spent and Projected)

Fire Station 82 design and construction	$4,000,000
Other projects	T.B.D.

Potential Resources
- Insurance
- Hazard Mitigation Grant Program (HMPG)
- Public Assistance (PA)
- U.S. Department of Agriculture (USDA)

Return on Investment
Operational efficiencies, reduced response time, and overall fire protection.

Timeline (2022 and forward)

Fire Station 82	0-2 years
Other projects	Ongoing

OLD STATION 82

ADDED

RP16

PRIORITIZING ROAD RECONSTRUCTION

Recovery Priority

Tier 1
The Town of Paradise has secured funding to rehabilitate all publicly owned roadways damaged by the Camp Fire. Sequencing the road projects properly is a Tier 1 community priority.

Project Description
As Paradise rebuilds, the necessary reconstruction of damaged roads has been a top priority. While the repairs have vastly improved quality of life, the phasing schedule of construction can be disruptive and has not been made available to the public.

This project acknowledges residents' frustration with lack of communication by improving community awareness on the reconstruction schedule. In response, the town has made a Paving Map available on their website and coordinate with PG&E, Comcast, AT&T, and PID to create an online interactive tool for residents to see the schedule for undergrounding on a street-by-street basis.

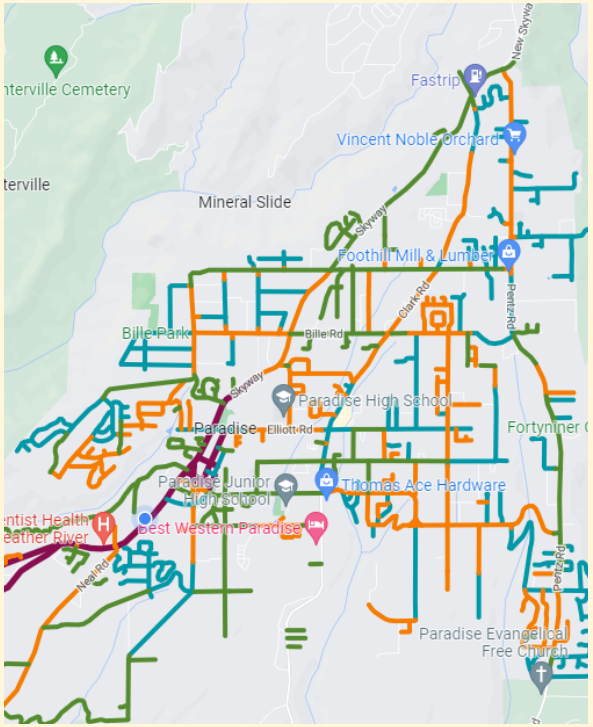
Lead
Town of Paradise

Partners
PG&E, Comcast, AT&T, PID

Action Steps
- Coordinate with PG&E, Comcast, AT&T, and PID to determine an accurate schedule
- Build a website and/or online interactive mapping tool to publicize the road reconstruction schedule

Cost Estimate
Minor

Timeline
Completion in 2022



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ADDED

RP17

FIRESAFE BUILDING STANDARDS

Recovery Priority

Tier 1
Rising insurance premiums are an existential threat to recovery. The relationship of this project to insurance costs makes it a Tier 1 recovery priority.

Project Description
Implement firesafe building standards beyond the Wildland Urban Interface (WUI) Code to reduce fire risk and insurance rates. The Insurance Institute for Business and Home Safety (IBHS) has developed a new set of guidelines called the Wildfire Prepared Home Standard and are creating similar standards for multifamily buildings and communities. These standards are targeted at lowering insurance premiums and increasing the pool of companies offering insurance in areas affected by wildfire. The IBHS Home Standards were adopted by the town in 2022. They require measures such as a 5-foot non-combustible perimeter around the home and no combustible fences within 5 feet of the home.

Owners of existing non-conforming homes and businesses will need financial assistance to meet the new standards and take advantage of long-term premium reductions.

Lead
Town of Paradise

Partner
IBHS

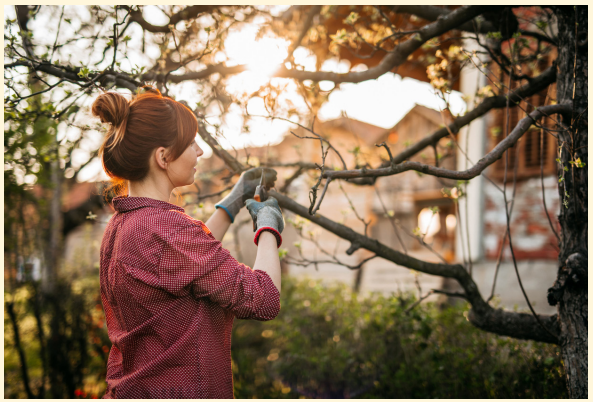
Action Steps
- Town to publisize adoption of IBHS Wildfire Prepared Home Standards
- Town to consider adoption of Multi-family and Community Standards once completed by IBHS

Cost Estimate
- Retrofit — To be determined
- Long-term inspection and enforcement — To be determined

Potential Resources
- FEMA Mitigation Grant
- Owner Occupied Rehab/Reconstruction (OOR) Loan
- Infrastructure Investment and Jobs Act (IIJA)

Return on Investment
Retrofitting existing buildings to adopted standards will make them more firesafe and could help reduce insurance premiums.

Timeline
0 to 3 years



1949

COMPLETED

RP18

SUSTAINABLE FISCAL MODEL

Update

Securing gap funding and financing sources needed to support the municipality's operations until the tax base is restored has been completed. Revenue was back-filled from the State of California for the first two years ($10,000,000 total) along with insurance proceeds ($5,000,000). About 80% or $180,000,000 of the town's $270,000,000 settlement with PG&E will fund the balance. MGT Partners did a long-term (25-year) fiscal sustainable model that included projected revenues and expenditures. The projections assumed a modest rebuild rate. Part of the remaining 20% of the PG&E settlement is a safety net if revenue recovery doesn't meet projections.

SUSTAINABLE FISCAL MODEL

RP 13

Recovery Project Priority

Tier 1
It is essential that the town continue to be a viable and strong local jurisdiction in the years following the disaster and into the future. Therefore, this project has a Tier 1 recovery priority.

Project Description
The Town of Paradise will experience an estimated loss of tax revenue of $155 million over the next 20 years due to loss of tax base. At the same time, the necessary response to the disaster has increased the required resources and staff for the town to provide essential government services to facilitate recovery. Gap funding and financing sources will be needed to support the operations of the municipality, until the tax base is restored.

The town is continuing to evaluate the lost revenue and seeking support for gap funding.

Lead
- Town of Paradise

Action Steps
- Continue to analyze and collect data on estimated lost revenue to support funding requirements and determine what investments in town infrastructure can accelerate recovery
- Seek legislative support for gap funding (ongoing)
- Seek appropriate grant funding through public and private entities to facilitate and accelerate recovery.

Cost Estimate

Loss of tax revenue to be replaced	$155 million
Cost to create plan	$0

Potential Resources
- Town of Paradise

Return on Investment
Ensures the continuity of government for the town as a viable and strong local jurisdiction.

Timeline
0 to 15 years

PARADISE, CALIFORNIA

1950

UPDATED

RP19

SEWER SYSTEM

Recovery Priority

Tier 1
The sewer system is a primary community priority and is therefore classified as a Tier 1 project.

Project Description
For a number of years, the town has pursued a municipal solution for wastewater treatment to address failed septic systems that have degraded local groundwater quality and constrained affordable housing, essential community services, and related economic growth. Reliance on septic systems has resulted in two areas of concern: environmental impacts and economic impediments. Failed septic systems release untreated wastewater into groundwater or ground surface, resulting in environmental degradation and public health risk due to water contamination or exposure to untreated wastewater. Economically, the lack of a sewer system has suppressed the development of a sustainable business community by limiting the size and types of businesses that can affordably operate in the community. Development of affordable and workforce housing has also been hindered as larger housing facilities require more sewer treatment capacity than a traditional septic system can provide within the available parcel sizes. As a result of these concerns, the town worked diligently for more than 50 years, even prior to its incorporation in 1979, to identify a feasible wastewater treatment solution for the community, with a priority to provide service to those commercial and densely populated residential areas with failed and failing septic systems.

Three primary objectives and associated goals drove the development of the Paradise Sewer Project as it exists in 2022:

- Provide long-term, efficient, reliable treatment of wastewater in a cost-effective, environmentally beneficial manner to current and returning town residents, in a manner acceptable to the RWQCB and other permitting agencies:
  - Accommodate regrowth while reducing further environmental degradation of groundwater and surface water from failing septic systems
  - Reduce the public health risk associated with failing septic systems
- Generate economic recovery by eliminating septic-related capacity limitations, as well as the general burden of on-site wastewater management for businesses:
  - Promote the return or arrival of essential community services and businesses by removing restrictions caused by on-site septic systems
- Provide for the ability to construct and maintain affordable housing, specifically multi-family housing:
  - Support centralizing affordable housing to Paradise's urban core, along major evacuation routes

The Town of Paradise released its Program Environmental Impact Report in July 2022 and anticipates a Final version being considered in late 2022. The project aims to contract with the City of Chico for overall wastewater treatment services at their existing Water Pollution Control Plant. If approved, the town's Sewer Service Area could generate 0.464 million gallons per day and be exported to the City's plant for treatment and disposal.

UPDATED

RP20

SEWER SYSTEM, CONT.

The Town of Paradise has secured $30M for the design phase through California Housing & Community Development using CDBG-DR funds.

Lead
Town of Paradise

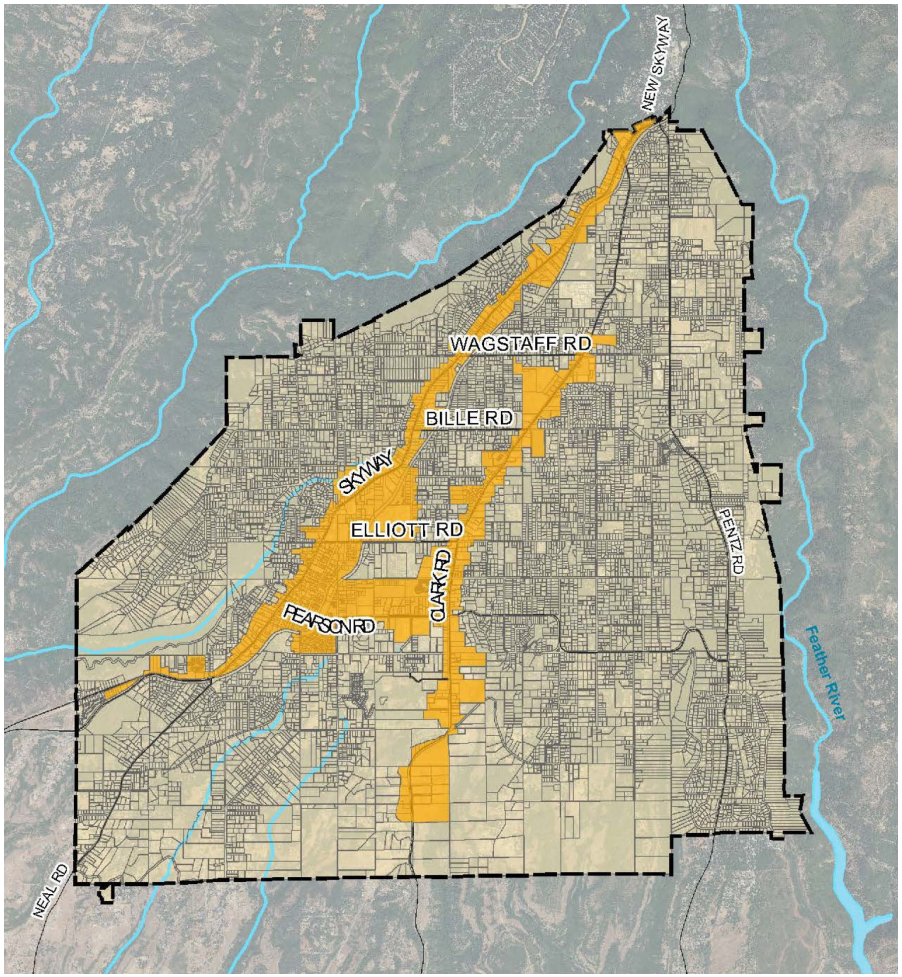
Partners
City of Chico

Potential Resources
- Community Development Block Grant Disaster Recovery Infrastructure
- State Water Board
- US Department of Agriculture
- California Environmental Protection Agency
- US Environmental Protection Agency

Action Steps
- Finalize environmental review
- Commence design
- Secure construction funding
- Construction

Cost Estimate
- $30M Design (secured)
- $182M Construction

Timeline
Completion in 2027



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UPDATED

RP21

WALKABLE DOWNTOWN

Recovery Priority

Tier 1
Given that this project is a primary community priority and is currently being implemented, it is classified as a Tier 1 priority project.

Project Description
Design a walkable central business district (Skyway to the Community Park and Pearson to Elliot Road). The town was awarded a grant before the fire to add sidewalks, lighting, landscaping, and drainage facilities in this area.

Construction of the revitalized downtown is currently underway, with completion expected by the end of 2023. The project benefits will be many, including a new enticing environment for land and business owners alike — especially with the prospects of a future sewer system in 2027.

Lead
Town of Paradise

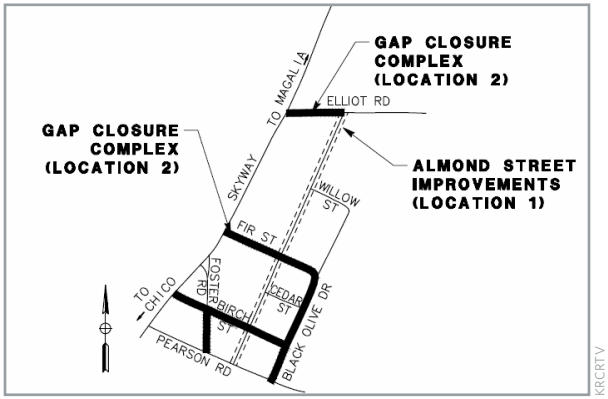
Action Steps
- Implement CDBG-DR Infrastructure projects
- Secure additional funding for future efforts

Cost Estimate
$7M

Potential Resources
California Department of Transportation (Caltrans)

Return on Investment
A safer and more convenient downtown for pedestrians. Plus, expenditure of grant dollars that have already been secured.

Timeline
2022



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COMPLETED

RP22

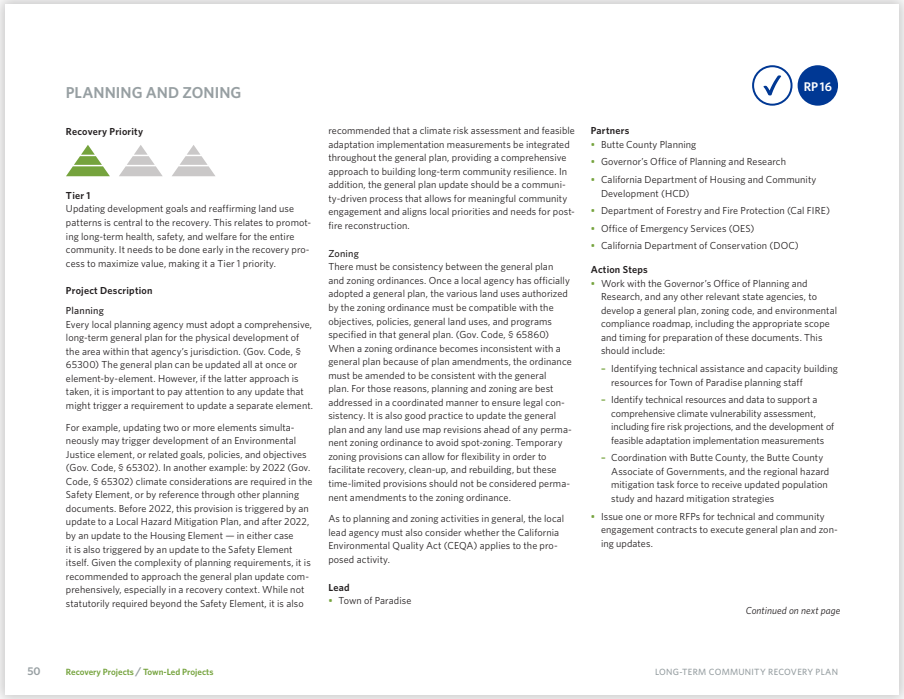
PLANNING AND ZONING

There are seven mandated General Plan elements: Land Use, Open Space, Conservation, Housing, Circulation, Noise, and Safety. The Paradise General Plan Update is proceeding on schedule. This includes the Housing Element, which was sent to the state in June for certification. A portion of the housing Element was paid for by Prop 84 funds, as it lays out policies for fire resiliency.

The Safety Element is waiting for comments from CalFire and then certification from the Board of Forestry. The Health and Safety Code now incorporates the requirements of the Wildfire Prepared Home Standard, discussed in detail under the Firesafe Building Standards recovery project.

Work on the Land Use, Open Space, Conservation, Circulation, and Noise Elements will start in 2023 and take approximately two years. Robust public outreach and a technical advisory committee are planned as part of this process. Also, a zoning overlay is being drafted to allow for increased density along the planned sewer line. It will be processed with the General Plan Update and other zoning amendments. Funding will be provided by a General Plan Update surcharge on permits that has been in place since the 1990s.

This recovery projects is considered complete as the intent has been met.



PLANNING AND ZONING

RP16

Recovery Priority

Tier 1
Updating development goals and reaffirming land use patterns is central to the recovery. This relates to promoting long-term health, safety, and welfare for the entire community. It needs to be done early in the recovery process to maximize value, making it a Tier 1 priority.

Project Description

Planning
Every local planning agency must adopt a comprehensive, long-term general plan for the physical development of the area within that agency's jurisdiction. (Gov. Code, § 65300) The general plan can be updated all at once or element-by-element. However, if the latter approach is taken, it is important to pay attention to any update that might trigger a requirement to update a separate element.

For example, updating two or more elements simultaneously may trigger development of an Environmental Justice element, or related goals, policies, and objectives (Gov. Code, § 65302). In another example: by 2022 (Gov. Code, § 65302) climate considerations are required in the Safety Element, or by reference through other planning documents. Before 2022, this provision is triggered by an update to a Local Hazard Mitigation Plan, and after 2022, by an update to the Housing Element — in either case it is also triggered by an update to the Safety Element itself. Given the complexity of planning requirements, it is recommended to approach the general plan update comprehensively, especially in a recovery context. While not statutorily required beyond the Safety Element, it is also recommended that a climate risk assessment and feasible adaptation implementation measurements be integrated throughout the general plan, providing a comprehensive approach to building long-term community resilience. In addition, the general plan update should be a community-driven process that allows for meaningful community engagement and aligns local priorities and needs for post-fire reconstruction.

Zoning
There must be consistency between the general plan and zoning ordinances. Once a local agency has officially adopted a general plan, the various land uses authorized by the zoning ordinance must be compatible with the objectives, policies, general land uses, and programs specified in that general plan. (Gov. Code, § 65860) When a zoning ordinance becomes inconsistent with a general plan because of plan amendments, the ordinance must be amended to be consistent with the general plan. For those reasons, planning and zoning are best addressed in a coordinated manner to ensure legal consistency. It is also good practice to update the general plan and any land use map revisions ahead of any permanent zoning ordinance to avoid spot-zoning. Temporary zoning provisions can allow for flexibility in order to facilitate recovery, clean-up, and rebuilding, but these time-limited provisions should not be considered permanent amendments to the zoning ordinance.

As to planning and zoning activities in general, the local lead agency must also consider whether the California Environmental Quality Act (CEQA) applies to the proposed activity.

Lead
- Town of Paradise

Partners
- Butte County Planning
- Governor's Office of Planning and Research
- California Department of Housing and Community Development (HCD)
- Department of Forestry and Fire Protection (Cal FIRE)
- Office of Emergency Services (OES)
- California Department of Conservation (DOC)

Action Steps
- Work with the Governor's Office of Planning and Research, and any other relevant state agencies, to develop a general plan, zoning code, and environmental compliance roadmap, including the appropriate scope and timing for preparation of these documents. This should include:
  - Identifying technical assistance and capacity building resources for Town of Paradise planning staff
  - Identify technical resources and data to support a comprehensive climate vulnerability assessment, including fire risk projections, and the development of feasible adaptation implementation measurements
  - Coordination with Butte County, the Butte County Associate of Governments, and the regional hazard mitigation task force to receive updated population study and hazard mitigation strategies
- Issue one or more RFPs for technical and community engagement contracts to execute general plan and zoning updates.

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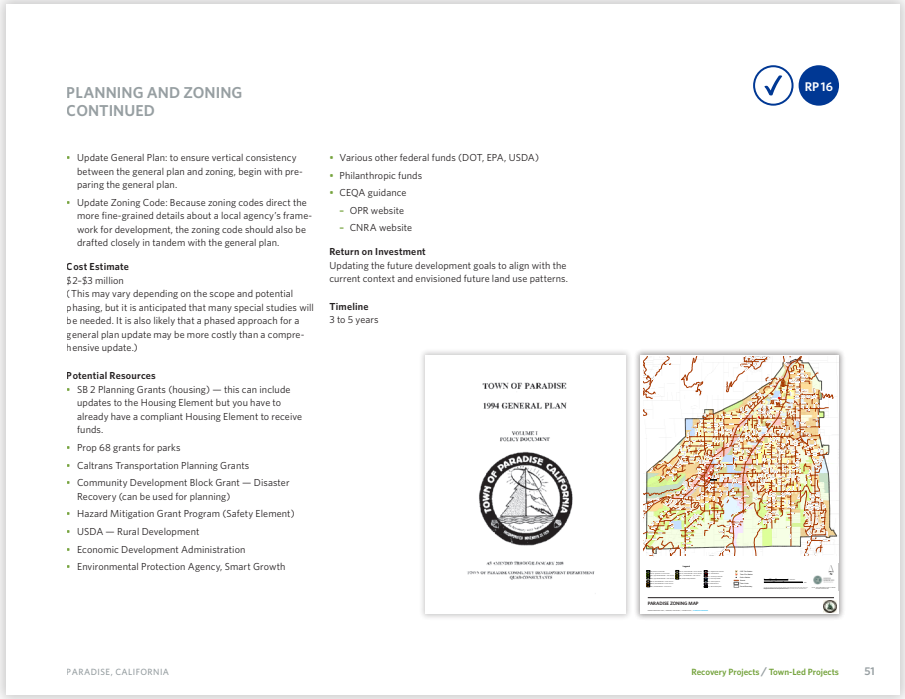


PLANNING AND ZONING CONTINUED

RP16

- Update General Plan: to ensure vertical consistency between the general plan and zoning, begin with preparing the general plan.
- Update Zoning Code: Because zoning codes direct the more fine-grained details about a local agency's framework for development, the zoning code should also be drafted closely in tandem with the general plan.

Cost Estimate
$2-$3 million
(This may vary depending on the scope and potential phasing, but it is anticipated that many special studies will be needed. It is also likely that a phased approach for a general plan update may be more costly than a comprehensive update.)

Potential Resources
- SB 2 Planning Grants (housing) — this can include updates to the Housing Element but you have to already have a compliant Housing Element to receive funds.
- Prop 68 grants for parks
- Caltrans Transportation Planning Grants
- Community Development Block Grant — Disaster Recovery (can be used for planning)
- Hazard Mitigation Grant Program (Safety Element)
- USDA — Rural Development
- Economic Development Administration
- Environmental Protection Agency, Smart Growth
- Various other federal funds (DOT, EPA, USDA)
- Philanthropic funds
- CEQA guidance
  - OPR website
  - CNRA website

Return on Investment
Updating the future development goals to align with the current context and envisioned future land use patterns.

Timeline
3 to 5 years

1954

ADDED

RP23

WALKABILITY & BIKABILITY

Recovery Priority

Tier 1
This is a Tier 1 priority as it should parallel ongoing road reconstruction.

Project Description
The community survey revealed that many residents would like to see the pedestrian and bike network expanded beyond the Interconnected Path System recovery project. This could include some combination of sidewalks, trails, and bike lanes branching off the primary path network. Paradise is a rural community and to maintain its unique character these elements should be used selectively. Still, opportunities exist to enhance the quality of life within neighborhoods through targeted implementation of this initiative.

Lead
Town of Paradise

Action Steps
- Look for opportunities to extend the pedestrian and bike network
- Identify potential funding sources
- Confirm proposed locations with Town Council and Paradise residents

Cost Estimate
To be determined

Potential Resources
- Active Transportation Program (ATP)

Return on Investment
- Increased walkability and pedestrian/bike safety

Timeline
0 to 5 years

1955

ADDED

RP24

BEAUTIFICATION AND ECOLOGY

Recovery Priority

Tier 1
This is a Tier 1 priority as it should be implemented with ongoing community adaptation measures.

Project Description
The town should work on new approaches to beautification and ecology given the postfire terrain and updated fire safety requirements. The fire decimated most of the local cultural landscape and pollinator population. A community character which was dominated by large trees has been replaced by vast open vistas. Safety requirements now preclude foundation planting and trees within falling distance of public streets. Ground level fuels are also prohibited. These facts require rethinking how lots and the community should be planted. At the same time, plant pallets need to be established to bring back the pollinators that support a balanced ecosystem and agriculture.

It should be noted that the Paradise Recreation and Parks District is looking to reintroduce oak trees throughout the area to replace the lost conifers. They also want to encourage more agricultural uses, e.g. orchards, vineyards, etc. as fire breaks within the community.

Lead
Town of Paradise

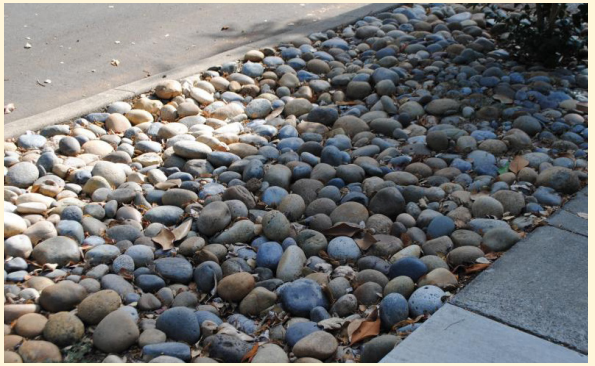
Action Steps
Form an advisory committee to explore balancing the requirements of fire safety with restoration of local ecology and beautification

Cost Estimate
To be determined

Potential Resources
- Nature Conservancy
- American Society of Landscape Architects
- Paradise Garden Club

Return on Investment
Community pride and inviting the pollinators back along with former residents.

Timeline
0 to 5 years



1956

ADDED

RP25

CONTRACTOR ACCOUNTABILITY

Recovery Priority

Tier 2
Given that there is an existing system that needs to be improved, Contractor Accountability is a Tier 2 recovery priority.

Project Description
Approximately one-third of survey respondents in Paradise report that they have been taken advantage of by a contractor working on their property since the fire. The town should develop additional strategies for holding contractors accountable for the quality of their work, property damage, and failure to perform work. Quality construction is a cornerstone of fire safety and resident happiness.

Lead
Town of Paradise

Partners
Contractor State Licensing Board (CSLB)

Action Steps
- Have the CSLB step up enforcement efforts with more frequent visits to Paradise.
- Provide owner/builder pulling their own permits with education materials from CSLB about contracting laws
- Create an online forum for complaints

Cost Estimate
To be determined

Potential Resources
To be determined

Return on Investment
Restoration of resident confidence that contractors are being held to recognized industry standards.

Timeline
0 to 1 year

1957

COMPLETED

RP26

RESIDENT FIRE SAFE EDUCATION

Update

Blue Flamingo, in partnership with the Paradise Fire and Police Departments, spearheaded to initiatives to provide resident fire safe education to the Town of Paradise. Now utilized by CalFire on the state's wildfire preparedness website — ReadyForWildfire.org — a video series called Ready, Set, Go was produced to instruct residents in the necessary wildfire preparedness measures to stay alert and protected in Wildland Urban Interface communities. In addition, the $30k grant supported printing collateral material with defensible space requirements, fridge magnets to help residents know their zone for evacuation purposes, and social media promotion of events and activities around wildfire safety and preparedness.

Defensible space checklist produced by Blue Flamingo

Recovery Priority

Tier 2
Fire safe education is a Tier 2 priority. With an unceasing need to stay in touch with current best practices, this program is important to the recovery.

Project Description
A perpetual education program could be established to train residents on Cal FIRE's guidelines and regulations on fire safe construction, landscaping, and defensible space. Paradise should aspire to rebuild as a model fire safe town.

Lead
- Cal FIRE
- Paradise Fire Department
- Town of Paradise
- ISO (Insurance Service Office)
- Paradise Ridge Fire Safe Council
- Butte County Fire Safe Council
- Paradise Zone Captains
- Civic Groups
- Butte County Office of Emergency Management

Action Steps
- Identify best fire safe practices by consulting with subject matter experts/professionals
- Coordinate with surrounding stakeholders (Cal FIRE, Fire Safe Councils, Butte County) when developing educational curriculum to ensure a consistent message throughout the Paradise area
- Determine who would be lead/coordinating agency, department or group
- Identify distribution methods (videos, pamphlets, fliers, social media, community group, etc.)

Cost Estimate

Public cost, program information, defensible space brochures, etc.	$5,000
Printing and mailing town evacuation plan	$10,000
Wildfire Ready Raccoon youth materials; children's book, trading card, promotion	$5,000
Evacuation safety video, go bag materials, and other social media outreach	$10,000
Scotch broom weed wrench lending program 20 wrenches x $150/each	$3,000
Community presentation materials — projector, in-case of emergency booklets, etc.	$1,500
Community training days on how to safely reduce fuels with machinery and equipment as well as safe pile burning practices — 10 x $100	$1,000
Continuing education/professional development for coordinator	$5,000
Community outreach/program coordinator	$50,000

Potential Resources
- NFPA
- Firewise USA
- California State Fire Marshal Office
- National Wildland Coordination Group — Wildland-Urban Interface Mitigation Committee
- National Institute of Technology
- Insurance Institute for Business and Home Safety
- Fire Safe Councils
- Public relations firms (on how to roll out an effective program)
- Butte County Community Wildfire Protection Plan
- Butte County Hazard Mitigation Plan
- Hazard Mitigation Grant Program (HMGP)

Return on Investment
Increased resident awareness of the steps required to live safely in the Wildland-Urban Interface.

Timeline
0 to 3 years

1958

UPDATED

RP27

ECONOMIC DEVELOPMENT STRATEGY

Recovery Priority

Tier 2

An economic development strategy is related to recovery from the economic damage and restoring financial stability. It is important to the recovery, still qualifying it as a Tier 2 priority.

Project Description

A non-residential market study was implemented as part of the Transportation Master Plan and accepted by Council in March 2022. This information is being shared with developers and businesses investing in Paradise. The next step will be a strategy for an Economic Development Plan to be prepared by the town in the Summer of 2023.

Lead

Town of Paradise (setting policy, direction, strategy, and leading programs and projects)

Additional Action Steps

- Creation of an Economic Development Plan to include adoption of policy, direction, and strategy to go forward
- Town identifies projects

Cost Estimate

Non-residential market study and development site map

$60,000

Economic Development Plan	To be determined
Project Costs	To be determined

Potential Resources

- Transportation Master Plan
- Study Cost: U.S. Department of Agriculture (USDA) Rural Business Development Grants (RBDG) Program Funding
- Economic Development Plan: U.S. Economic Development Administration (EDA) Disaster Recovery Funding
- Projects: Varies by nature of project

Return on Investment

Rebuilding the business and employment base.

Updated Timeline

- Study and Economic Development Plan: 0 to 1 year
- Projects: Varies

1959

UPDATED

RP28

HIGH-SPEED DATA NETWORK

Recovery Priority

Tier 2

The high speed data network remains a Tier 2 priority because it can provide residents and businesses with an improved internet connection, allowing them to communicate more effectively, and it provides safer infrastructure for internet service distribution.

Project Description

This recovery project called for the town to work with providers to make the fiber optic network accessible to all residents and businesses as part of the infrastructure rebuilding effort. In 2020, the town issued a Request for Proposals for agencies to produce a feasibility study examining the demand and viability of installing high-speed broadband infrastructure in Paradise. The Geographical Information Center (GIC) at Chico State Enterprises submitted a proposal that was approved by Town Council in the summer of 2020. The goal of this study was to determine the demand for and cost of installing broadband infrastructure. The resulting Paradise Broadband Feasibility Study, completed in 2021, focuses on the demand within the town for high-speed broadband services.

Provides are currently undergrounding lines as housing and infrastructure are rebuilt. Future funding opportunities for broadband infrastructure are anticipated to be available through the California Advanced Services Fund (CPUC).

Lead

- Town of Paradise
- Internet Service Providers (i.e. Comcast, AT&T, Level 3, MCI, and U.S. TelePacific Corp.)
- Northeastern California Connect Consortium
- CSU Chico

Action Steps

- Per 2021 Paradise Broadband Feasibility Study

Cost Estimate: Per Original LTRP

Underground Fiber Deployment (Shared Underground Cost)	$3.7 million
Underground Fiber Deployment (Standalone Deployment)	$11.4 million

The first scenario ($3.7M) assumes this deployment partners with a public utility (i.e., PG&E) in carrying out undergrounding deployments (trenching or excavating) along the fiber routes, so fiber deployments could achieve up to 90% cost reduction in undergrounding cable placement. The second scenario ($11.4M) assumes the provider carries out the deployment as a standalone project.

See also 2021 Paradise Broadband Feasibility Study.

Potential Resources

Based on rate of return and/or time horizon, potential funding sources include the following:

- Private capital (i.e., equity, debt, internal funding)
- Public-private partnerships (i.e., publicly owned/privately enabled, privately owned/publicly supported, joint ownership)
- Government assistance (i.e., Federal and State infrastructure grants, subsidies, loans, tax credits)
- Upfront payment by target customers

Return on Investment

When combined with all other underground utilities, the high speed data network supports a utilities distribution which is safer and smarter for residents of and businesses in the Town of Paradise.

Timeline

0 to 5 years

1960

ADDED

RP29

SUPPORT FOR MOM-AND-POP BUSINESSES

Recovery Priority

Tier 2
Support for Mom-and-Pop Businesses is a Tier 2 priority as it is tied to construction of the sewer system.

Project Description
Support small, independent (and often family-owned) businesses that lost their buildings in the fire and desire to return. The cost of rebuilding in Paradise far exceeds insurance proceeds making stick built new construction cost prohibitive. This challenge is compounded by the fact that new commercial space must wait for implementation of the sewer project.

Small businesses comprise 99.9% of all businesses in the U.S. and were the foundation of Ridge commerce before the fire. They often rely on affordable costs in owned or leased older buildings to be competitive. Innovative solutions must be developed if displaced mom-and-pops are to return.

Lead
Paradise Ridge Chamber of Commerce

Partner
3-CORE

Action Steps
- Help match small, independent businesses seeking commercial space with existing available space
- Get the sewer system fully funded and built
- Explore lowing new-build construction costs through prefabricated and modular building systems

Cost Estimate
Not available

Potential Resources
- Conventional construction loans and mortgages
- The town is currently developing business assistance programs utilizing ARPA funds (American Rescue Plan Act). They expect to have the programs open for enrollment in December 2022.
- Small Business Adminitration (SBA) loans

Return on Investment
- Restoration of a critical part of Paradise's economy

Timeline
0 to 5 years

1961

COMPLETED

RP30

2019 BUILDING ENERGY EFFICIENCY STANDARDS

Update

This recovery project has been completed. Applicants for building permits are now required to follow the 2019 Building Energy Efficiency Standards.

2019 BUILDING ENERGY EFFICIENCY STANDARDS

RP20

Recovery Priority

Tier 2

This project has a Tier 2 priority status. The 2019 Building Energy Efficiency Standards promotes sustainability through updated green building requirements for new construction and promotes financial stability by ensuring residents and property owners meet the requirements of their insurance companies to receive adequate benefits.

Project Description

The Title 24-2019 standard will go into effect on January 1, 2020. These requirements for solar panels, energy efficient technologies, and sustainable construction methods are more stringent than ever. Embracing these standards for Title 24 buildings would provide residents and property owners with numerous financial benefits. First, residents and property owners would be able to claim the required improvements from their insurance companies if their policy incorporated this provision. Second, residents and property owners should see a savings on utility bills through the use of community renewable energy resources, like rooftop solar panels.

In order to achieve these benefits and successfully apply the 2019 Building Energy Efficiency Standards to new Title 24 construction, this project should:

- Provide certainty to get started on rebuilding now, while eliminating future unknown costs for residents

Lead

- Town of Paradise

Action Steps

- Document and distribute a fact sheet, explaining the 2019 Building Energy Efficiency Standards to residents and property owners who are rebuilding

Cost Estimate

Not applicable

Potential Resources

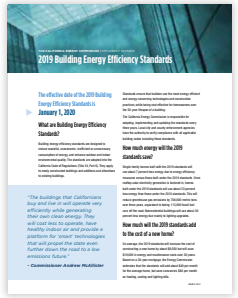
- Hazard Mitigation Grant Program (HMGP)
- Public Assistance (PA)
- U.S. Department of Energy (DOE)
- U.S. Environmental Protection Agency (EPA)

Return on Investment

Upgraded building energy efficiency standards, when implemented successfully, are designed to reduce the utility cost burden on residents, promote the conservation of energy and water, and support fire safety through design.

Timeline

0 to 1 years



PARADISE, CALIFORNIA

1962

RETIRED

RP31

SUSTAINABLE STORMWATER AND DRAINAGE

Update

Sustainable Stormwater and Drainage has been retired as a stand-alone recovery project. The town is incorporating current best stormwater practices into the infrastructure and vertical development as Paradise is rebuilt. These initiatives are incorporated into the Town's Storm Drainage Master Plan (June 7, 2022) and Stormwater Management Program.

SUSTAINABLE STORMWATER AND DRAINAGE

RP 21

Recovery Priority

Tier 2
The level of priority is Tier 2. Most of the stormwater drainage system did not sustain physical damage in the fire. However, it is still important to the recovery. Water quality can be significantly improved as the community is rebuilt.

Project Description
Sustainable stormwater and drainage investments would decrease the quantity of runoff and improve the quality of water. A funded study would provide the town with critical information to make improvements, such as:

- Additional erosion control management to prevent erosion during recovery and protect the sensitive post-fire condition of the land
- Elimination of open ditches along evacuation routes and all public roads to improve safety
- Detention basins and bioswales to slow down and clean stormwater before it reaches natural systems

Lead
- Town of Paradise

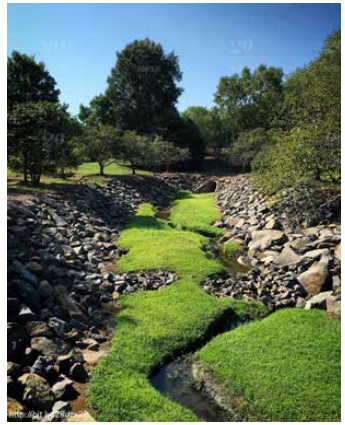
Action Steps
- New Storm Drainage Master Plan (current plan is from 1979)
- Secure funding
- Town-wide capacity and resiliency implementation based on Drainage Master Plan recommendations

Cost Estimate
Design and construction $250,000

Potential Resources
- Hazard Mitigation Grant Program (HMGP)
- Public Assistance (PA)

Return on Investment
The town would have cleaner stormwater and improved erosion control, including the reduction of open ditches, fast flowing water, and muddy runoff.

Timeline
0 to 5 years



RETIRED

RP32

SUSTAINABLE DEVELOPMENT

Update

The town is not pursuing Sustainable Development as originally conceived. However, many sustainability best practices are being incorporated into both infrastructure and residential construction per state and local regulations.

SUSTAINABLE DEVELOPMENT

RP22

Recovery Priority

Tier 2

The Sustainable Development project has a Tier 2 priority status. This project promotes sustainability through land and infrastructure development and management over a long-term timeline as the town recovers and rebuilds.

Project Description

As Paradise rebuilds, the natural systems of the town are equally as important as the physically built infrastructure systems. Metric systems and ideas like the City Resilience Index could provide framework ideas and strategies for sustainable development that would minimize the negative impact of rebuilding on the natural systems of Paradise. While the City Resilience Index does not currently have an application for rural communities, the town could leverage a partnership with this agency and others like it to develop a toolkit for sustainable development in post-disaster areas.

To advance sustainable land development strategies, the town could:

- Seek incentives for low-impact and resilient design and land management
- Develop and adopt sustainable development standards and guidelines
- Partner to educate residents about low-impact models and options

Lead

- Town of Paradise

Action Steps

- Create partnerships with City Resilience Index, Cal OES Infrastructure Systems Recovery Support Function, and others to develop standards and guidelines for sustainable development in Paradise and other rural communities
- Develop and distribute educational information on sustainable land management and infrastructure development to residents
- Secure funding and create incentives for residents and property owners who engage in sustainable infrastructure and development projects

Cost Estimate

Not applicable

Potential Resources

- California Governor's Office of Emergency Services (Cal OES) Infrastructure Systems Recovery Support Function
- Hazard Mitigation Grant Program (HMGP)
- Public Assistance (PA)
- U.S. Department of Energy (DOE)
- U.S. Environment Protection Agency (EPA)

Return on Investment

Sustainable development strategies serve to support resiliency and fire safe infrastructure, while also promoting the town as an exemplary rural community.

Timeline

0 to 5 years

PARADISE, CALIFORNIA

Recovery Projects / Town-Led Projects 57

1964

RETIRED

RP33

SUSTAINABLE BUILDING PROGRAMS

Update

Given limited available funds, the town is prioritizing fire safety and building back over sustainable building programs.

SUSTAINABLE BUILDING PROGRAMS

RP 23

Recovery Priority

Tier 2

Sustainable Building Programs are a Tier 2 priority, as they demonstrate a willingness on the part of town leadership to invest in sustainable building practices for public buildings, recognizing the role that green design plays in promoting the town as a model, rural community during its rebuilding and recovery process.

Project Description

The Town of Paradise has a unique opportunity to be a model, rural community for fire safety and resiliency, as well as sustainability and green design. In the wake of the Camp Fire, the town should be a leader in fire-resistant and non-combustible building design. Throughout the rebuild and recovery effort, Paradise could become a destination for those who want to learn about these sustainable building strategies, including incorporation of LEED and USGBC principles in a rural context, application of California's stringent energy efficiency standards, matching efforts of sustainability with affordability, and Wildland-Urban Interface (WUI) compliance and execution.

In order to achieve this, the Sustainable Building Programs recovery project should include:

- Designing and constructing public buildings to meet stringent environmental and energy efficient standards and certifications
- Seeking financial incentives for residential and commercial owners to invest in ignition-resistant building materials that exceed WUI requirements

Lead

- Town of Paradise

Action Steps

- Create partnerships with LEED, USGBC, and others to develop standards and guidelines for sustainable and green building in high fire hazard rural communities like Paradise
- Develop and distribute education information on how individual residents and property owners can incorporate and benefit from sustainable, green, and fire safe design in the reconstruction of their homes and businesses
- Provide residents and property owners with a resource list of local builders, contractors, material providers, and others who specialize in locally sourced materials and are knowledgeable in green building design and construction
- Secure funding to support sustainable building efforts
- Create incentives for residents and property owners who exceed WUI requirements

Cost Estimate

Not applicable

Potential Resources

- Hazard Mitigation Grant Program (HMGP)
- Public Assistance (PA)
- U.S. Department of Energy (DOE)
- U.S. Environmental Protection Agency (EPA)

Return on Investment

When residents and property owners use sustainable building strategies and best green design practices, homes and businesses are more likely to be fire safe, ignition-resistant, and energy efficient, promoting an overall safer, more resilient Paradise.

Timeline

0 to 5 years

1965

NEW CIVIC CENTER

SUPERSEDED

RP34

Update

The New Civic Center has been superseded by the Facilities Maintenance and Upgrades recovery project.

NEW CIVIC CENTER

RP 24

Recovery Priority

Tier 3

Building a new civic center is desirable for the recovery and would be a significant improvement. However, it is not related to the fire damage. That requires this recovery project to be categorized as a Tier 3 priority.

Project Description

Town Hall should be co-located with police/fire in a hardened facility. This building(s) could be located on town-owned property adjacent to the community park. Creating a new civic center in the heart of the town would increase safety and bring these critical facilities, such as the Emergency Operations Center (EOC), into conformance with Wildland-Urban Interface building regulations. It could also anchor the revitalization of downtown.

Hardening would include ignition-resistant building materials, commercial windows, defensible space standards, protected communications and power, and backup generators.

Lead

- Town of Paradise

Action Steps

- Town of Paradise to conceptualize this facility in terms of program and performance requirements
- Town to apply for outside funding to do a feasibility study and cost estimate
- Town to apply for outside funding to build the new facility

Cost Estimate

Feasibility study and cost estimate	$150,000
30,000 SF facility (town hall/police/fire)	
Soft costs	$1,800,000–$2,200,000
Construction	$15,000,000–$18,000,000
Furniture, fixtures, and equipment	TBD

Potential Resources

- U.S. Economic Development Administration (EDA)
- Emergency Management Grant Program (EMGP)
- Town of Paradise

Return on Investment

Safety that comes with a consolidated and hardened Emergency Operations Center and hardened critical infrastructure. Centralized operational and communication efficiency.

Timeline

3 to 5 years

PARADISE, CALIFORNIA

Recovery Projects / Town-Led Projects 59

1966

RETIRED

RP35

OPPORTUNITY ZONE

Update

Special legislation that would allow Paradise to be designated an Opportunity Zone never materialized.

OPPORTUNITY ZONE

RP 25

Recovery Priority

Tier 3

Paradise was not designated as an Opportunity Zone before the fire, but may now qualify. This is desirable for recovery and as such is classified as a Tier 3 priority.

Project Description

The Opportunity Zone program was created to revitalize economically distressed communities using private investment rather than taxpayer dollars. By deferring capital gains for up to ten years, investors or groups of investors are incentivized to make long-term investments in areas that may historically have been underserved. While the Town of Paradise was not included in the first round of Opportunity Zone designations, it is possible the program could be amended, at which time the town should explore eligibility.

Lead

- Town of Paradise
- 3CORE

Partners

- U.S. Senate
- State Legislature
- Butte County
- Local investors
- Local developers
- Accounts and financial advisors

Action Steps

- Monitor and advocate for expansion of the current Opportunity Zone program — On April 3, 2018, Senators Marco Rubio (R-FL) and Rick Scott (R-FL) introduced the Disaster Opportunity Zones Act (DOZA), which will open Opportunity Zone designation to areas affected by 2018 natural disasters. The bill has been referred to the Senate Finance Committee for hearing.
- If expanded, create a prospectus on potential investment in Camp Fire burn area
- Educate policymakers regarding the importance of expanding these incentives
- Educate local investors/developers/CPAs/financial advisors on the benefits of Opportunity Zones

Cost Estimate

To be determined

Potential Resources

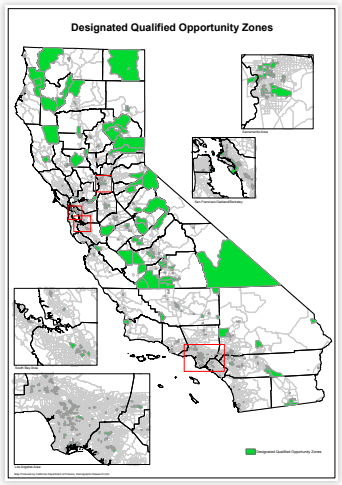
- California Opportunity Zones (CalOZ)
- Governor's Office of Business and Economic Development (GoBiz)
- U.S. Economic Development Administration (EDA)

Return on Investment

Incentives to invest in Paradise.

Timeline

To be determined — depends on potential policy changes



1967

PARTNER-LED PROJECTS

Partner-led projects are those which are being championed by various individuals, agencies, and organizations whose knowledge is directly applicable to each respective project. Within this section, projects are grouped together based on the category of the community vision they fall under — Safer, Welcoming, Stronger, Better, Greener. These projects range from Tier 1 to Tier 3 level of priority.

Recommended Projects

- PID Water System
- **Fire Breaks (Buffer Zones)**
- **Manufactured Home Communities**
- Housing Affordability
- Housing Market Study
- Workforce Development Plan
- Chamber of Commerce
- Educational Campus/Resiliency Research Center
- Volunteers
- Live/Work Space for Entrepreneurs
- Construction Training Center
- Elementary and Secondary Education
- Healthcare Services
- **All Scales of Healthcare**
- Outdoor Destination
- Early Childhood Education
- Public Transportation
- Arts and Culture on the Ridge (Gold Nugget Museum and Norton Buffalo Hall)
- **Blue Zones**

Bold indicates added recovery project

1968

COMPLETED

RP36

PID WATER SYSTEM

Update

The Paradise Irrigation District (PID) has cleared all waterlines of contamination. This includes mainline service as well as service lines to existing structures. They are also undertaking the extensive replacement of service lines to all new structures.

Water meters replacement is another element of planned upgrades within the district. PID was able to secure funding in 2022 to insure the long-term sustainability of the irrigation district. This recovery project is considered complete as the intent has been met.

PID WATER SYSTEM

RP 26

Recovery Priority

Tier 1

The water system sustained physical damage as a result of the disaster. Repairing the system is critical to fire safety and recovery. This is a primary community concern, leading to assignment as a Tier 1 priority.

Project Description

The Town of Paradise will support the Paradise Irrigation District (PID) in its mission to restore potable water throughout the town. Following the Camp Fire, PID re-pressurized the distribution system, repaired some of the leaks, and did initial water quality testing to determine that the distribution system had been contaminated with volatile organic compounds (VOCs). In response to the contamination, PID issued a "do not drink" advisory that is still in effect today as the system is repaired under the PID Recovery Plan protocols.

In order to determine restoration and service priority, each main within the PID system has been identified as a Category 1 through Category 4 main. Category 1 is a primary distribution main. Work will begin with Category 1 and continue for approximately two years (anticipated completion in early 2021) until all categories of service lines have been tested, repaired, and restored.

Lead

- Paradise Irrigation District

Partners

- Town Liaison Committee

Action Steps

The PID Water System Recovery Plan includes three steps:

1. Sample all service laterals and mains in the distribution system for VOCs. This will eventually total nearly 20,000 samples
2. Replace contaminated service laterals and flush contaminated mains
3. Restore potable water service to the system

In order to accomplish these steps, there are five actions to be executed:

1. Temporary customer supply
   a. Where possible, temporary customer supply will be above-grade pipe/hose from a service lateral outside the Sample Area
   b. In some cases, temporary customer supply will be a tank and booster pump providing non-potable domestic use flows only
   c. Once sampling of stagnated water lines is completed, the temporary water supply will be removed, and the customer reconnected to the PID water system
2. Recover water meters and appurtenances
3. Sample mains and service laterals
4. Repair and replace damaged system components
5. Reconnect customers to distribution system

Cost Estimate

Total Cost $53,000,000+

Potential Resources

- California Governor's Office of Emergency Services (Cal OES)
- Federal Emergency Management Agency (FEMA)

Return on Investment

The PID Water System will provide homeowners and business owners with potable water, a prerequisite for large scale rebuilding.

Timeline

0 to 2 years

NOTE: Information was taken from the Paradise Irrigation District Water System Recovery Plan issued on April 12, 2019

1969

ADDED

RP37

FIRE BREAKS (BUFFER ZONES)

Recovery Priority

Tier 1

Fire breaks are a key element of community-wide fire safety and serve as an instrumental mitigation measure with long-term impact. This proposal for a fire break around the perimeter of the town is a Tier 1 priority project.

Project Description

Implement and maintain a buffer zone between development and the wildlands to reduce fire risk, especially on the east side of town. As fuels are reduced, these areas can also double as an opportunity for hiking trails. The soon to be released *IBHS Wildfire Prepared Community Standards* are expected to include bufer zones as a fundamental mitigation measure.

Lead

- Paradise Recreation and Parks District (PRPD)

Partner

- FEMA and CalOES
- Town of Paradise
- The Nature Conservancy

Action Steps

- Perform a cost benefit analysis
- Develop a comprehensive rubric for analyzing and selecting property that will form a contiguous boundary and how that property should be programmed
- Establish program requirements, site standards, and fuels management plans for maintaining and stewarding the protective barrier
- Identify areas of vulnerability
- Execute maintenance agreements with existing landowners and propose opportunities for land acquisition
- Confirm potential sources for purchase, construction, and long-term maintenance funding
- Construct and maintain the fire break

Cost Estimate

The cost of property acquisition, park development, trail network extensions, and fuels management throughout the entire fire break will be determined during the initial planning funded by the FEMA Building Resilience in Communities Program.

Potential Resources

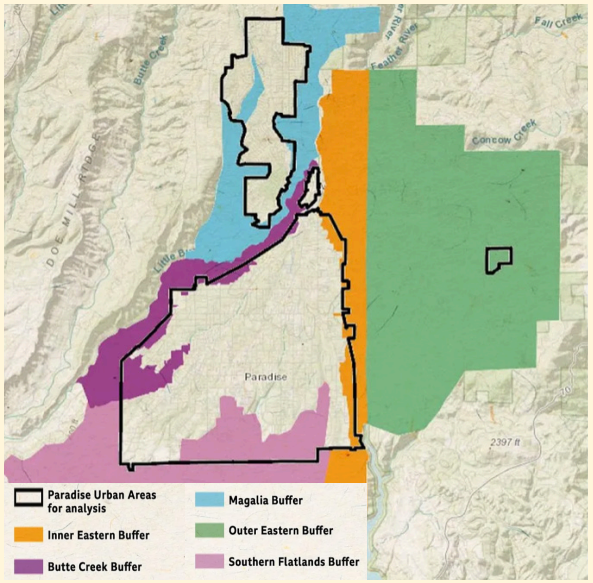
- $300K grant from FEMA's Building Resilience in Communities Program to perform a cost benefit analysis, establish priorities, and set up the programming and development rubric (Submitted in 2020, but waiting on agreement)
- Donation and Funding Program for Property Acquisition
  - $225k approved by the Sierra Nevada Conservancy in 2020 (designated for 2 properties - about 12 acres)
  - Donation (unincorporated area) completed 12/2021 for about 5 acres
  - Additional donations in progress for October 2022 including property near Bille Park (1.39 acres) and Feather River Place (3.44 acres), as well as a signing agreement for purchase (2.22 acres) and partial donation (7.4 acres) of property in Eastern Paradise

Return on Investment

It is anticipated that the creation of a fire break that fully surrounds the Town of Paradise would help reduce insurance costs by up to 40%. As well, initial cost benefit analysis research shows a 4:1 return on investment from damage reduction over 30 years with a fire break just on the eastern edge of Town. In addition to insurance reductions, a fire break could serve several functions beyond a protective barrier and passive green space. Other uses include: active park spaces, extended trail networks, and potential business opportunities that take responsible care of the town's boundary.

Timeline

- Study: 0-5 yeras
- Implementation: 5-15 years
- Maintenance: in perpetuity



1970

ADDED

RP38

MANUFACTURED HOME COMMUNITIES

Recovery Priority

Tier 2
This is a Tier 2 recovery priority like the Housing Affordability project in the original LTRP.

Project Description
Address the challenges to rebuilding the 36 privately-owned manufactured home parks destroyed in the fire. In general, funding has not been available to rebuild these parks and prepare manufactured home sites. However, the recently passed Senate Bill (SB) 197 expands authorized purposes for grants or loans under the Manufactured Housing Opportunity and Revitalization (MORE) Program (previously the Mobile Home Park Rehabilitation and Resident Ownership Program) for converting a mobile home park also to include: the acquisition, rehabilitation, reconstruction and replacement of a mobile home park; certain necessary repairs to health and safety deficiencies of a mobile home park; or reestablishment, including relocation, of a mobile home park. SB 197 also modifies the required conditions for program loans and grants for mobile home parks and individual low-income residents of such parks, including adding conditions for required affordability restrictions and permitting deferral of repayments for the full term of any loan.

The MORE program is likely to be used by some park owners; additional strategies must be developed to encourage the adaptive reuse of all vacant sites.

Lead
California Department of Housing and Community Development (HCD)

Action Steps
- Publicize the MORE program
- Further investigate strategies through the town's newly formed Housing Advisory Committee, including commissioning parks

Cost Estimate
To be determined

Potential Resources
MORE program

Return on Investment
Broadening housing opportunities and choices for residents that aspire to return.

Timeline
0 to 5 years

1971

HOUSING AFFORDABILITY

COMPLETED

RP39

Paradise Community Village has been rebuilt. The 36-unit neighborhood was completed and fully reoccupied, on its original site, in September 2021. There were approximately 250 initial applications with more than 60% being Camp Fire survivors. Proceeds to rebuild included insurance, a FEMA Public Assistance Grant, and private donations.

HOUSING AFFORDABILITY

RP 27

Recovery Priority

Tier 2
This project focuses on replacing Paradise Community Village, an affordable housing community that was lost in the disaster. It has a Tier 2 recovery priority. Rehousing those families will take pressure off of other regional housing needs.

Project Description
Much of the housing in Paradise prior to the fire was naturally occurring affordable housing. Given the cost of construction, it will be difficult to replicate the levels of housing affordability. There was also a small amount of subsidized workforce housing, including multi-family housing at Paradise Community Village. Paradise Community Village should be rebuilt by the Community Housing Improvement Program (CHIP) to replace the lost housing and services, in partnership with the Town of Paradise.

Paradise Community Village was completed in 2013 and included 36 units of multi-family housing, community amenities, and a community building. CHIP is required to rebuild what was lost, only changing any required upgrades to meet codes or fire safety mandates. To comply with IRS rules, there is a two-year timeframe for replacement, but CHIP has requested that the rebuild time be extended to 4 years.

Other future mixed-use partners could be involved in the rebuilding to achieve the live-work-learn-play vision for Paradise Community Village, in exploring options for rebuilding infrastructure. After the first phase of housing is replaced there could be opportunities for a second phase that meets the needs of the community (family, senior, or homeownership development).

Lead
- Community Housing Improvement Program (CHIP)

Partner
- Town of Paradise

Action Steps
1. Apply for IRS exception to extend the IRS required timeframe to rebuild the 36 units of housing and amenities from 2 to 4 years. Request has been made and a decision is pending.
2. Secure additional financing for rebuilding as costs to rebuild have escalated and new codes and requirements will increase the total development cost.
3. Explore partnership with potential adjacent mixed-use elements to complement the rental housing.
4. Repair the existing community wastewater system that supports the Paradise Community Village and other uses (additional housing, future soccer/sports complex, school, etc.). The existing system can be expanded to accommodate additional users.
5. Consider additional partnerships with complementary users during the rebuild of Paradise Community Village. If this occurs, additional funding to address signalization and road improvements will be required.

Cost Estimate

Development cost (materials, labor)	$11 million
Development soft costs	To be determined
Infrastructure	To be determined

Potential Resources
- Community Development Block Grant Disaster Recovery Program (CDBG DR)
- Federal Emergency Management Agency (FEMA) Public Assistance (PA) Grant
- Foundations and donations
- Traditional debt/mortgage financing

Return on Investment
This project takes advantage of dedicated funding sources for reconstructing Paradise Community Village to rebuild a stable community and rehouse 36 families with services and community amenities, which will help to reduce housing pressures in Paradise and Butte County. Many of the former residents wish to return to Paradise and reside at Paradise Community Village.

Timeline
2 to 4 years

PARADISE, CALIFORNIA

1972

COMPLETED

RP40

HOUSING MARKET STUDY

Update

A residential market study was completed for Butte, Tehama, and Glenn cocunties. This study, prepared by Peloton Research and Economics, was undertaken to help better understand the impacts of the Camp Fire on housing market conditions in the tri-county region. Funders included the North Valley Community Foundation, Butte Strong Fund, Fannie Mae, and Sierra Nevada.

The Study noted that "at the crux of all the housing challenges faced in the region, both pre- and post-fire, is the availability of affordable housing options. This issue is of greater importance now following the eliminiation of so much affordable housing stock back in Paradise and surrounding communities. In most cases these homes were not only affordable, but they were unsubsidized. It is extremely difficult to deliver market-rate affordable units in today's markets, though not impossible."

Key Objectives

- Update pre-Camp Fire baseline data to 2018 sources
- Provide more in-depth information on pre- and post-disaster market conditions
- Understand the dynamics leading to population out-migration
- Examine feasibility of new housing construction
- Identify opportunities for new housing in the region
- Create policies promoting housing production

Although not specific to Paradise, information about the town was included. Links to the study are included on the North Valley Community Foundation and Chico Builders Association websites.

HOUSING MARKET STUDY

RP 28

Recovery Priority

Tier 2
A market study is important to the recovery to quantify what was lost, what is in the pipeline and the projected need in the future. This is a Tier 2 priority.

Project Description
To ensure a mix of housing options and opportunities for the tri-county region, a market study should be undertaken. The study will include definitions for affordable, workforce, and attainable housing and provide pre-fire examples of each housing type from within the Town of Paradise and other tri-county communities. An analysis and breakdown of housing types in Paradise prior to the fire will be provided along with a current breakdown of the composition of housing units remaining.

Paradise should evaluate the results to benchmark the affordable/workforce housing lost and to set targets for replacing affordability that ensure a mixed-income community.

Lead
- Camp Fire Long-Term Recovery Group, Housing Subcommittee

Partners
- 3CORE
- Town of Paradise

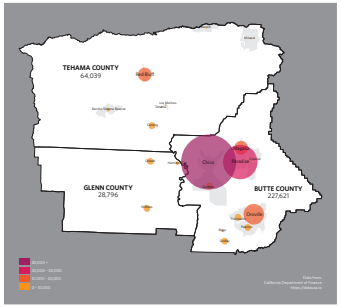
Action Steps
- Pre-Fire Household Composition, Housing Mix, and Market Conditions
  - Review pre- and post-fire composition of housing stock and housing market conditions in Paradise, Butte County, and the surrounding tri-county area
  - Provide breakdown of household types by income, housing type, tenure, family composition, household size, and age group
  - Aid community in establishing goals and target allocations for the re-introduction of mixed-income housing types, as well as identify tools and resources to assist in planning, encouraging, and implementing mixed-income housing
  - Understand the movements of children and families in the region
- Post-Fire Housing Issues including Availability, Affordability, and Future Mix
  - Analyze the impacts of Camp Fire victims on local housing resources by analyzing rental rates, occupancies, home sale prices, listing prices, and inventory of available homes
  - Identify and analyze sites capable of supporting new housing units
  - Analyze current residential developments under construction
- Feasibility of Building and Rebuilding
  - Analyze the feasibility of home construction in Paradise
- Future Development and Policy Recommendations to Meet Local Housing Needs
  - Provide calculations for future housing units and identify shortfalls, by housing type and income level, across the region
  - List of resources and incentives for mixed-housing types

Cost Estimate
Market study $35,000–$75,000

Potential Resources
- Foundations

Return on Investment
Empirical data that quantifies what was lost, what is in the pipeline and the projected need in the future.

Timeline
0 to 1 years



64 Recovery Projects / Partner-Led Projects LONG-TERM COMMUNITY RECOVERY PLAN

UPDATED

RP41

WORKFORCE DEVELOPMENT PLAN

Recovery Priority

Tier 2
The workforce development plan is related to the economic damage caused by the disaster. It will help restore job security and financial stability to the region over the long-term. It remains a Tier 2 priority.

Project Description
Although still in the early stages, a new workforce training center for trades and a 3D printing center are the top priorities. A Notice of Funding Availability (NOFA) is scheduled to be issued in January 2023. What projects the town's partners can apply for will be better known then. In the meantime, a 3D printing course is offered through CSU Chico, which could be a feeder program, and the Rotary Club has formed a special committee.

A Workforce Development Plan should ensure that workforce needs are understood and that training opportunities adequately address those needs. There are many local job seekers who lost their jobs and business owners whose business were either lost or severely impacted by the Camp Fire. NoRTEC and the Alliance for Workforce Development (AFWD) have been working closely with partner agencies in Butte County to meet the new disaster related workforce needs. Original targeted activities included:

- Career and training services, including partnering with Butte College to ensure relevant training options are available
- Temporary clean-up jobs for impacted workers in the Camp Fire burn area
- Job Seeker services (assessments for employment and training needs, assistance with short term prevocational training, occupational skills training, paid work experiences, paid internships, On-the-Job (OJT) training, supportive services, career guidance and job search assistance and placement as needed)
- Evaluating needed vocational programs, trades, apprenticeships, and ROP programs
- Coordinating with the Laborers Local 185 Union and assisting in developing a plan to help get individuals employed through the Union
- Working with Cal Recycle/Cal OES to identify contractors hiring for debris cleanup
- Hosting job fairs for HAZWOPER certified individuals with the hiring contractors and also with the local laborers union, Business Recovery Forums, resume and application workshops for affected individuals, contractor workforce info session, and a Listening Session with Butte County businesses and State Agency resources
- Participating in the Camp Fire Business Recovery Task and Camp Fire Long Term Recovery Group
- Conducting business walks and outreach to the Paradise area to identify any needs of the new or reopening businesses
- Coordinating and participating in the North Valley Camp Fire Resource Round-up
- Coordinating services between various public and non-profit agencies to help identify individuals that need workforce development services

Lead
- NoRTEC (Northern Rural Training and Employment Consortium)
- AWFD
- Butte College

Partners
- Camp Fire Business Recovery Task Force
  - Chamber of Commerce
  - Butte College
  - Town of Paradise
  - City of Chico
  - Butte County
  - 3Core
  - Small Business Development Center (SBDC)
  - Small Business Administration (SBA)
  - Rotary Club

Additional Action Steps
- Respond to NOFA
- Implement based on qualifying projects

Cost Estimate
$18,700,000 allocated

Potential Resources
- CDBG-DR

Return on Investment
Meeting the workforce needs resulting from the Camp Fire. Also, helping job seekers and business owners impacted by the disaster.

Timeline
1 to 3 years

1974

UPDATED

RP42

CHAMBER OF COMMERCE

Recovery Priority

Tier 2
The Paradise Ridge Chamber of Commerce is a Tier 2 priority due to its role in the economic recovery from the disaster and its continued importance as a key entity in organizing small business support, promoting local opportunities, and attracting residents to the Ridge.

Project Description
As rebuilding has progressed, the Paradise Ridge Chamber of Commerce has been highly involved in supporting the evolving needs of its members, while also promoting and attracting new businesses and residents to the Ridge.

The Chamber of Commerce has addressed several action steps from the 2019 Long-Term Recovery Plan, including:

- Focusing on strategies that would support businesses and economic development on an individual, business-by-business basis after the Butte County Business Recovery Task Force terminated convening as a structured group
- Establishing sponsorships and applying for short-term grant opportunities to initialize a sustainable fiscal model for the Chamber
- Developing short and long-term work plans and goals for promoting local events and celebrations, attracting new rooftops and residents, and publishing the Ridge Business Journal and Ridge Rising Guides

In addition, the Chamber has focused on a series of initiatives that have supported the town's recovery and brought back residents and businesses to the Ridge, including:

- Advocating for a commercial sewer system and community-wide broadband through writing letters to legislators and keeping the business community updated on the progress
- Supporting the Valley Contractors Exchange's Construction Industry Workforce Initiatives by publicizing events and issues in the Chamber's media channels
- Partnering with local rebuild, workforce, and construction organizations to form the Home Builders Resource Connection to produce resources and events connecting potential residents with trades and providing comprehensive information about building in the Wildland Urban Interface (WUI)

Lead
Paradise Ridge Chamber of Commerce

Partner
- Town of Paradise and Butte County
- Business community

Additional Action Steps
- Establish a stronger partnership with the Town of Paradise to further economic development initiatives, pursue joint funding opportunities, and foster a greater sense of unity between both entities
- Fund and implement a multi-year campaign to attract residents to the Ridge
- Maintain and grow the Ridge Rising publications to continue attracting businesses, organizations, and residents to the region
- Identify staffing needs for the Chamber and develop a workplace and funding strategy to fill the gap

Cost Estimate (Spent and Projected)
$1.2 million spent across all of the Chamber of Commerce's various initiatives

Potential Resources
- Small grants on a project-by-project basis
- Public-private partnerships

Return on Investment
The Paradise Ridge Chamber of Commerce has created countless opportunities for residents and small businesses to call the Paradise community home through their small business support initiatives and culture-building publications. Continued support of the Chamber equates to continued growth and recovery of the Town of Paradise.

Timeline (2022 and forward)
The timeline is determined on a project-by-project basis.

SUPERSEDED

RP43

EDUCATIONAL CAMPUS/ RESILIENCY RESEARCH CENTER

Update

The Educational Campus/Resiliency Research Center has been superseded by the Workforce Development Plan recovery project.

RP31

EDUCATIONAL CAMPUS/ RESILIENCY RESEARCH CENTER

Recovery Priority

Tier 3

A postsecondary campus did not exist in Paradise before the fire. This is an opportunity that was created because of the fire. It is desirable for recovery and classified as a Tier 3 priority.

Project Description

Paradise would be the ideal location for the study of fire safety, fire hazard area ecology, disaster recovery best practices, hardening research, vocational training, building in harmony with nature, etc. The town should explore partnerships with existing institutions that could lead to satellite programs or even a physical presence in downtown.

The academic communities interest in Paradise after the Camp Fire is underscored by the over fifty academic institutions that have reached out to Chico State. Both Chico State and Butte College have been key institutional partners in supporting the Paradise recovery and rebuilding effort.

Chico State maintains 3,950 acres of diverse habitats known as the Big Chico Creek Ecological Reserve (BCCER) just west of Paradise. Approximately 85% of the Reserve burned in the Camp Fire. Goals of the Reserve include monitoring on-site natural resources and providing public outreach and education. The faculty has focused on creating a healing recovery and resiliency center since the disaster. The town should explore a potential partnership for a secondary meeting and educational facility in Paradise. Other Chico State efforts to support Paradise include, but are not limited to:

- Wildcats Rise Fire Recovery Fund and several other donation collection efforts
- Human Identification Laboratory effort to search for human remains after the Camp Fire
- Camp Fire Oral History Project
- GeoPlace Mapping Lab studying the fire's displacement effect

Butte College has supported the recovery and rebuilding of Paradise in the aftermath of the Camp Fire through two initiatives:

1. Economic and Workforce Development (EWD) unit, which includes the Small Business Development Center, Contract Education, and Training Place
2. Credit Certification and Degree Programs development to provide a pipeline of skilled employees to support industry

Lead

- Chico State University (CSU)
- Butte College

Partners

- Town of Paradise

Action Steps

- Town of Paradise Disaster Recovery Coordinator to establish a direct link with CSU and Butte College leadership
- Formulate a plan for moving forward with consensus goals and objectives
- Seek funding if needed

Cost Estimate

Programs and Facilities — To be determined

Potential Resources

- Butte College
- Chico State University (CSU)

Return on Investment

The Educational Campus and Resiliency Research Center can provide an academic focus on resiliency, job training related to the rebuilding efforts, and a possible broadening of educational opportunities in Paradise.

Timeline

0 to 5 years

1976

UPDATED

RP44

VOLUNTEERS

Recovery Priority

Tier 3
The Volunteers Recovery Project is a Tier 3 priority. Accepting and organizing the influx of volunteers to the Town of Paradise provides opportunities for residents to connect with additional resources they need for recovery, supports significant improvements to the damage from the Camp Fire, and boosts a sense of morale and community spirit in the wake of the disaster.

Project Description
Volunteer services are in abundance in the town, both as agencies within the community are trying to support the rebuilding of their town and as external groups are looking to lend a helping hand.

While there is still a steady influx of volunteer services to the Town of Paradise, there is no single organization or entity responsible for managing volunteers and directing them towards areas of most need. Individual organizations receiving volunteer support and services are currently managing their own efforts, and intend on continuing to do so.

Beyond this individualized response, The Camp Fire Collaborative exists to help provide disaster case management services to Camp Fire victims. Formerly the Camp Fire Long-Term Recovery Group (CFLTRG), the Camp Fire Collaborative transitioned to a collaborative model in the Spring of 2020. Made up of almost 100 non-profit, private, and public organizations, the Camp Fire Collaborative seeks to address the unmet needs of Camp Fire survivors by organizing volunteer assistance, in-kind donations, and accessing all available funding for survivors.

Lead
- Independent organizations
- Camp Fire Collaborative

Additional Action Steps
No additional action steps are needed at this time, as individual organizations will continue to hold ownership over their volunteer needs.

Cost Estimate (Spent and Projected)
Varies based on volunteer project and those engaged.

Potential Resources
No additional resources are needed at this time on a coordinate effort. Any potential resources will be acquired by individual organizations on a project-by-project basis.

Return on Investment
By allowing organizations in need of volunteer support and services to manage their own individual demands, the burden of responsibility is removed from a single, management organization and handled as needed by those seeking support and assistance. This allows individual organizations to curate their volunteer support, and the specific skill demands needed to complete projects.

Timeline (2022 and forward)
As the Town of Paradise continues to recover, there will be a fluctuating need for volunteers, with more specific timelines offered on a project-by-project basis.

1977

UPDATED

RP 45

LIVE/WORK SPACE FOR ENTREPRENEURS

Recovery Priority

Tier 3

This remains a Tier 3 priority project. Paradise had a small maker community before the fire. This recovery project contemplates leveraging vacant commercial buildings and sites to build on what was and encourage reinvestment. It is a tertiary priority that falls under Tier 3 initiatives.

Project Description

This recovery project is on hold pending the installation of a sewer system. Existing commercial space is at a premium until new commercial space is built.

The internet economy could allow the Ridge to be competitive in live/work space. Room now exists to house business start-ups requiring affordable work space with or without adjacent living quarters. Tax breaks and other incentives should be identified to seed this initiative.

Lead

Investors

Partners

- Town of Paradise
- Chico State Center for Entrepreneurship

Action Steps

- Identify potential sites
- Promote the opportunity
- Encourage private investment

Cost Estimate

Design and construction	To be determined

Potential Resources

- Private investors

Return on Investment

Opportunity for economic development through adaptive reuse.

Timeline

0 to 5 years

1978

UPDATED

RP46

ELEMENTARY AND SECONDARY EDUCATION

Recovery Priority

Tier 1
Rebuilding elementary and secondary schools in Paradise was a Tier 1 priority for the 2019 LTRP, and remains a Tier 1 priority. Safe, high-quality schools are a necessary prerequisite for families moving back and new families moving in.

Project Description
Paradise's public, charter, and private schools are instrumental in providing current and future families with high-quality, state-of-the-art programming and education on the Ridge. Since the 2019 Long-Term Recovery Plan, both Paradise Unified School District (PUSD) and Achieve Charter School have made significant investments in not only repairing and reopening schools, but also ensuring that those schools incorporate 21st-century best practices, learning models, and classroom environments.

Update from Paradise Unified School District
- Completed Paradise Ridge Elementary, which combines Paradise Elementary and Ponderosa Elementary, with a building that is twice the size of the old facility
- In front of Paradise Ridge Elementary, there have been substantial infrastructure improvements as a part of a program to provide safe routes to school, including a widened road with a safer turn lane and a large sidewalk in front of the school
- Paradise High School has reopened in its original facility, with a new gymnasium, softball field, tennis courts, and accessibility ramping
- A new Paradise High School facility is currently under construction
- Ridgeview High School is currently under construction, across the street from Paradise High School, and is slated for completion at the end of April 2023
- Cedarwood Elementary in Magalia has moved from temporary structures to permanent classrooms
- The 10-year goal for PUSD is to have all schools on the Ridge modernized and upgraded to their new standard of facility

Update from Achieve Charter School
Achieve Charter School reopened in Paradise in 2022 at the St. Thomas Moore site as a K-5 school

Lead
- Paradise Unified School District
- Achieve Charter School

Additional Action Steps

Paradise Unified School District
- Promote walkability around schools with necessary infrastructure improvements, including expanded and additional sidewalks
- Continue to secure funding to complete their anticipated projects list (reference cost estimate and projected investments table)
- Establish an approach to education that provides high-quality facilities and services to the residents of the Ridge, with advancements the community wouldn't have seen in 20-30 years prior to the Camp Fire

Achieve Charter School
- Evaluate a need for 5-8th grade charter school services, and provide as needed
- Perform strategic planning initiatives with local stakeholders, residents, the town, etc to figure out where the population is moving and what the demand on education will be
- Continue to implement trauma-informed care and practices id daily educational programming
- Plan to reopen Achieve Charter High School once there is a need in the community, anticipate in the next 3-5 years

Continued on next page

1979

UPDATED

RP 47

ELEMENTARY AND SECONDARY EDUCATION, CONTINUED

Cost Estimate (Spent and Projected)

Paradise Unified School District

- Spent
  - Overall, approximately $90–$100 million in investment in PUSD schools
  - Paradise High School — $23 million
  - Paradise Ridge Elementary — $23 million
- Projected Investments
  - $41 million remaining in $61 million bond package, with the next $10 million projected for use in the next few years

Achieve Charter School

- $4 million was spent on infrastructure and an additional $1 million on portable classrooms for Achieve Charter satellite campus in Chico, before returning to Paradise
- $300k to develop STEM lab in Chico and $600k in start-up costs to Paradise through the Silicon Schools Fund
- Thousands, not fully quantified, in philanthropic support

	Project Description	Estimated Total Cost	Estimated State Funds
1	Reserve for Potential Future Lot Purchases near Paradise High	500,000	
2a	Paradise High Science Rooms Remodel & Library Remodel	6,940,621	
2b	PHS — Remove old wings and replace with grass & outdoor benches	2,421,595	
3	Paradise Junior High Modernize Classrooms/STEAM Lab	9,565,309	1,449,115
4	Pine Ridge Modernize Classrooms ADA+ Alt.1 to Replace Bleachers	5,372,556	1,928,519
5	Pine Ridge Admin Building	3,266,778	
6	PHS Student Parking lot — Replace and Expand Lot on Maxwell	4,482,643	
7	Cedarwood 10 Classroom Wing/Admin & Demo Portables	13,864,308	1,687,480
8	Pine Ridge — Remove Lower Portables by Library	297,225	
9	PHS — New parking for stadium (3 lots off Elliott}	4,704,315	
10	Paradise High Stadium — Turf Field/Lights/Bleaches/ADA...	11,'600,403	
11	Paradise High Gold Gym Locker Room Remodel and Stage Remodel	6,071,351	
12	Paradise High Kitchen Remodel (Inc. Exterior and HVAC)	4,582,887	
13	Maintenance/Transportation/Nutrition Building	9,470,703	
14	Paradise High Building 400 & 500 (Rm 502) Modernization	2,043,492	
15	Paradise High Wrestling Rm (Bldg 500,. Rm 508)	1,402,805	
16	Paradise High Baseball Field Lighting & Access	1,835,033	
17	Paradise High CTI: Facility (Schematics Completed)	13,895,436	
18	Paradise High Performing Arts Center and 100 Wing Demo	12,377,661	
		114,695,121	5,065,114

Paradise Unified School District Facilities Project Priorities List
Project Would Be Approved To Start Construction As Funding Becomes Available
Board Approved On 01/18/22

Potential Resources

Paradise Unified School District

- State of California
- Bond package

Achieve Charter School

- Paradise Recreation and Parks District
- Chico State University
- Paradise Rebuild Foundation
- Butte County Office of Education
- North Valley Community Foundation

Return on Investment

As stated in the 2019 LTRP, rebuilding a strong elementary and secondary school system and network of private and charter options is a prerequisite for the rebuilding of Paradise. Many families choose their communities based on the education options. In order for Paradise to rebuild and encourage families to move back, schools are essential.

Investing in high-quality education options for children leads to better health, educational attainment, jobs/careers, and future buying power.

The work of Paradise Unified School District and Achieve Charter School is already well on its way to ensuring that Paradise is envied for its high-quality, state-of-the-art education amenities. Continued investments will only continue to elevate the educational opportunities for current residents and attract new residents to the Ridge.

Timeline (2022 and forward)

10+ Years

1980

HEALTHCARE SERVICES

Update

Healthcare Services has been superseded by the new All Scales of Healthcare recovery project

SUPERSEDED

RP 48

HEALTHCARE SERVICES

RP 35

Recovery Priority

Tier 2

Access to healthcare is an important issue to the community and rebuilding the healthcare system to meet the needs of the community is a Tier 2 priority project.

Project Description

Health services should be matched to the needs of the community as Paradise grows back.

Primary care and specialist services would be replaced in Paradise so that people have regular access to their doctors and do not have to leave the community to get care. Emergency services should also be replaced. Health and wellness should be incorporated into the design of the community.

Lead

- Feather River Health Care
- Oroville Hospital
- Butte County EMS

Partners

- Town of Paradise

Action Steps

- Support SB 156, which would issue a special permit to allow a general acute care hospital to offer emergency stabilization services in the community
- Replace and grow primary care and specialist services in Paradise so that people have regular access to their doctors and do not have to leave the community to get care
- Match the needs of the population with the health services as the community grows back
- Replace access to emergency service facilities
- Develop preventative health care and fitness facilities in partnership with healthcare providers
- Incorporate health and wellness into the design of the community, including walking and biking trails, parks, and active recreation amenities

Cost Estimate

Preventative health/wellness facilities	To be determined
Primary care office	To be determined
Medical specialists' offices	To be determined
Emergency care facility	To be determined

Potential Resources

- State of California
- Private healthcare systems

Return on Investment

Preventative, primary, specialist, and emergency healthcare are foundational amenities for a complete community. Investing in whole-person and preventative health has measurable benefits and reduces future public healthcare costs. Furthermore, the availability of healthcare is a threshold for returning to the community and therefore becomes a critical component of attracting returning and new residents.

Timeline

0 to 5 years

1981

ADDED

RP49

ALL SCALES OF HEALTHCARE

Recovery Priority

Tier 1

Access to healthcare was an important issue to the community immediately following the Camp Fire, and continues to be a critical issue for the Ridge. Rebuilding the healthcare system to meet the needs of the community has been elevated to a Tier 1 priority project.

Project Description

The objective of this effort is to restore all scales of healthcare to the Town of Paradise. Although deemed infeasible at this time, healthcare providers have shifted the conversation to forming a robust clinic system, with strong primary care services, and fortifying this with in-person or telehealth specialized medicine.

While the discussion of providing services and making healthcare accessible on the Ridge continues, it is critical that healthcare providers engage in a dialogue with residents of Paradise and the other Ridge communities over their major concerns and work to address those concerns through restoring critical services.

One major concern is the Adventist Health Feather River Hospital facility that was severely damaged during the Camp Fire, which left a significant gap in healthcare services and the perceived feeling of securing in Paradise and on the Ridge. Services including hospitalization and emergency care, urgent and immediate care, and primary care are still missing, despite a few efforts to increase providers in the community, including the immediate and rapid care clinic that opened in 2019.

Lead

- Adventist Health
- Butte County EMS
- Additional healthcare providers

Action Steps

- Put together a task force with Adventist Health Staff and Community Leaders to have a structured entity supporting the development and provision of healthcare services on the Ridge
- Develop a fortified and robust clinic system which creates the opportunity for community medicine
- Hold a public forum in Paradise to hear from residents about major concerns regarding a perceived lack of local healthcare services
- Acknowledge resident frustration with opaque systems, and discuss concerns related to emergency care and hospital services being accessible on the Ridge
- Continue to identify missing critical services and establish a trajectory for fulfilling the gap
- Establish resources for transportation to critical services

Cost Estimate

Projected costs for increasing healthcare services and amenities on the Ridge are to be determined, until healthcare providers can be identified and expanded services discussed.

Potential Resources

- Private and alternative healthcare providers
- State of California
- Town of Paradise

Return on Investment

Preventative, primary, specialist, and emergency healthcare are foundational amenities for a complete community. Investing in whole-person and preventative health has measurable benefits and reduces future public healthcare costs. Furthermore, the availability of healthcare is a threshold for returning to the community and therefore becomes a critical component for attracting returning and new residents.

Timeline

Continued conversations with residents, local community leaders, the Town of Paradise, and healthcare providers will determine the timeline for continuing to infuse the Ridge with additional healthcare services.

1982

UPDATED

RP50

OUTDOOR DESTINATION

Recovery Priority

Tier 2

The parks fared well during the Camp Fire, sustaining relatively minor damage. However, following the Camp Fire and during the COVID-19 Pandemic, the parks and public open spaces in Paradise and on the Ridge have served as a critical element of community infrastructure. Therefore, these outdoor destinations have been elevated from a Tier 2 priority status in the 2019 LTRP to a Tier 1.

Project Description

As rebuilding has continued, the Paradise Recreation and Parks District (PRPD) has pursued a rapid schedule for rebuilding community park spaces, growing their existing networks, and finding innovative ways to be involved in conversations around resilience and disaster preparedness.

PRPD has addressed several action steps from the 2019 Long-Term Recovery Plan, including:

- Proposing a fuels and landscape management task force and strike team for fuel reduction, invasive species reduction, and beautification (currently unfunded)
- Investing in enhancements to current PRPD parks and trails, including Bille Park, Oak Creek Park, Moore Road Park, and an extension of the Yellowstone Kelly Trail
- Assisting the Paradise Senior Center, now Paradise Community Center, on their continued rebuilding work

While the Parks Master Management Plan (PMMP) is currently stalled, there are aspirations to see each park on the Ridge with an interim management plan that identifies uses, manages vegetation, and strategically allocates funding and staff resources. The completion of this interim management plan has a much shorter anticipated timeline for completion, while the PMMP awaits further development.

In addition, PRPD has focused on a series of new initiatives that have supported the town's continued recovery, rebuilding, and resilience work, including:

- Addressing future park design and improvements to incorporate refuge areas and fire-preparedness amenities
- Proposing a natural fire break around the Town of Paradise perimeter

Lead

Paradise Recreation and Parks District (PRPD)

Additional Action Steps

- Pursue funding to add staffing and management capacity
- Explore opportunities for state investment in local parks, so as to foster increased support and awareness
- Propose, construct, and maintain demonstration projects that explore wildfire risk reduction concepts
- Develop resiliency programs, in partnership with Chico State, to work with youth on nature and forestry awareness, guided nature therapy walks, and natural methods for stress relief
- Grow existing parks on the edges of the town to make space and necessary connections for the fire break project

Cost Estimate (Spent and Projected)

- Spent
  - $8 million for workforce development and improvements to Oak Creek Park
  - $1 million for Bille Park hazard tree removal
- Received
  - $5.2 million for full-service new park - Lakebridge Park (Magalia)
  - $600k for Magalia Paradise Lake Loop Trail
  - $1.4 million for bike flow course, adventure play, ropes course, etc. at Bille Park
  - $170k for improvements to Oake Creek Park (wildland trailhead)
  - $6 million for Noble Park (pursued but not received)
  - $20k for Yellowstone Kelly Trail improvement study
- Anticipated
  - $1.4 million (decision by 12/2022) for a new park in Butte Creek Canyon (will need a total of $2.5 million)

Potential Resources

- FEMA
- Town of Paradise
- State of California
- Independent partnerships and grant opportunities

Return on Investment

Because of their importance as evacuation routes and areas of refuge during disasters, the Paradise Recreation and Parks District network of parks, trails, and open spaces are vital assets to safety and quality of life in Paradise. Investment in this network will result in an increased sense of security, while also providing a critical amenity for current and future Ridge residents.

Timeline (2022 and forward)

Timeline is determined on a project-by-project basis.

1983

UPDATED

RP51

EARLY CHILDHOOD EDUCATION

Recovery Project Priority

Tier 2

The Early Childhood Education recovery project focuses on replacing the childhood education slots lost in the Camp Fire. The project has a Tier 2 priority related to helping support families and educational achievement in young children.

Project Description

Intended to replace the educational foundation for young children and family support that vanished in the Camp Fire, the restoration of early childhood education on the Ridge has faced some major roadblocks to completion since the 2019 report. As initially projected, over 1,000 slots of licensed capacity for early learning (or childhood education) and child care were lost in Paradise. Numbers for services, as developed post-Camp Fire, are as follows:

	2018 Pre Camp Fire	2018/2019 Post Camp Fire	2022 Child Care
Licensed Childcare Centers	6	3; 1 center in Paradise was able to reopen	3
Family Child Care Homes	32	6 standing after the fire, 3 stayed open	5; 2 of the 3 in Paradise still open
Family, Friend, and Neighbor Providers	62	Unknown	15
License Exempt Centers (i.e. Boys and Girls Club)	4	2	3

In 2018, a Child Care Task Force was established to address the urgent need for child care in the communities impacted by the Camp Fire. This group includes representatives from the Local Child Care Planning Council, Valley Oak Children's Services, Butte County Office of Education, Community Care Licensing, local school districts, parks departments, local colleges, and others. Outcomes from this group include conducting and analyzing the Local Child Care Planning Council County-Wide Needs Assessment, identifying the indirect impacts of the fire, and proposing services that can mitigate those effects.

Lead

- Butte County Office of Education
- Valley Oak Children's Services
- Office of Resource and Referral

Additional Action Steps

- Provide enhanced referral support by identifying families that would help fulfill specific needs for families and centers
- Create resource awareness for all scales of child care providers and services
- Identify disaster preparedness measures and develop protocols for trauma-informed care for students and staff
- Develop a formal system for tracking unlicensed childcare providers and sharing resources to become licensed
- Secure funding to reinstate and rebuild pre-Camp Fire facilities
- Create incentives and unlock partnerships to secure adequate staffing

Cost Estimate (Spent and Projected)

Cost to restore early childhood education services is on a project-by-project basis as new facilities open or previous facilities are reopened.

Potential Resources

- COVID and AARPA funding
- CA Development Infrastructure Grant — $150 million available for major construction
- North Valley Community Foundation
- First 5 Butte — $1 million committed for planning and creation of Family Resource Centers in disinvested communities
- Office of Resource and Referral
- Town of Paradise and Butte County

Return on Investment

As stated in the 2019 LTRIP, this return-on-investment for quality early childhood (0–5) education has been well documented. National studies show a 4x to 12x return per dollar invested in early childhood education.

In the long term, providing high-quality childhood education options for families leads to better health, educational attainment, jobs/careers, and future buying power.

In the short term, the availability of childhood education and childcare slots influences the ability of parents of young children to work, earn family income and raise incomes in the community. Quality early childhood education options are also a critical amenity that young families will evaluate before moving to Paradise, making investing in early childhood education a tool in attracting and marketing Paradise to future residents.

Timeline (2022 and forward)

10+ Years

1984

UPDATED

RP52

PUBLIC TRANSPORTATION

Recovery Priority

Tier 3
The public transit system on the Ridge did not sustain physical damage in the fire and has returned to limited service based on the current population and demand. Priority for upgraded and additional public transportation will depend on rates-of-return to the Ridge and, therefore, will remain a Tier 3 priority.

Project Description
Although the public transportation system did not suffer physical damage from the Camp Fire, population displacement and uneven, disparate returns to the town have reduced routes and demand for transit service. While the 2019 LTRP indicated a need for transit service to return to pre-fire levels, a desire for expanded routes to better serve the community, and a proposal for bus shelters at major stops, these transit service improvements are not feasible for implementation at this time.

In order to establish realistic priorities, the Butte County Association of Governments (BCAG) conducted a Post Camp Fire Study in 2021 and will perform a ridership study in 2023. These studies look at the population in the county over the short-term and long-term to project potential points of demand increase and where additional services will be needed to respond to this demand. The results will inform the 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and other projects.

Butte Regional Transit (BRT) is open to providing additional services if met by demand, or explore alternative transit options to increase access on the Ridge. Programs BRT is exploring including:

- The Paradise Transit Center
- Paradise Dial-A-Ride (a non-fixed, door-to-door service between Paradise and downtown Chico)
- Non-Emergency Medical Transportation (Projected for study in early 2023, a new service to the Ridge a few days a week to improve access to doctors' visits, local pharmacies, etc.)

Lead
Butte Regional Transit

Partner
Town of Paradise

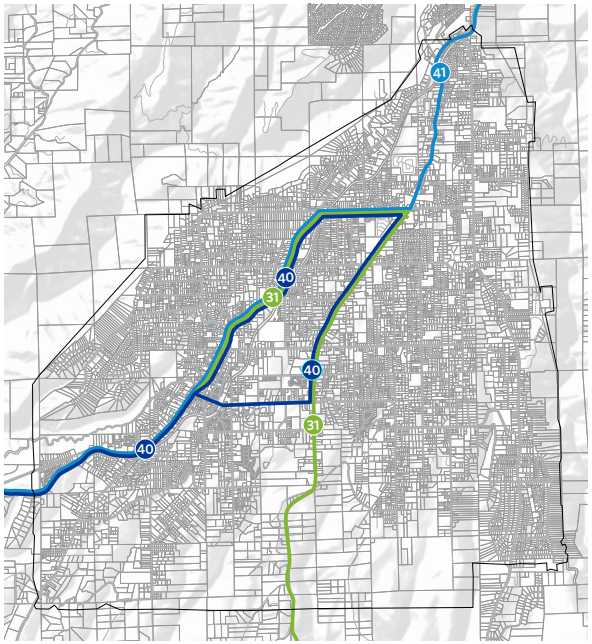
Additional Action Steps
- Continue to evaluate population return on the Ridge and match the public transit service options to this demand
- Further research and gauge interest in additional, proposed projects that may better serve the community

Cost Estimate (Spent and Projected)
Cost estimate on a project-by-project basis

Potential Resources
- Butte County Association of Governments (BCAG)
- Federal Transit Administration (FTA)
- State resources
- Town of Paradise

Return on Investment
As Paradise's population increases and transit service becomes more frequent, public transportation will serve residents who might not otherwise have mobility access to the services and amenities they need.

Timeline (2022 and forward)
Timeline to be determined once demand increases.



1985

UPDATED

RP53

ARTS AND CULTURE ON THE RIDGE (Gold Nugget Museum And Norton Buffalo Hall)

Recovery Priority

Tier 3

The Gold Nugget Museum, Norton Buffalo Hall, and the expanded arts and culture hub adjacent to the future Downtown Paradise are a Tier 3 priority because they will provide a thriving arts and culture destination for Paradise as it continues to rebuild and recover, restoring hope and reminding residents and visitors alike of Paradise's uniqueness and strong community spirit.

Project Description

During the 2019 Long-Term Recovery Planning Process, the Gold Nugget Museum and Paradise Community Guilds – both corners of arts and culture in Paradise – were exploring a partnership to build a new Norton Buffalo Hall within a walkable downtown Paradise. This idea expanded in January 2019 to imagine a co-located Gold Nugget Museum and Norton Buffalo Hall. The goal of this partnership was to address the need for collective action in the face of losing audience and membership. Since then, efforts have expanded to envision a new arts and culture campus curated by the PATCH Collaborative, including space for Gold Nugget Museum, Paradise Arts Center, Theater on the Ridge, Norton Buffalo Hall, and outdoor amphitheater, Nuggetville, and the Gem and Mineral Society.

Gold Nugget Museum Update

The new home of the Gold Nugget Museum is located at 475-479 Pearson Road, across the street from the original building. The conversion of a former transmission shop, the new Gold Nugget Museum, is pretty much complete with design and is continuing to be built out. However, in the meantime, the museum is open to the public and has already seen over 3,000 visitors. The first exhibit at the museum to open featured the PG&E equipment that failed on the morning of November 8, 2018, leading to the Camp Fire, the genesis of a wide range of feelings and emotions from all visitors. The Gold Nugget Museum continues to be the keeper of culture and commemoration in the town. Its full build-out will provide residents and visitors the opportunity to learn of the Paradise of the past and the Paradise to come.

The PATCH Collaborative Update

The Paradise Arts, Theater, and Culture Hub, otherwise known as the PATCH Collaborative, is a collective of arts and culture organizations dedicated to establishing a thriving arts and culture campus in close proximity to the future downtown Paradise. The PATCH Collaborative includes the following organizations: Gold Nugget Museum, Norton Buffalo Hall, Theater on the Ridge, Paradise Arts Center, Paradise Recreation and Parks District, and Mechoopda Tribal Council. Exploration and development are underway to identify property adjacent to currently owned land that would total 8-9 acres for the campus.

Lead

- Gold Nugget Museum
- PATCH Collaborative Board

Partners

- Paradise Recreation and Parks District
- Regenerating Paradise

Melton Design Group

1986

UPDATED

RP54

ARTS AND CULTURE ON THE RIDGE, CONT. (Gold Nugget Museum And Norton Buffalo Hall)

Melton Design Group

Melton Design Group

Additional Action Steps

Gold Nugget Museum

- Complete construction on the Gold Nugget Museum, and continue retrofitting the future exhibition space to provide increased educational opportunities and exhibits to the public

The PATCH Collaborative

- Continue conversations with Paradise Recreation and Parks District about the land where the previous Gold Nugget Museum was located for its use as a potential home for Paradise Arts Center, Theater on the Ridge, outdoor amphitheater, and Norton Buffalo Hall
- Complete due diligence on all adjacent property and potential sites for acquisition
- Acquire property
- Generate a development plan for the future arts and culture campus that all partners agree on
- Promote and execute a $25 million capitol campaign

Cost Estimate (Spent and Projected)

Gold Nugget Museum

- $214k grant from the North Valley Community Foundation
- A grant from Paradise Rotary Club for Gold Nugget Museum office space

The PATCH Collaborative

- $50k grant for administrator/assistant position
- $25 million capital fundraising campaign
- Seek additional funding opportunities for potential property acquisition and supplemental build-out support

Potential Resources

- USDA Rural Communities grants
- North Valley Community Foundation
- Paradise Rotary Club

Return on Investment

The Gold Nugget Museum and Norton Buffalo Hall promote a thriving civic spirit, encouraging Paradise's future as an arts and culture destination. With the expanded vision from the PATCH Collaborative, access to arts and culture amenities will be expanded and both residents and visitors to the Town of Paradise will be able to experience the magnitude of this community's joy and resilience.

Timeline (2022 and forward)

5 to 10 years

1987

ADDED

RP55

BLUE ZONES

Recovery Priority

Tier 3

Blue Zones is a policy and design framework that could help represent and promote Paradise's overall health as the town continues to recover and rebuild. Achieving a formal Blue Zones Community certification is a Tier 3 priority; however, the individual framework elements which support this certification are prioritized in other recovery projects.

Project Description

Paradise should seek to achieve certification as a Blue Zones community in the future, leveraging the work that has already been done and will be done in the collective recovery effort.

Blue Zones began in a quest to find environmental causes and commonalities between communities that statistically have populations with longer lifespans, low rates of disease, healthier lifestyles, etc. This initial research was condensed into a rubric and framework approach that communities can utilize to achieve Blue Zones certification.

The application of this methodology for Paradise is unique. The Blue Zones framework was not designed for disaster recovery, and teams of local organizations are already working in Paradise to impact wellness, support longevity, and promote sustainability through a variety of independent projects and initiatives. As a result, the objective of Blue Zones as a recovery project is to emphasize the Blue Zones model as a leading thought initiative that individual organizations can consider when executing individual projects and efforts.

Lead

Adventist Health's Feather River Health Foundation

Partner

- Local organizations and interested individuals
- Paradise Citizen's Alliance
- Rebuild Paradise Foundation
- Town of Paradise

Action Steps

- Use principles from the Blue Zones framework to help guide healthier rebuilding on a project-by-project basis
- Prioritize walking and biking via road improvements and trails
- Create gathering spaces to nurture community
- Design homes that promote health and resiliency
- Establish collaborative conversations and volunteer opportunities between interested individuals and organizations doing recovery work on the Ridge, so as to understand how the collective community effort could be framed as a Blue Zones community in the future

Potential Resources

- Adventist Health
- Volunteer organizations

Timeline

Achieving a Blue Zones community certification is typically a five-year process; however, the uniqueness of Paradise's recovery effort and future pursuit of certification will determine the timeline.

1988

Parallel Initiatives

1989

Photo Provided by Stephen Klessel of Rebuild Paradise Foundation

PARALLEL INITIATIVES

Rebuilding is a group effort; multiple organizations doing great work creates a stronger support system.

In the years since the Camp Fire, hundreds of residents, organizations, and local businesses have volunteered time, money, and support in the name of Paradise's recovery. The 2019 report was intended to help guide these efforts, make connections between related initiatives, and look farther into the future. The resulting Long-Term Recovery Plan (LTRP) was therefore very comprehensive. However, the sheer magnitude of rebuilding, market unpredictability, and many other external factors spawned many other initiatives that have run parallel to the original recovery projects. Although not necessarily associated with the original 2019 report, these projects have fulfilled many short-term needs.

This chapter contains many, but not all, of the parallel initiatives that are in varying stages of completion. While some have been incorporated into new or updated recovery projects, the following projects are independently successful and likely do not require the support of this document. Rather, this chapter is intended to acknowledge and celebrate the many achievements of Paradise's strong community network.

Some of the organizations that are engaged in parallel initiatives that have aided in Paradise's long-term recovery include:

- Habitat for Humanity
- Wells Fargo
- Theatre on the Ridge
- Valley Contractors Exchange
- Hope Plaza
- Camp Fire Collaborative
- Butte County Local Food Network
- Paradise Performing Arts Center
- Paradise Alliance Church
- Youth on the Ridge Community Foundation
- Paradise Stronger
- Community Housing Improvement Program (CHIP)
- 3CORE
- North Valley Community Foundation
- Construction Training Center

Thanks to Paradise Citizens Alliance for organizing and compiling many of the following updates.

1990

HABITAT FOR HUMANITY

Project Description
With the intent to serve Camp Fire survivors who want to return to Paradise but may not have all the resources necessary to build back on their own, Habitat for Humanity of Butte County has hugely impacted Paradise's affordable housing stock.

Habitat expects to remain focused on rebuilding efforts in Paradise for the next 20 years at the current rate. Partnered with Trilogy Construction, the increased rate of construction has helped bring many residents back. Currently, the organization controls 19 properties in various stages of production:

- Summer 2022
  - Entering production on ten homes
  - Construction to be completed on five homes
- Fall 2022
  - Entering production on two homes
  - Construction to be completed on one home

The typical timeline for each home is less than six months from Habitat's acquisition of the lot to move-in day. Two or three months before construction is completed, a family is matched to the home based on their ability to pay the mortgage and provide a down payment. The family is required to invest 250 sweat equity hours that can be achieved by assisting with construction and/or participating in community events, embedding them into the caring and resourceful Paradise community.

Obstacles
A few obstacles remain that hinder Habitat's ability to achieve its ambitious goals. Primarily, the organization needs more help to find and access government funding sources that help push home-building forward.

The enhanced speed of construction, thanks to the new partnership with Trilogy Construction, is a double-edged sword; instead of the traditional 4 to 5 months of construction, building time has been reduced to 2 to 3 months. While this increase in productivity is commendable, it also decreases the amount of time the organization has to match a family with the home and the window of time that the family has to meet the 250-hour volunteer requirement. Making this matching process more efficient is a priority moving forward.

Immediately after the Camp Fire, volunteers worldwide traveled to Paradise to help relieve pressure and rebuild. Those first responders have since moved on, but because the local workforce is still undersized for the demand, outside volunteer groups could still greatly impact rebuilding for Paradise residents with the greatest needs. However, outside volunteer groups require lots of infrastructure and housing that still does not exist locally.

Timeline
Approximately 20 years

Blue Flamingo

Local construction workers and volunteers assist in homebuilding.

Blue Flamingo

Increasing the amount of affordable housing stock in Paradise is Habitat's primary goal.

1991

WELLS FARGO

Project Description
Intending to educate community members about funding opportunities for rebuilding, the Paradise Wells Fargo team has helped bring down financial barriers to rebuilding. Understanding customers' short-term and long-term goals allow the team to identify appropriate strategies for families' financial needs.

Timeline
Ongoing

1992

THEATRE ON THE RIDGE

Project Description
Now celebrating its 47th year, Theatre on the Ridge offers the best in local talent through the performing arts. Since the Camp Fire, theater has returned to a challenging environment due to the COVID-19 Pandemic and continues to prioritize the safety and health of its staff, volunteers, and visitors. Despite this challenge, more than five shows have run since 2019.

Community volunteers and staff have been highly involved in rebuilding, maintaining, and beautifying the Theatre's facilities since the fire and will continue to enhance the premises indefinitely. The Theatre is committed to providing a vitally important piece of community and arts appreciation in Paradise in perpetuity.

Timeline
Ongoing

Instagram: dirvish

Marquee announces new shows.

Theater on the Ridge

Seating at the Theater on the Ridge

Keller Williams Chico

Artwork on the outside of the theater

1993

VALLEY CONTRACTORS EXCHANGE (VCE)

Project Description

VCE is a group of contractors, developers, and construction professionals that are dedicated to the growth and prosperity of the local construction industry. VCE is a key player in assisting Paradise residents rebuild.

Multiple projects are in progress:

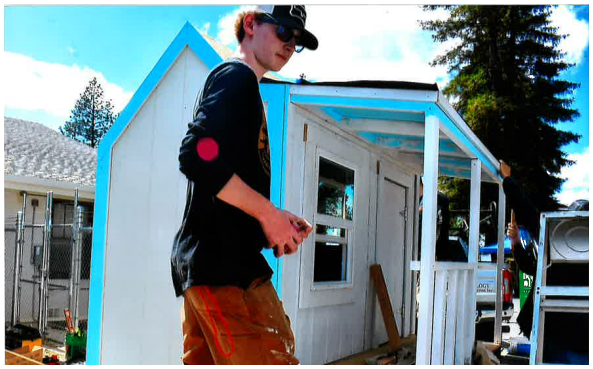
- Hands On Tools Mobile Construction Training
  - Mobile classroom with tool storage
  - Run by volunteer construction industry professionals
  - Focus on training young people in concrete finishing, mechanical (HVAC), electrical, and plumbing
  - Provides industry-recognized 80-hour NCCER CORE curriculum basic construction training
- Chico High Tiny Home Build for Bear Fire Survivor
  - VCE leads a group of Chico High School students in a Design Build Competition in Sacramento hosted by the Construction Industry Education Foundation (CIEF)
  - Provides education on Wildland Urban Interface (WUI) compliancy
- Chocolate Fest
  - VCE members assist local youth from Ridgeview and Paradise High School in a youth playhouse blitz build

Although primarily an support association for industry professionals, VCE is intended to be more than "a place for plans," with a focus on community outreach, education, and business enhancement.

Timeline

Ongoing

Garden box blitz build with Ridgeview Rangers



Playhouse build at Chocolate Fest

1994

HOPE PLAZA

Project Description
Intended as a gift to the Ridge community, Hope Plaza is a memorial of the Camp Fire tragedy as well as a show of gratitude for the lifesaving efforts of first responders.

Hope Plaza will be located at 6148 Skyway Drive, on the corner of Skyway and Foster on a lot known as the "triangle." This location serves as a gateway to the new downtown area.

Funded entirely through private donations and with the assistance of local pro-bono construction professionals, Hope Plaza is still fundraising. More than $233,000 has been raised to date. Construction is set to begin in May 2022.

Obstacles
Funding is ongoing. The original cost estimate of $1.5 million was significantly reduced thanks to the pro-bono work of local contractors, but more sponsorship will help see the project to the finish line.

Timeline
1 to 2 years

Conceptual rendering of Hope Plaza

Conceptual rendering of Hope Plaza

Conceptual rendering of Hope Plaza

CAMP FIRE COLLABORATIVE

Project Description
The Camp Fire Collaborative (CFC) is a collection of over 50 nonprofit, private, and public organizations working to address the unmet needs of Camp Fire survivors outside of federal and state assistance. Since the fire, the CFC coordinated up to 11 Disaster Case Management (DCM) agencies with 100 case managers, contacting 8,000 households and opening more than 5,000 cases. Today, the CFC facilitates 5 DCM agencies with 36 case managers who manage 426 cases. The CFC anticipates the need to assist in another 1,000 cases over the next two years.

The CFC holds a weekly Simple Unmet Needs Roundtable (UMNRT) where DCMs present vetted cases requesting material assistance up to $15,000. To date, through multiple funding partners, the UMNRT has funded 1,400 cases to a total of $3.6 million. Additionally, CFC engages with the volunteer rebuild organizational partners to continue the focus of their efforts for Camp Fire survivors.

The CFC opened their new offices at 6241 Skyway in Paradise on August 5, 2022.

Obstacles
The CFC is relocating its office to the Ridge and is searching for a new location.

Timeline
Ongoing

Camp Fire Collaborative

Camp Fire Collaborative engagement at local Paradise events

1996

BUTTE COUNTY LOCAL FOOD NETWORK

Project Description

Founded on the idea that local food systems are critical in feeding healthy, growing communities, the Butte County Local Food Network has multiple projects in progress.

- Farmers Marketmobile
  - Every Sunday at Magalia Community Center, healthy, fresh food is available for purchase
  - Creates a link between farmers and communities that supports the health and economy of both
  - Offers an "Angel Program" for those still recovering from the financial impact of the Camp Fire
- The Garden BLITZ
  - Community members can purchase or apply to win a package that includes a raised bed box, plants, and other materials needed to install a garden
  - "Garden Raising" event with volunteers to assist in the construction of garden beds in community members' backyards
- Local Food Assessment
  - Thanks to donations, a study was conducted on Butte County's food system to help guide decision-making on further projects.

Timeline

Ongoing

Butte County Local Food Network

Farmers Marketmobile at Magalia Community Center

Butte County Local Food Network

Tiny Free Library stocked with free food

Butte County Local Food Network

Garden Blitz

1997

PARADISE PERFORMING ARTS CENTER

Project Description

Founded to provide a community performance space, the Paradise Performing Arts Center hosts the Northern California Ballet, Paradise Community Chorus, Paradise Community Band, and the Paradise Symphony Orchestra. Thanks to donations from the North Valley Community Foundation, facility upgrades including stage floor repair, painting, carpeting, and lighting have been the latest focus. The schedule of 2022 events is full of community and holiday performances, including Paradise Stronger and KZFR.

Timeline

Ongoing

Paradise Performing Arts Center

Improvements to the stage and lighting improve the experience.

The Orion

Camp Fire memorial event

Paradise Performing Arts Center

Lobby improvements

1998

PARADISE ALLIANCE CHURCH

Project Description

With a focus on community-building events, the Paradise Alliance Church continues to supports Paradise residents throughout the rebuilding process.

Current events and support programs include:

- Thursday Night Community Dinners
- Samaritan's Purse home partnership and assistance program
- FRAP's fuel reduction and tree removal programs
- Personal and financial assistance for Camp Fire survivors
- Propane assistance for residents living in trailers
- New home celebration gifts
- Faith-based outreaches for all age groups.

Timeline

Ongoing

Paradise Alliance Church

Volunteers helping clean wildfire impacted areas

Paradise Alliance Church

Church events are held in the gym facility

1999

YOUTH ON THE RIDGE COMMUNITY FOUNDATION

Project Description

Dedicated to the support of non-profit organizations that provide educational, enrichment, recreational, and leadership opportunities for youth in Paradise, the foundation raises vital funds and awareness through the annual Paradise Chocolate Fest.

Current beneficiaries of the Youth of the Ridge Community Foundation include:

- Achieve Charter School
- Boy Scouts Troop 316
- Children's Community Charter School
- Cub Scouts Troop 316
- Girl Scouts
- Gold Nugget Museum
- Mindful Littles
- Northern California Ballet
- Paradise Friends of the Library
- Paradise High School Football
- Paradise High School Woodshop
- Paradise Host Lions Club
- Paradise Piranhas Swim Team
- Paradise Recreation & Park District
- Paradise Rotary Interaact
- Paradise Stronger
- Paradise Veterans Memorial Hall/American Legion
- Rainbow Girls & Ridgeview Rangers

Timeline

Ongoing

Youth on the Ridge Community Foundation

Paradise Chocolate Fest fundraising event

Youth on the Ridge Community Foundation

Paradise Chocolate Fest fundraising event

2000

PARADISE STRONGER

Project Description
Paradise Stronger is an organization invested in the wellness of the residents on the ridge, offering functional fitness classes for all ages and abilities including seniors, disabled adults, and troubled teens at the Skyway facility.

Paradise Stronger is very active in the community through events including:

- Green Paradise Garden collaboration to complete a community teaching garden to be used for gardening, nutrition, and cooking classes
- Paradise Recreation & Parks District partnership to form the Ridge Hiking Association to lead monthly community hikes in and around Butte County
- Adventist Health collaboration to host monthly "Walk with a Doc" wellness education events
- A Simple Gesture relaunch that provides food for local pantries on the ridge
- Chocolate Chase and Phoenix 5K

Timeline
Ongoing

Paradise Stronger

Wellness education and events

Paradise Stronger

Workout area

2001

COMMUNITY HOUSING IMPROVEMENT PROGRAM (CHIP)

Project Description

Following the rebuilding of Paradise Community Village, CHIP is proud to announce the expansion of a mutual self-help housing program in Paradise. Current Paradise lot-owners who lost their home in the Camp Fire and would like to partner with CHIP to rebuild may be eligible. CHIP is also currently involved with a few additional multi-family projects in the town, along with a mobile home park they have purchased for redevelopment.

Timeline

5 to 10 years

Rebuilt Paradise Community Village

Rebuilt Paradise Community Village

2002

CONSTRUCTION TRAINING CENTER

Project Description
Hands On Tools is a mobile construction training program hosted by the Valley Contractors Exchange with the intent to train the potential workforce in basic construction skills and safety while repairing or building community projects, assisting volunteer build organizations, or for people in need that have been impacted by the Camp Fire. The Hands on Tools Mobile Construction Training (MCT) program has a four-pronged approach to recruiting and upskilling the construction workforce:

- Introduction to construction: providing training and mentorship to youth to empower, engage, and employ them in well playing, upwardly mobile construction jobs
- Mobile Construction Training: providing basic construction safety and skills training, while assisting with community projects or volunteer build organizations
- Mobile UpSkill Training: providing upskilling in trades based on locally identified industry needs
- Construction Industry Safety Training: as required by CalOSHA

To date, the Mobile Construction Training program has introduced construction as a career choice to over 900 students in Butte and Glen Counties. The Valley Contractors Exchange will continue to pursue funding opportunities as the program continues to grow and thrive.

Timeline
Ongoing

Photo provided by Valley Contractors Exchange

Garden Box Blitz with Ridgeview Rangers

Photo provided by Valley Contractors Exchange

Epic cornhole build for Paradise Recreation and Parks District

Photo provided by Valley Contractors Exchange

Garden Box Blitz with Ridgeview Rangers

2003

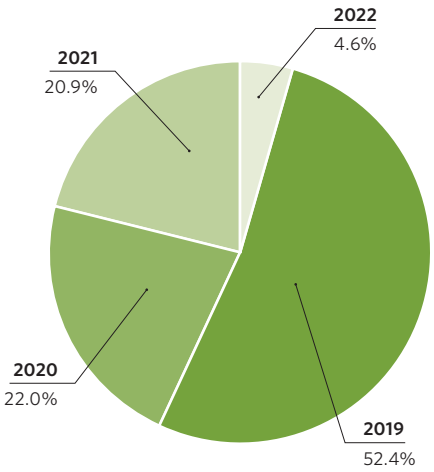
NORTH VALLEY COMMUNITY FOUNDATION

Project Description
The North Valley Community Foundation has served as a key funder of recovery efforts since the 2018 Camp Fire. On the pages to follow, please find grants in support of projects, both in the Town of Paradise and throughout the Ridge above $50,000. Several additional grants, valued individually at $50,000 or less are not represented.

Timeline
Ongoing

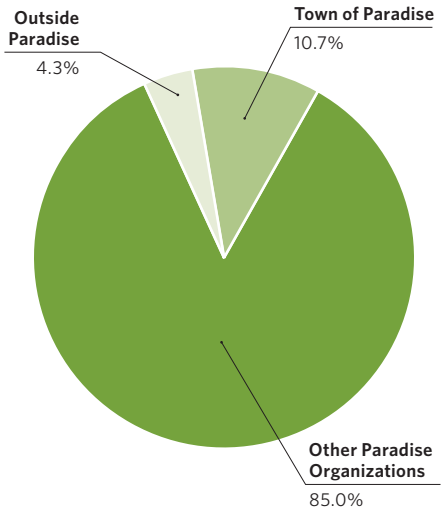
GRANTS AWARDED BY YEAR

YEAR	AWARDED
2019	$16,878,520
2020	$7,077,715
2021	$6,741,074
2022	$1,485,778
TOTAL	**$32,183,087**



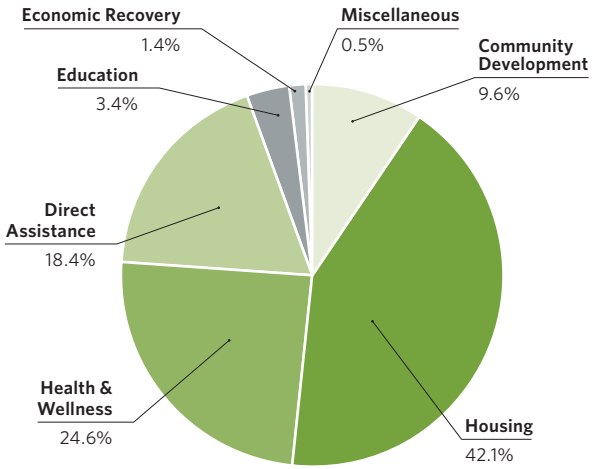
GRANTS AWARDED BY DIVISION

DIVISION	AWARDED
Town of Paradise	$3,417,758
Other Paradise Organizations	$27,367,991
Outside Paradise	$1,397,338



GRANTS AWARDED BY CATEGORY

YEAR	AWARDED
Community Development	$2,894,403
Housing	$12,701,357
Health & Wellness	$7,409,177
Direct Assistance	$5,535,642
Education	$1,019,147
Miscellaneous	$152,961
Economic Recovery	$426,000
TOTAL	**$30,138,687**



2004

GRANTS MADE TO TOWN OF PARADISE

YEAR	GRANTEE	PROJECT	CATEGORY	AWARD
2020	Town of Paradise	Rebuild Incentive Program 2020	Housing	($ 1,000,000)
2019	Town of Paradise	Rebuild Incentive Program	Housing	($ 1,000,000)
2019	Town of Paradise	Paradise Town Planning	Community Development	($ 488,500)
2019	Town of Paradise	Building Resiliency Center	Housing	($ 346,953)
2020	Town of Paradise	Grants Administrator Position	Community Development	($ 226,883)
2019	Town of Paradise	Communications & Public Relations	Community Development	($ 102,215)
2019	Town of Paradise	Camp Fire Anniversary Remembrance Events	Health & Wellness	($ 50,000)
2020	Town of Paradise	Broadband Feasibility Study	Community Development	($ 50,000)
2020	Town of Paradise	Town of Paradise Recovery Comms.	Housing	($ 50,000)
2020	Paradise Police Department	Town of Paradise Radio System Rebuild	Community Development	($ 48,690)
2019	Town of Paradise	Paradise Road Assessment	Community Development	($ 24,500)
2020	Town of Paradise	Pi1ers Wanted: An Econ. Dvlpmt. Video for the ToP	Community Development	($ 15,017)
2019	Town of Paradise — VIPS	Volunteers in Police Service	Community Development	($ 15,000)

GRANTS MADE TO OTHER ORGANIZATIONS BENEFITING PARADISE/MAGALIA RIDGE

YEAR	GRANTEE	PROJECT	CATEGORY	AWARD
2019	Butte County Office of Education	Trauma Response & Recovery	Health & Wellness	($ 1,861,270)
2019	Youth for Change	Direct Assistance/Unmet Needs	Direct Assistance	($ 1,271,000)
2019	Butte County Sheriff's Posse	Butte County First Responders Wellness Program	Health & Wellness	($ 1,000,000)
2019	NVCF - Workforce Housing	Temporary Workforce Housing	Housing	($ 1,000,000)
2019	Youth For Change	Emergency Financial Assistance	Direct Assistance	($ 1,000,000)
2019	Youth for Change/ Butte County	Emergency Financial Assistance	Direct Assistance	($ 1,000,000)
2021	Habitat for Humanity Butte County	6 to 10 Homes Project	Housing	($ 903,511)
2020	Rebuild Paradise	Septic Infrastructure Grant	Housing	($ 875,000)
2019	3 CORE	Business Assistance Fund	Economic Recovery	($ 750,000)
2021	Community Housing Improvement Program (CHIP)	Paradise Ridge Expansion Capacity Building and Construction	Housing	($ 649,500)
2022	Camp Fire Collaborative	Camp Fire Collaborative Community Integration and Operations	Housing	($ 501,948)
2019	Butte County	Rebuild Incentive Program	Housing	($ 500,000)
2019	Butte County Fire Safe Council	Harvestable Timber	Housing	($ 500,000)

YEAR	GRANTEE	PROJECT	CATEGORY	AWARD
2021	Chico Housing Action Team	Camp Fire Housing Access Model Program	Housing	($ 500,000)
2021	Habitat for Humanity Butte County	Paradise Project Lots for Homes	Housing	($ 500,000)
2019	Camp Fire Collaborative	Community Resource Specialists	Direct Assistance	($ 450,000)
2022	PUSD	Secure Current Fire Crisis Counseling Positions for the 2022-23 and 2023-24 School Years	Health & Wellness	($ 425,000)
2019	3 CORE	Business Assistance Loan Fund	Economic Recovery	($ 400,000)
2021	Jesus Center	Renewal Center Shelter Program	Health & Wellness	($ 382,500)
2021	Jesus Center	Renewal Center Shelter Program	Housing	($ 382,500)
2020	Butte County Office of Education	Trauma Response and Recovery	Education	($ 358,142)
2021	Valley Contractors Exchange	Mobile Training Force grant for X	Economic Recovery	($ 326,000)
2020	City of Chico	Grants/Projects Program Manager	Community Development	($ 318,610)
2019	Butte County Mosquito & Vector Control District	Emergency Abatement Project	Health & Wellness	($ 310,434)
2021	Butte County Office of Education	Butte County Office of Education Camp Fire Trauma Response and Recovery (TRR)	Health & Wellness	($ 295,014)
2019	Help Central, Inc	Butte 211	Direct Assistance	($ 288,419)
2020	Butte County	County Program Development Manager Position	Community Development	($ 282,800)
2019	Community Housing Improvement Program (CHIP)	Housing Development Programs	Housing	($ 280,000)
2019	Butte College Foundation	Skilled Workforce	Education	($ 268,400)
2019	Butte County Dept of Develop. Services	Upper Ridge Community Plan	Community Development	($ 250,000)
2020	Habitat for Humanity Butte County	Sustaining Growth	Housing	($ 250,000)
2020	Honey Run Covered Bridge Association	Honey Run Covered Bridge Rebuild, Phase 1	Community Development	($ 250,000)
2021	Hope Crisis Response Network, Inc	VROC — Rebuilding Homes, Restoring Lives	Housing	($ 250,000)
2020	Paradise Alliance Church (VROC)	Rebuild Butte County Volunteer Housing	Housing	($ 250,000)
2021	Rebuild Paradise Foundation	The Missing Middle Building Assistance Grant	Housing	($ 250,000)

2006

YEAR	GRANTEE	PROJECT	CATEGORY	AWARD
2019	Butte County Office of Education	Child Trauma Reduction	Health & Wellness	($ 232,000)
2020	Oroville Hope Center	Disaster Relief Division	Direct Assistance	($ 218,493)
2020	Gold Nugget Days Inc.	Rebuild Former Site	Community Development	($ 214,000)
2019	United Policyholders	Roadmap to Recovery	Housing	($ 203,767)
2019	California Vocations, Inc.	Stable, Affordable Housing for Adults with Developmental Disabilities	Housing	($ 199,200)
2019	California Vocations, Inc.	Housing for Adults with Disabilities	Housing	($ 159,250)
2019	United Way of Northern California	SHOP	Housing	($ 156,731)
2019	Butte County	Housing Manager Housing	($ 155,000)	
2021	Butte-Glenn Community College District	Short-Term Construction Workforce Training Program	Education	($ 151,531)
2021	Inspire Hope	Feather River Health Foundation	Health & Wellness	($ 150,000)
2020	Paradise Adventist Church	Camp Fire Shed Project 2020	Housing	($ 150,000)
2020	Paradise Recreation and Park District	Plng. and Dvlpmt. Funding to Build a Safer, Healthier Rdg.	Community Development	($ 150,000)
2020	Rebuild Paradise Foundation	Hope Plaza	Community Development	($ 150,000)
2021	New Beginnings Housing Foundation	Safe Affordable Housing for Adults with Developmental Disabilities	Housing	($ 131,000)
2019	Magalia Community Church	Labor for Six months	Direct Assistance	($ 102,101)
2019	3 CORE	Economic Impact Analysis	Economic Recovery	($ 100,000)
2020	GRID Alternatives	Camp Fire Energy Equity Project	Housing	($ 100,000)
2022	Rebuild Paradise Foundation:	Hope Plaza 2022	Community Development	($ 100,000)
2019	NVCF - Transportation Fund	Transportation- Bus Passses	Direct Assistance	($ 87,062)
2021	Butte County Local Food Network	Farmers Marketmobile	Health & Wellness	($ 60,000)

2008

Photo Provided by Stephen Klessel of Rebuild Paradise Foundation

Appendix

ONLINE SURVEY

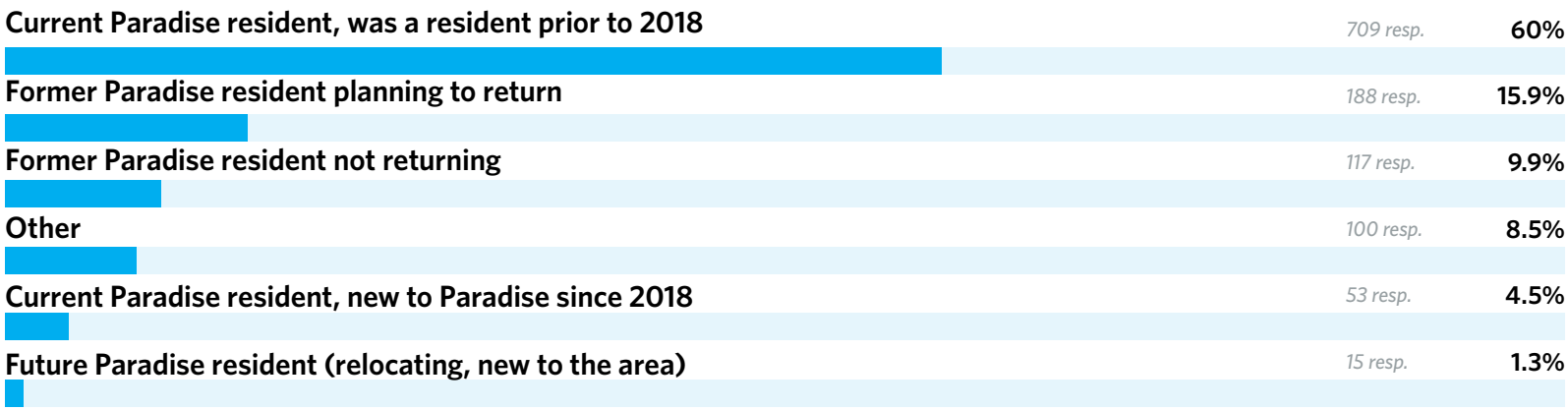
Resident feedback regarding on-going projects and changing needs in the community.

To gather feedback on the current state of progress and the general reception of the recovery projects first outlined in 2019, Paradise residents were asked to complete an online survey. The questions on this survey covered a wide range of topics, including all five categories of recovery projects (Safer, Welcoming, Stronger, Better, and Greener), as well as some administrative and engagement questions to gauge the effectiveness of community outreach methods.

The residents' answers to these questions guided the development of the new and in-progress recovery projects. The following pages reference all the responses to these questions received via the online survey.

1. Hello. Please tell us about yourself:

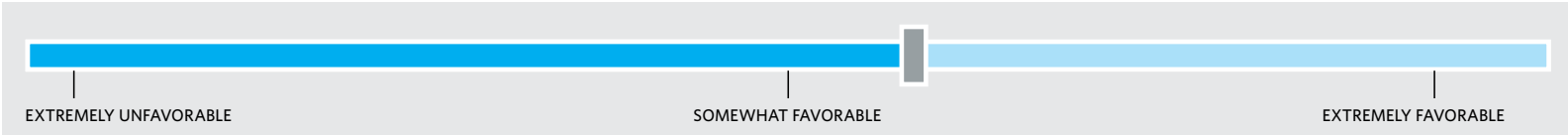
1182 *out of 1182 answered*



2. What's your view on how rebuilding is going?

1157 *out of 1182 answered*

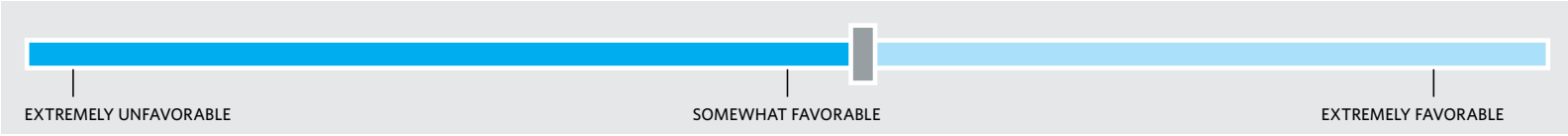
5.8 Average Rating



3. Is the pace of rebuilding adequate?

1145 *out of 1182 answered*

5.5 Average Rating



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URBAN DESIGN ASSOCIATES

2012

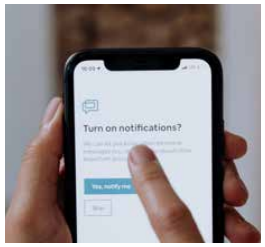
4. What are your top priorities?

1151 *out of 1182 answered*

BETTER WELCOMING SAFER

Road repairs

878 resp. **76.3%**



Emergency notification system

566 resp. **49.2%**

Sewer system

374 resp. **32.5%**

Additional healthcare services

658 resp. **57.2%**

Affordability of housing

415 resp **36.1%**

Availability of housing

245 resp. **21.3%**

Reducing wildfire risk

613 resp. **53.3%**

Building single-family homes

389 resp. **33.8%**

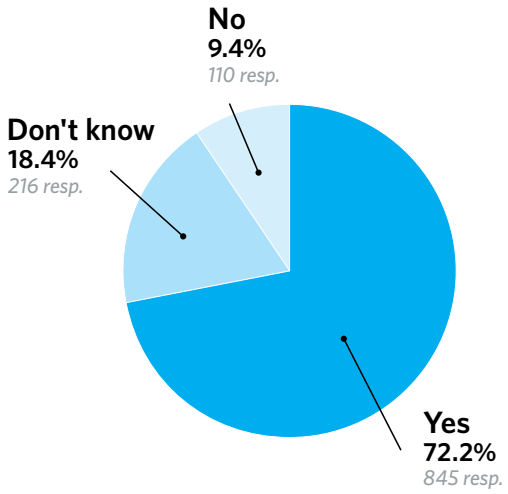
Other

21 resp. **1.8%**

5. The Town holds quarterly update meetings on the recovery process that are in person and broadcast on the internet.

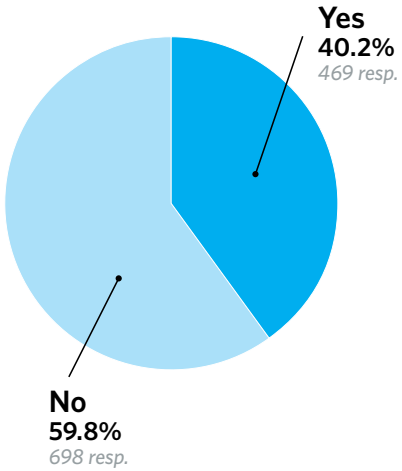
a. Do you see these updates as valuable?

1171 *out of 1182 answered*



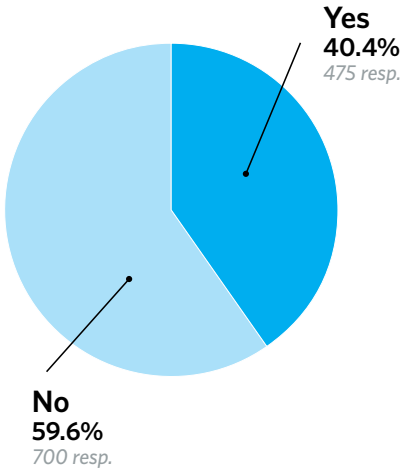
b. Have you participated in these quarterly updates?

1167 *out of 1182 answered*



c. Would you prefer additional methods of communication?

1175 *out of 1182 answered*



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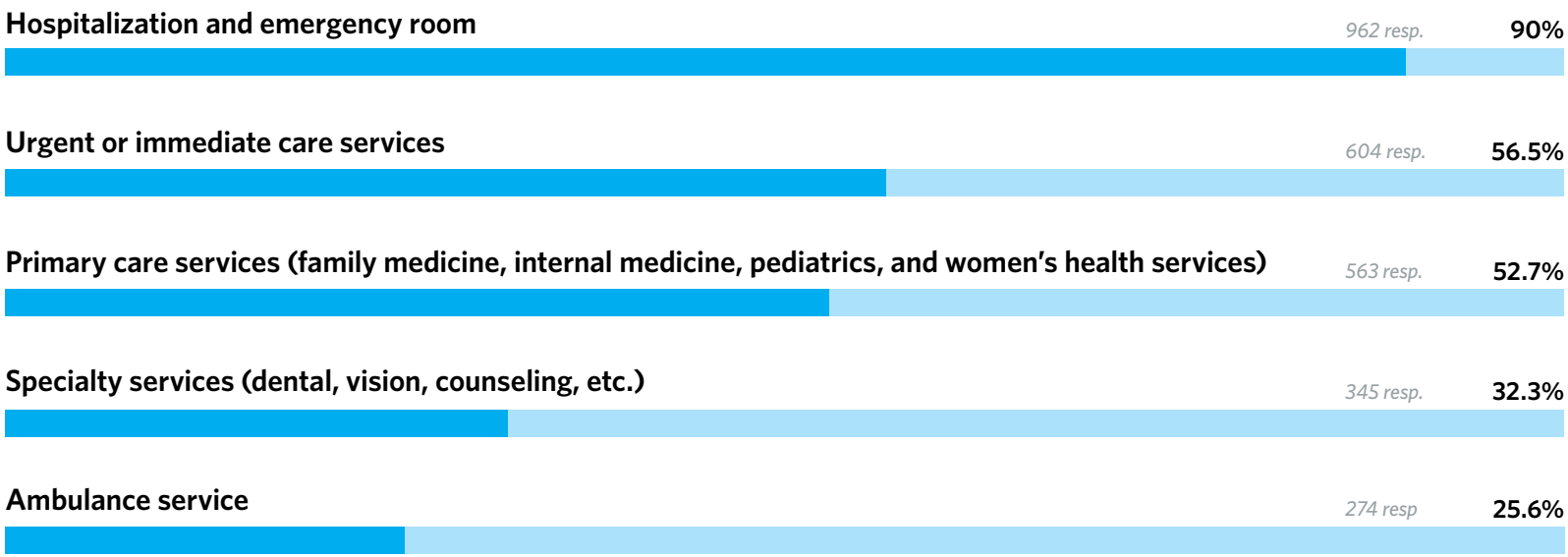
URBAN DESIGN ASSOCIATES

2014

5d. If YES, what additional methods of communication would you like to receive?

6. What are some of the unmet healthcare needs of current residents?

1069 *out of 1182 answered*



7. Are there any additional recovery projects that you would like to see the Town of Paradise consider?

SAFER

- Fire Break
- Prioritizing Road Reconstruction
- Firesafe Home Improvements

WELCOMING

- Contractor Accountability
- New Insurance Alternatives
- Support for First-Time Home Buyers
- Focus on Attainable and Workforce Housing
- Manufactured Home Communities

STRONGER

- Support for Mom and Pop Businesses

BETTER

- Blue Zones
- All Scales of Healthcare

GREENER

- Beautification
- Walkability and Bikeability

8. What do you miss from your memories of Paradise that will be difficult to be recreated?

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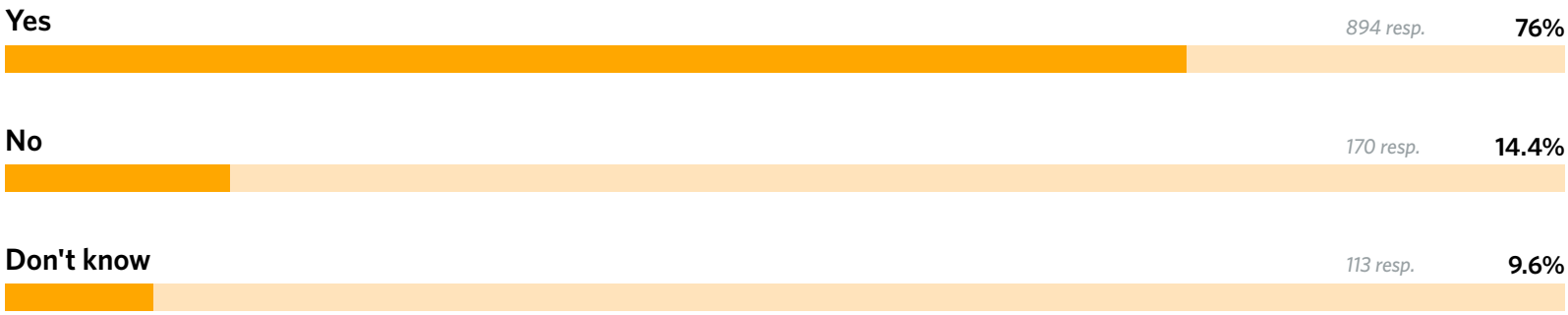
URBAN DESIGN ASSOCIATES

2018

9. Hazard trees have been a threat to rebuilding and public safety. In response, the Town secured funding for a series of tree removal programs. Do you feel hazardous trees are still a threat and potentially a fire hazard?

SAFER

1177 *out of 1182 answered*



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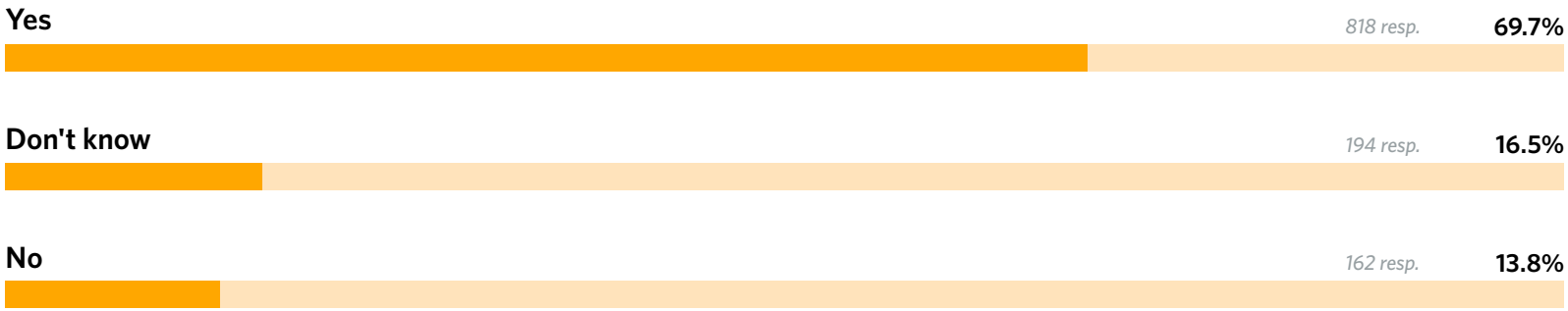
2019

10. As part of evacuation route improvements, the Town is prioritizing restriping Skyway (fall 2022) in the downtown area to add a downhill lane. Do you feel this will make Paradise safer?

SAFER

1174 *out of 1182 answered*



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URBAN DESIGN ASSOCIATES

2020

11. The Town has completed a comprehensive study of street fixes to improve evacuation routes, add missing road segments, and connect long dead-end streets. **With Skyway between Pearson and Elliott being addressed in 2022, please rank these major projects in the order of priority with #1 being the most important.**

SAFER

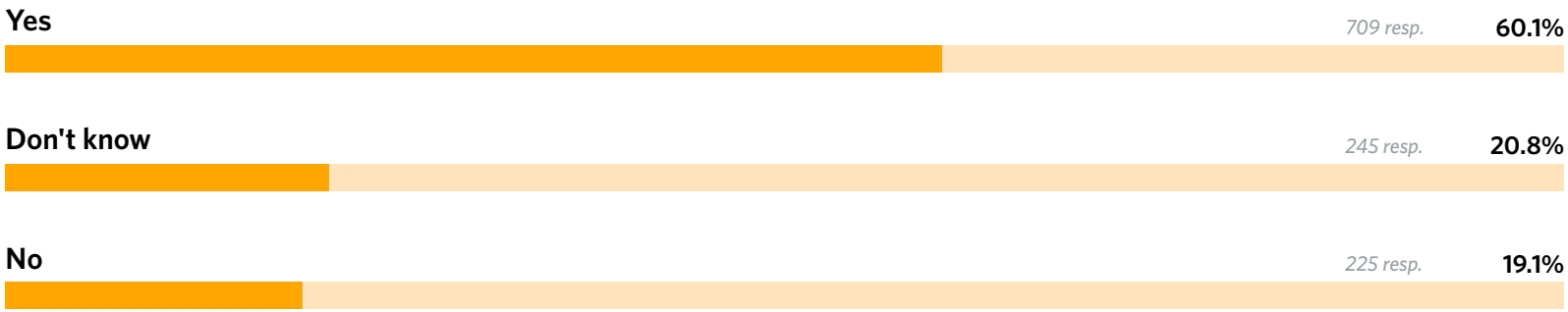
1039 *out of 1182 answered*

1. **Upper Clark Widening (Clark to Skyway)**
2. **Upper Skyway Widening (Bille to Pentz)**
3. **Roe Road Extension (Scottwood to Clark)**
4. **Roe Road Extension (Clark to Pentz)**
5. **Elliott Road Extension to Pentz**
6. **Pentz Road Widening (Town Limits to Skyway)**
7. **Neal Road Widening (Skyway to Town Limits)**
8. **Pearson Road Widening (Pentz to Clark)**

12. The Town also studied adding an interconnected path system adjacent to primary streets for daily use by pedestrians/cyclists and crisis use by emergency vehicles. Will you use this network for walking and biking?

SAFER

1179 *out of 1182 answered*



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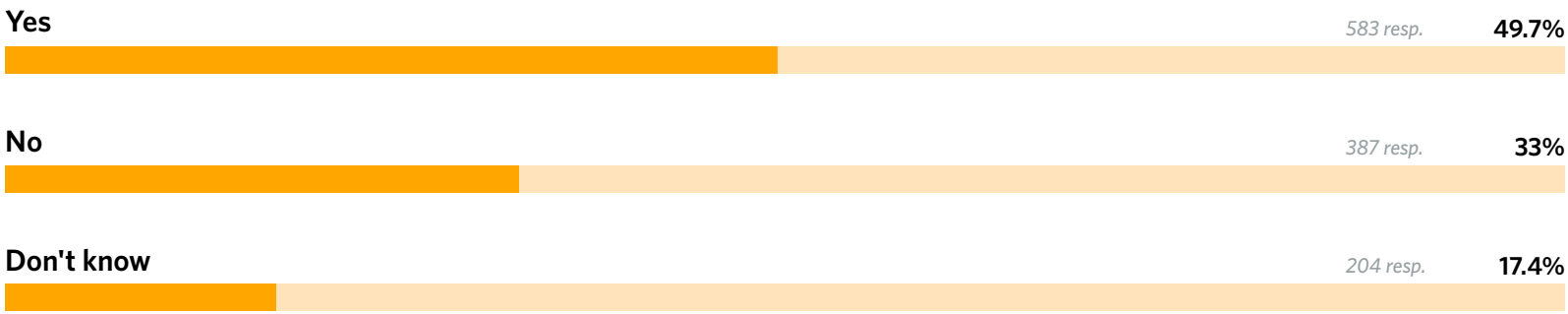
URBAN DESIGN ASSOCIATES

13. The Town has taken an aggressive approach to lot maintenance as part of their fuels management plan, including regular inspections, letters, and fines. Do you feel enforcement efforts are adequate?

SAFER

1174 *out of 1182 answered*



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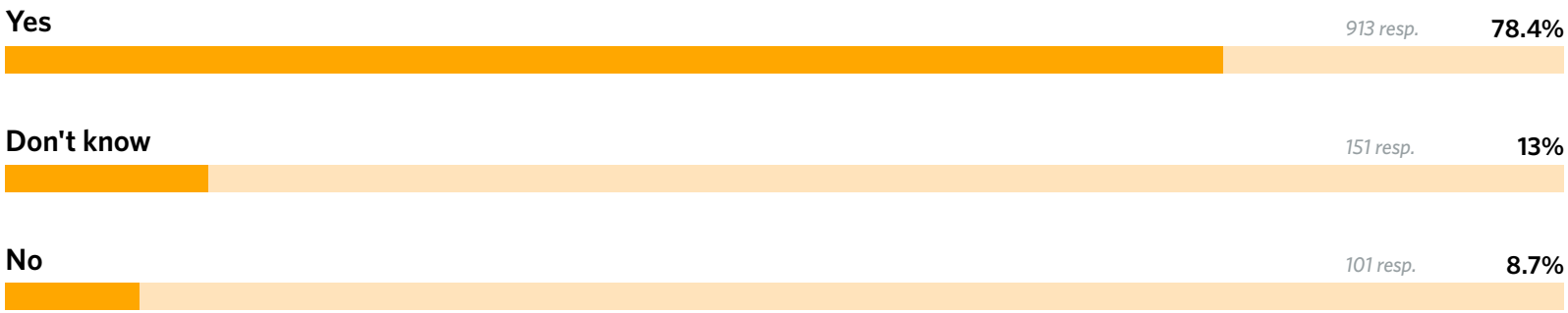
URBAN DESIGN ASSOCIATES

14. Would you support the Paradise Recreation and Parks District (PRPD) acquiring more open space in strategic locations throughout the town to reduce wildfire risk?

SAFER

1165 *out of 1182 answered*



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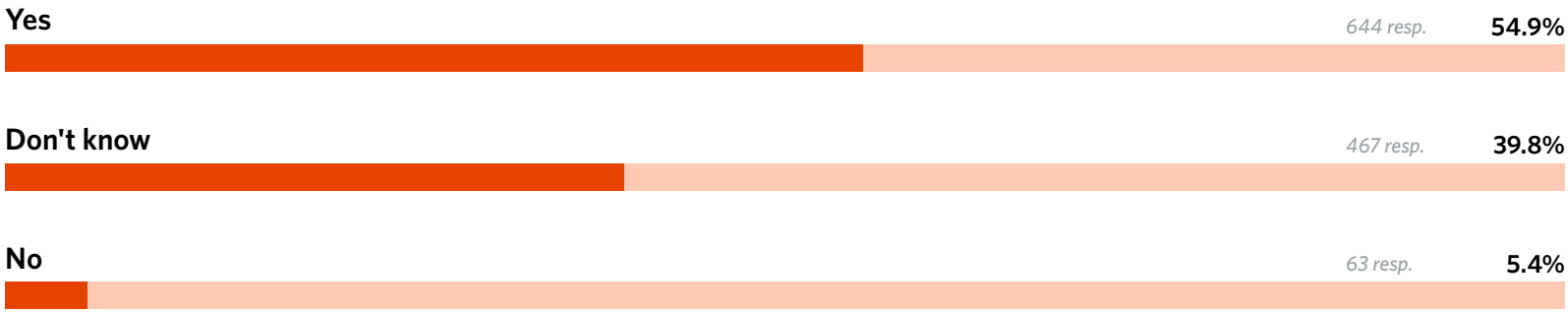
URBAN DESIGN ASSOCIATES

2024

15. The Town opened the Building Resiliency Center (BRC) in the former Bank of America building. Has consolidating all building services been a benefit to the community?

WELCOMING

1174 *out of 1182 answered*



16. Do you feel the current state and local residential building codes go far enough in promoting fire-resistant construction?

WELCOMING

1171 *out of 1182 answered*

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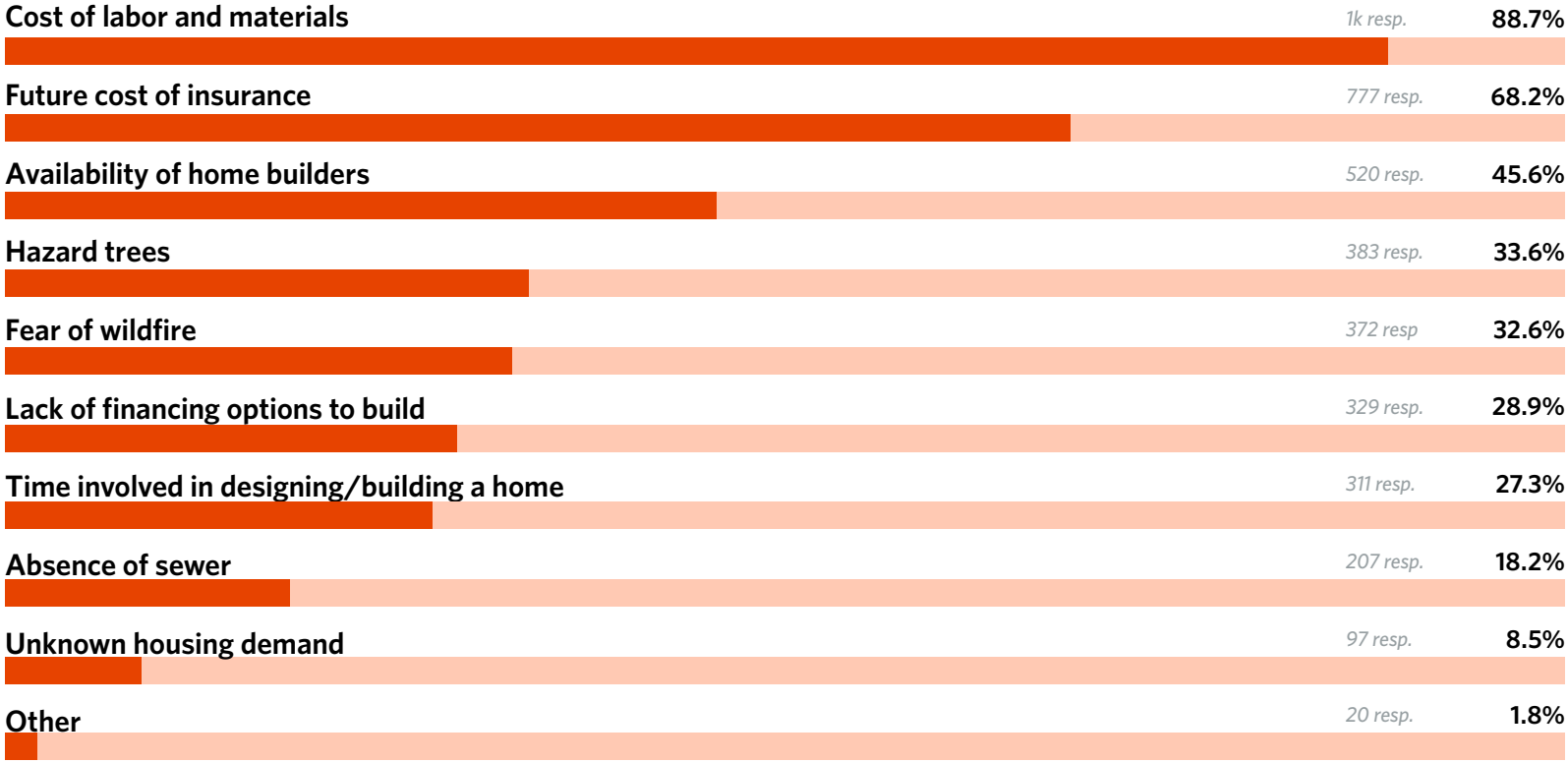
URBAN DESIGN ASSOCIATES

17. What do you see as the biggest hurdle to rebuilding housing?

1140 *out of 1182 answered*

WELCOMING



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URBAN DESIGN ASSOCIATES

18. Paradise had a broad range of housing opportunities and choices before the Camp Fire. Owner-occupied, stick-built homes represent most of the new units to date. Please rank the following types in order of importance moving forward.

WELCOMING

1041 *out of 1182 answered*

1. Owner-occupied stick-built homes
2. Rental homes
3. Owner-occupied manufactured homes (on private property)
4. Manufactured homes in parks (owner-occupied and rental)
5. Paired homes (duplexes)
6. Accessory dwelling units (ADU under 500 sq.ft.)
7. Apartments
8. Mixed-use (housing over commercial)

LONG-TERM COMMUNITY RECOVERY PLAN UPDATE / PARADISE, CALIFORNIA / 27 APRIL 2022

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2028

19. Paradise had an abundance of naturally-occurring, affordable housing before the Camp Fire. New construction has proven to be less affordable.

Please rank the kind of affordable housing that you would like to see prioritized in Paradise

WELCOMING

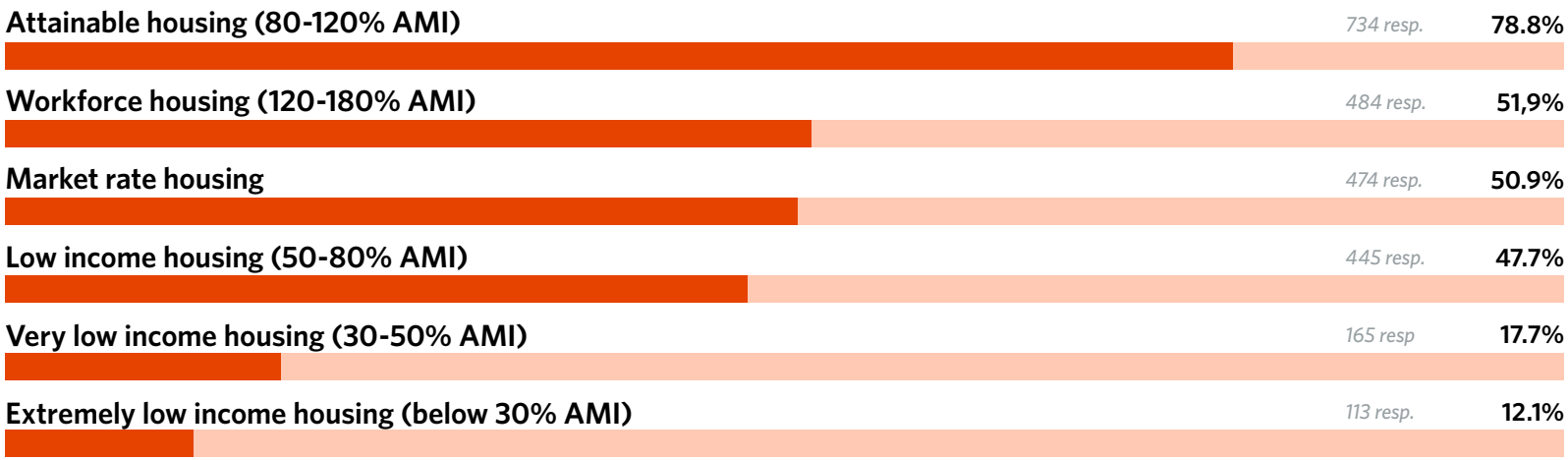
1041 *out of 1182 answered*

1. First time home buyers
2. Self-help ownership
3. Affordable apartments (80% of area median income or less)
4. Market rate apartments (no restrictions on rent)
5. Manufactured home communities
6. Secondary residential units (ADUs)

20. Butte County Area Median Income (AMI) for a four-person household is approximately $69,000/year. The associated monthly housing cost should be $1,725 or less. What should the focus be in Paradise moving forward?

WELCOMING

932 *out of 1182 answered*



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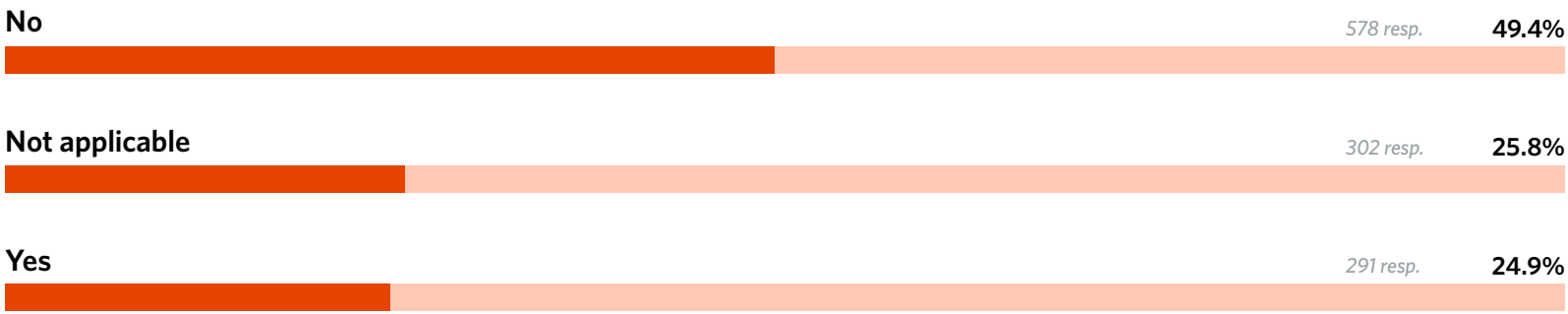
URBAN DESIGN ASSOCIATES

2030

21. Do you feel that you have been taken advantage of by any contractor that worked on your property since the fire?

WELCOMING

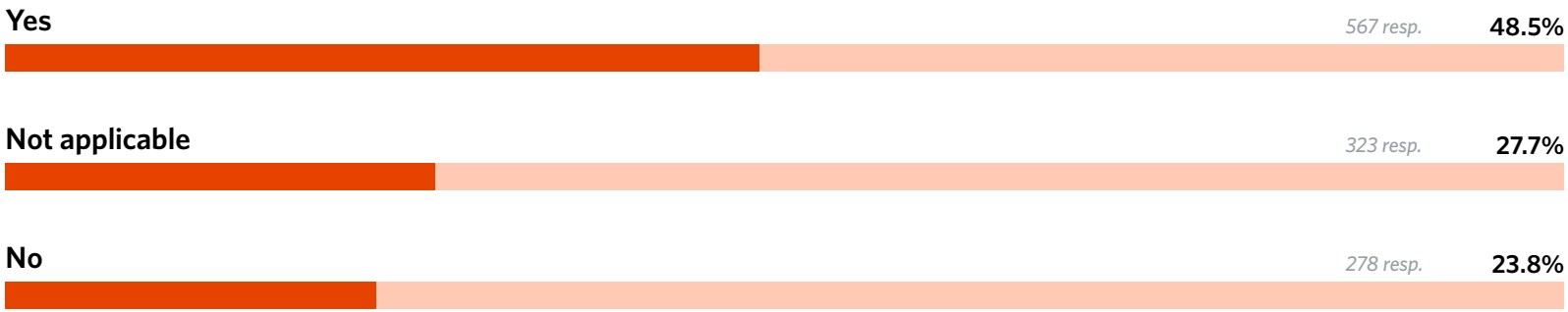
1171 *out of 1182 answered*



22. The Town received a grant to have a consultant study options for reducing homeowners insurance premiums. **Were you able to obtain or renew affordable homeowners insurance other than the California Fair Plan?**

WELCOMING

1168 *out of 1182 answered*



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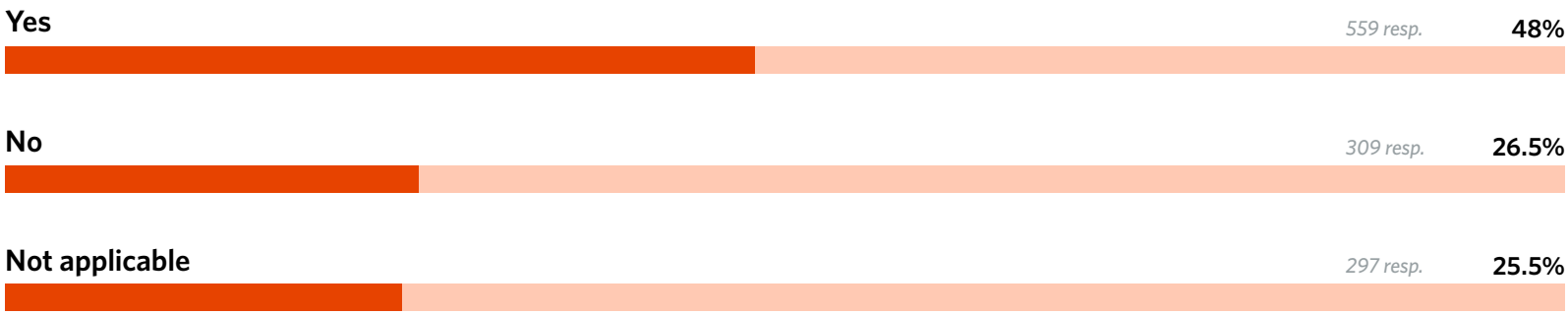
URBAN DESIGN ASSOCIATES

22a. Has the amount you pay for homeowners insurance been raised substantially?

1165 *out of 1182 answered*

WELCOMING



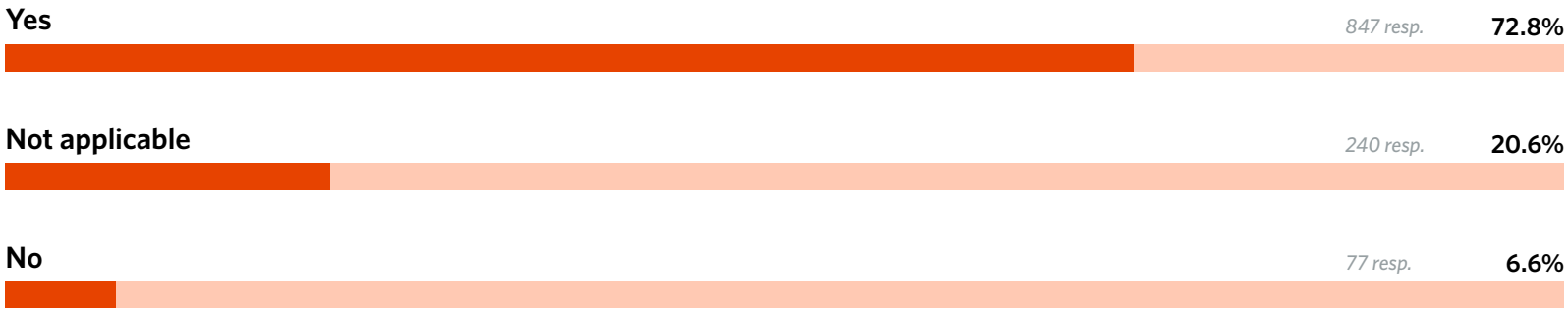
LONG-TERM COMMUNITY RECOVERY PLAN UPDATE / PARADISE, CALIFORNIA / 27 APRIL 2022

URBAN DESIGN ASSOCIATES

22b. Would you be willing to implement fire safe improvements to your home and property if the cost was reasonable or financial assistance was available?

WELCOMING

1164 *out of 1182 answered*



22c. Would you be willing to have your house exterior inspected annually for fire safe maintenance?

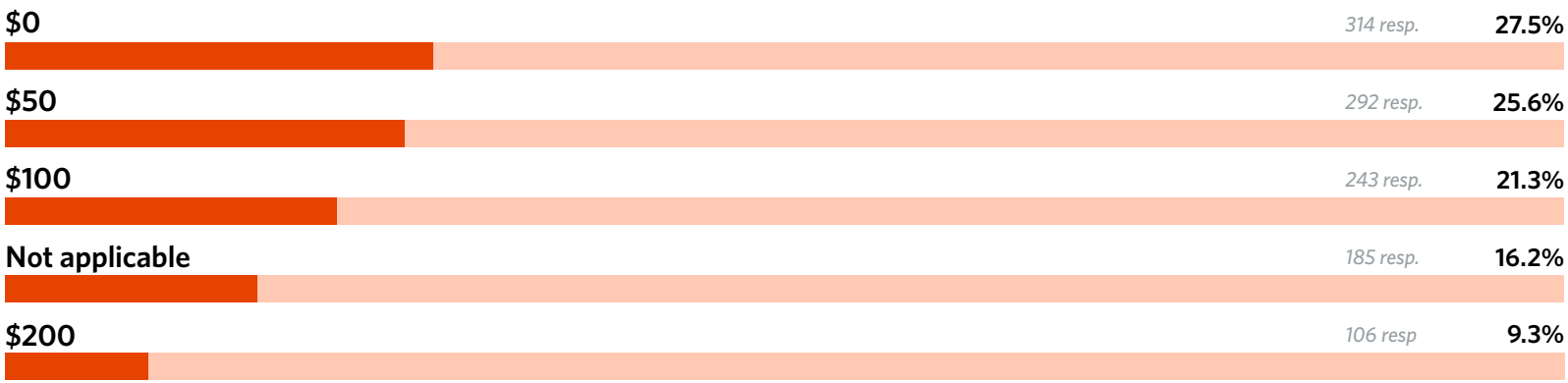
WELCOMING

1141 *out of 1182 answered*

22d. How much would you be willing to pay per year as a property assessment to fund wildfire risk mitigation and thereby reduce your homeowners insurance premiums?

WELCOMING

1040 *out of 1182 answered*



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URBAN DESIGN ASSOCIATES

22e. Are you more willing to pay such an assessment if you knew that it would be matched by grant money from the State?

WELCOMING

1119 *out of 1182 answered*

23. Rank the most important commercial establishments to bring back in order of importance

STRONGER

1127 *out of 1182 answered*

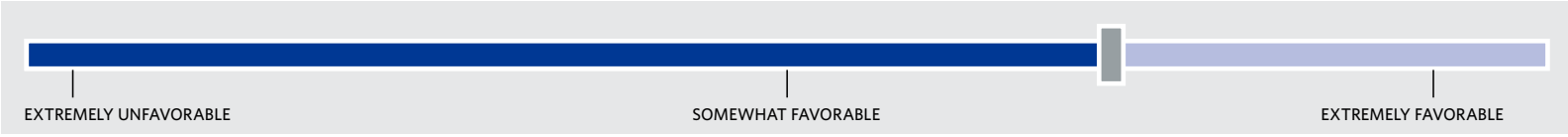
1. Dine in restaurants
2. Mom-and-pop neighborhood services
3. Grocery stores
4. Fast food restaurants
5. Drug stores
6. Entertainment
7. Other

24. Paradise Recreation and Parks District (PRPD) has been proactive in implementing fire safe measures and improving local quality of life. How would you rank the current parks system?

BETTER

1010 *out of 1182 answered*

7.1 Average Rating

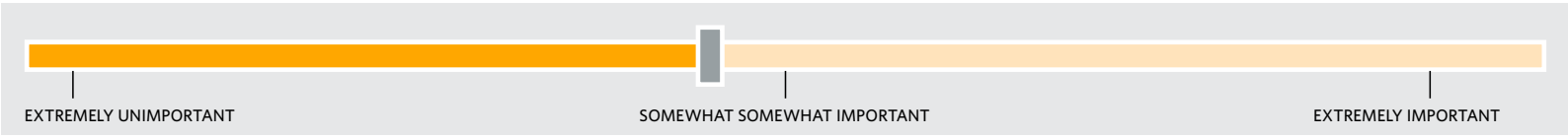


25. Adding a redundant Emergency Notification System is a top priority for the Town. Securing funding is in progress. How would you rank the importance of this project?

SAFER

1177 *out of 1182 answered*

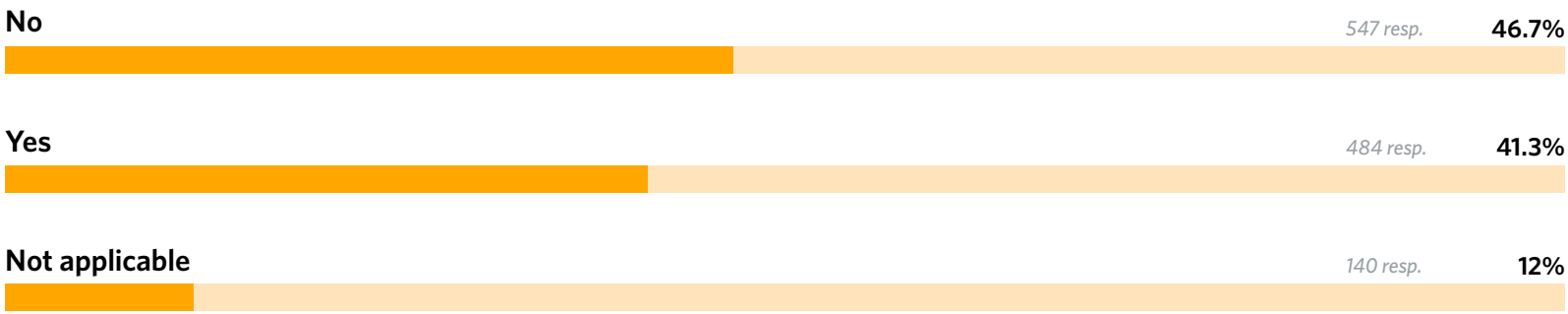
4.1 Average Rating



26. Resident fire safe education has been a priority for the Town in partnership with CalFire and other organizations. Have any of these programs reached you?

SAFER

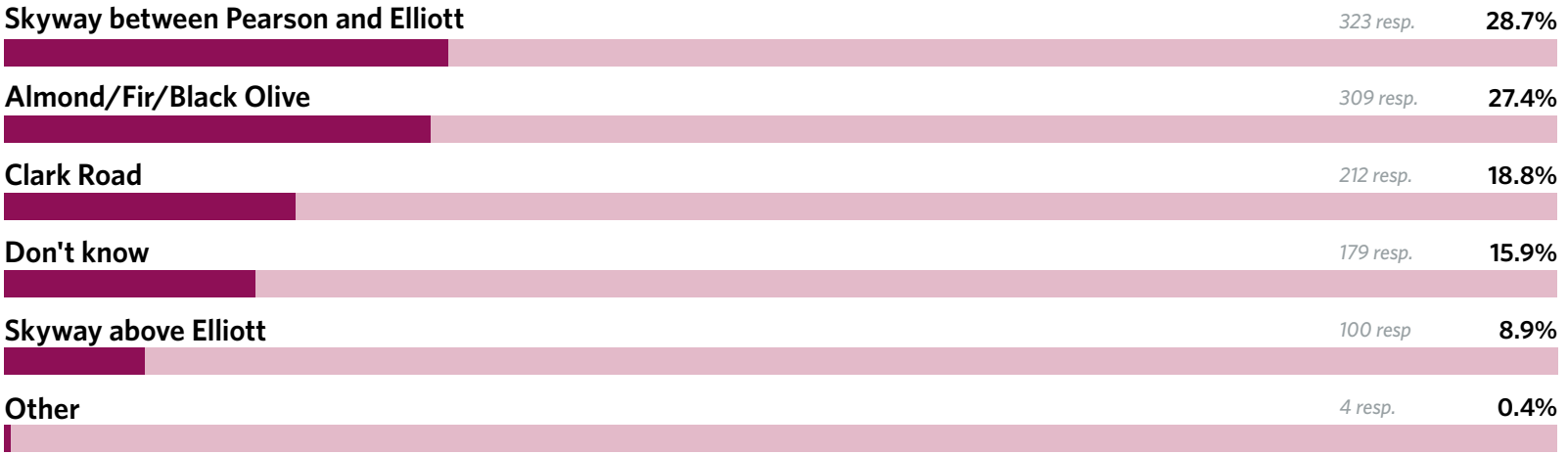
1171 *out of 1182 answered*



27. What is the best location for centralized walkable shopping?

1127 *out of 1182 answered*

STRONGER



LONG-TERM COMMUNITY RECOVERY PLAN UPDATE / PARADISE, CALIFORNIA / 27 APRIL 2022

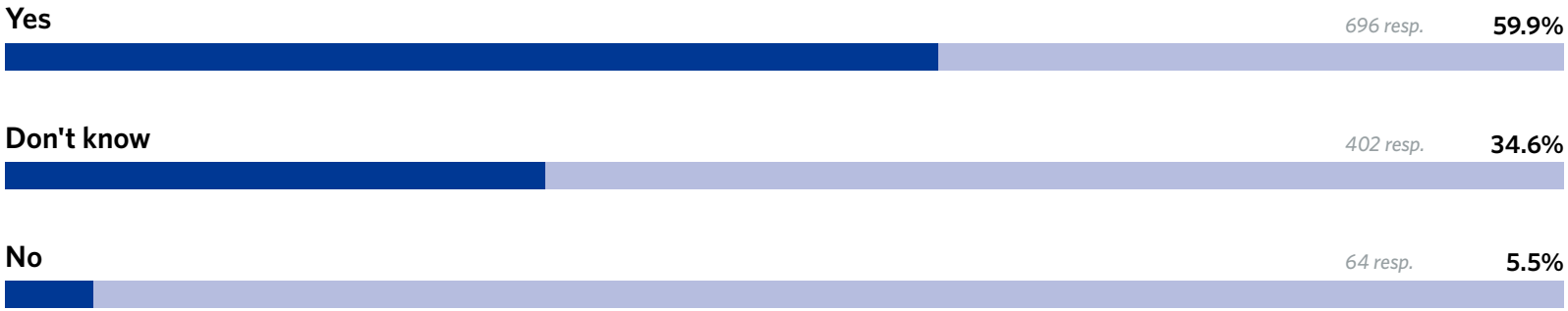
URBAN DESIGN ASSOCIATES

2042

28. A key recovery project related to elementary and secondary education calls for "Paradise's public, charter, and private schools to be rebuilt to meet the needs of all families and to incorporate 21st-century best practices and learning models...". Paradise schools have made remarkable progress toward meeting this objective. Do you feel satisfied with the progress to date?

BETTER

1162 *out of 1182 answered*



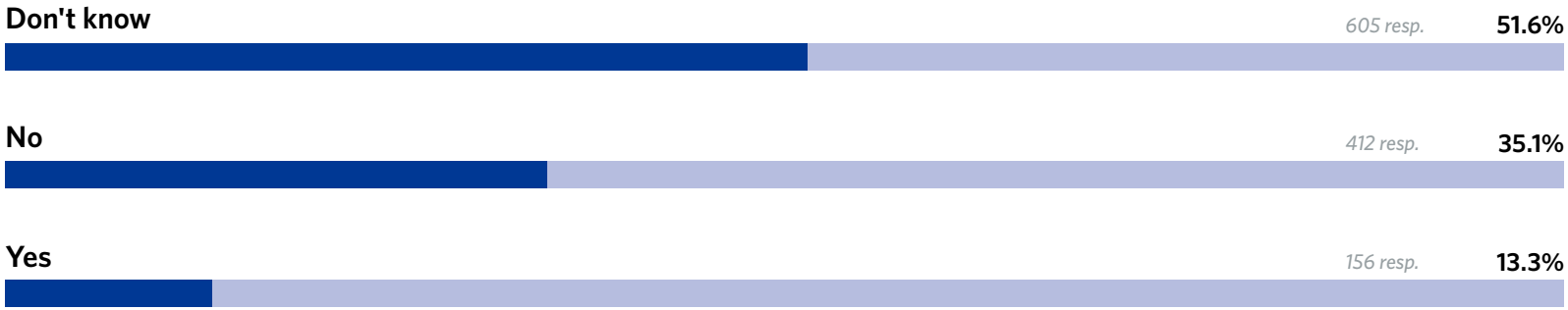
LONG-TERM COMMUNITY RECOVERY PLAN UPDATE / PARADISE, CALIFORNIA / 27 APRIL 2022

URBAN DESIGN ASSOCIATES

29. Is public transportation service in Paradise adequate?

1173 *out of 1182 answered*

BETTER



LONG-TERM COMMUNITY RECOVERY PLAN UPDATE / PARADISE, CALIFORNIA / 27 APRIL 2022

URBAN DESIGN ASSOCIATES

2044

30. Do you ever ride the bus?

1168 *out of 1182 answered*

BETTER

PUBLIC MEETING

Resident feedback on the first draft of new and updated recovery projects.

Creating an open dialogue between community members, town leadership, and the design team is imperative to update the recovery project list accurately. The first draft of recovery project updates was presented at an open forum to gauge specific concerns on each topic. Each attendee was asked to rate each project as positive (green if Paradise resident, blue if not) or negative (red if Paradise resident, yellow if not). Additionally, sticky notes were provided for specific comments.

Recovery projects were adjusted, added, and/or eliminated using the attendees' feedback to best achieve residents' immediate and long-term needs. The following pages are images of the boards shared at the public meeting, with the feedback recorded directly on the board and with volunteer facilitators.

General Comments

What else should we know about the Town of Paradise's recovery progress?

Comments* from April 28 Public Meeting

- Thank you Town of Paradise with moving forward
- Sustainable, fire wise, ecological education, community center, TEK, camp fire restoration project
- Indoor recreation (bowling, movie theater)
- When sewers come in businesses will need financial assistance for hook-up/ connection
- Movie theater, more drive in restaurants
- More signs for community events. Re-use old signs?
- Market to bring commerce and business
- Waterpark
- Community Rec Center with indoor facilities
- Yard wast facility & recycle yard
- Town owned solar
- independent renewable energy systems
- Reseeding forests
- Community art for tourism branding
- Keep up the good work!
- Skate park
- Indoor/outdoor pool
- California Constitution Article 1 Section 28(b)(17)
- We need things for youth to do on the Ridge-Skate Park
- Stop water from leaving our area

** Information has not been fact-checked by the Town of Paradise*

SAFER WELCOMING STRONGER BETTER GREENER

Additional New Recovery Projects

What did we miss? Let us know your thoughts about other potential recovery projects below.

Comments* from April 28 Public Meeting

- When sewers happen...? (can't read rest of stickie)

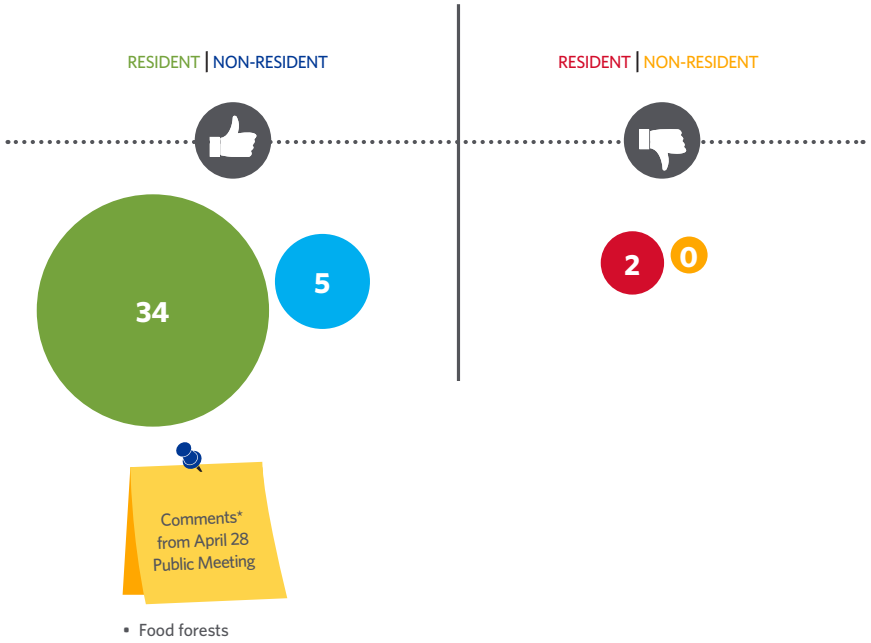
** Information has not been fact-checked by the Town of Paradise*

SAFER WELCOMING STRONGER BETTER GREENER

Fire Breaks

Recovery Project

Create a fire break between development and the wildlands as a way to reduce fire risk, especially along the east side of Town. The fire break could also double as an area for hiking trails. Paradise Recreation and Parks District (PRPD) should be the lead in securing funding, acquiring property/easements, and maintaining the break.



** Information has not been fact-checked by the Town of Paradise*

SAFER WELCOMING STRONGER BETTER GREENER

Prioritizing Road Reconstruction

Recovery Project

Acknowledge resident frustration with the damaged condition of streets by improving community awareness on the reconstruction schedule. The Town should make a Paving Map available on their website and coordinate with PG&E, Comcast, AT&T, and PID to create an online interactive tool for residents to see the schedule for undergrounding on a street-by-street basis.

Comments* from April 28 Public Meeting

- MOU County/Town road decisions
- Easier to read maps
- Improve communication between construction/town and residents
- Green utility progress meter
- More widenings

** Information has not been fact-checked by the Town of Paradise*

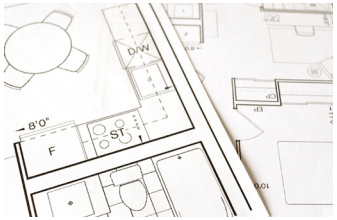
2050

SAFER WELCOMING STRONGER BETTER GREENER

Firesafe Home Improvements

Recovery Project

Publish a list of recommendations that follow future Wildland-Urban Interface (WUI) Code updates (as coordinated by the Insurance Institute for Business & Home Safety (IBHS) and seek grants for fire safe home improvements to increase safety and reduce homeowners' insurance premiums. The Town should take the lead in educating residents and continue to seek subsidy sources that would allow Paradise homeowners to make additional fire safe home improvements.



** Information has not been fact-checked by the Town of Paradise*

SAFER | **WELCOMING** | STRONGER | BETTER | GREENER

Contractor Accountability

Recovery Project

Address the fact that approximately one-third of survey respondents report that they have been taken advantage of by a contractor working on their property since the fire. The Contractor State Licensing Board (CSLB) has enforcement ability in this case. Possible initiatives could include:

- Have CSLB step up enforcement efforts
- Start an online community online forum where residents can post reviews
- Require contractors to post their contact information on jobsites
- Confirm contractors are in good standing at the time they pull permits

RESIDENT | NON-RESIDENT

27 | 4

RESIDENT | NON-RESIDENT

3 | 0

Comments* from April 28 Public Meeting

- No brainer, of course
- Private road damage from construction and no plans/money to repair?
- Fired contractors had good rating with CSLB
- Anyone doing (?) management must be LIC and town needs to verify INS workers comp etc
- Town LIC is required for everything, but no enforcement
- Owner/Builder allowed for unlicensed contracting
- Put down $200,000+ and contractor vanished
- No licensed required for fire prevention provided by State – a problem
- FEMA & OES Damage
- By your contractor or 3rd party contractor
- Aurora Ridge Homes

** Information has not been fact-checked by the Town of Paradise*

2052

SAFER | **WELCOMING** | STRONGER | BETTER | GREENER

New Insurance Alternatives

Recovery Project

Find insurance alternatives to help protect against limited options and rising insurance costs in the Wildland-Urban Interface (WUI). Community-wide fire safe improvements can reduce risk and thereby lower insurance premiums. As rebuilding progresses, options to be explored include:

- Create community-based insurance
- Collaborate with insurance companies on fire safe improvements
- Amend the Fair Plan so that it allows residents to get a mortgage and covers larger multi-family developments

** Information has not been fact-checked by the Town of Paradise*

SAFER | **WELCOMING** | STRONGER | BETTER | GREENER

RESIDENT | NON-RESIDENT

22 3

RESIDENT | NON-RESIDENT

1 0

Support for First-Time Homebuyers

Recovery Project

Give assistance to first-time homebuyers to allow them to purchase a home in Paradise. The Town should continue to look for a workaround to the existing first-time homebuyer program that is currently restricted to the purchase of pre-existing homes and is subject to HUD limitations on the cost of the homes.

** Information has not been fact-checked by the Town of Paradise*

SAFER | **WELCOMING** | STRONGER | BETTER | GREENER

Focus on Attainable & Workforce Housing

Recovery Project

Priority should be given to the re-creation of lost attainable and workforce housing that is affordable to families with a median income between 80 to 180% of Butte County Area Median Income (AMI). Planning for attainable/workforce rental units along the planned sewer line should be done concurrently with the sewer project to accelerate the timeline. Bringing back Manufactured Home Communities could also underpin this initiative.

RESIDENT | NON-RESIDENT

20 3

RESIDENT | NON-RESIDENT

1 1

Comments* from April 28 Public Meeting

- No brainer, of course
- Includes attainable single-family homes
- Top priority — gentrification only serves a small percent — affordable, sustainable workers need built housing
- Can't afford housing for my workers — makes it hard to retain them
- Rescind 750sf minimum housing size. Tiny houses are part of the solution!
- Always felt like we had enough affordable housing and especially apartments

** Information has not been fact-checked by the Town of Paradise*

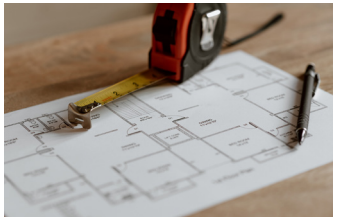
SAFER | **WELCOMING** | STRONGER | BETTER | GREENER

Manufactured Home Communities

Recovery Project

Tackle the factors that are causing the rebuilding of Manufactured Home Communities (regulated by the state) to lag behind scattered site home building. Hurdles include lack of insurance proceeds, regrading of home sites, replacing private roads, undergrounding on-site electric and communication, and repairing on-site sewer treatment.

Subsidy is required to keep site costs affordable to residents. Flexibility should be built into CDBG DR funding by California Department of Housing and Community Development (HCD) to permit state subsidy.



** Information has not been fact-checked by the Town of Paradise*

2056

SAFER | WELCOMING | **STRONGER** | BETTER | GREENER

Support for Mom-and-Pop Businesses

Recovery Project

Find ways to bring back small family-owned or independent businesses that lost their buildings and are now sidelined by the challenge of higher rents. This could include an initiative to match businesses with existing available space and/or lowering new-build construction costs through prefabricated building systems. The improved street infrastructure on Almond Street will provide a blank canvas for small businesses, contingent on sewer.

RESIDENT | NON-RESIDENT

27 | 8

RESIDENT | NON-RESIDENT

0 | 0

Comments* from April 28 Public Meeting

- Sewer is key
- But don't ship our water down the hill

** Information has not been fact-checked by the Town of Paradise*

SAFER | WELCOMING | STRONGER | **BETTER** | GREENER

Blue Zones

Recovery Project

Build systems that are conducive to healthier lifestyles and stronger communities as Paradise is rebuilt. Blue Zones is a policy and design framework that could help Paradise get healthier. Elements could include:

- Use *Blue Zones* principles to help guide healthier rebuilding
- Prioritize walking and biking via road improvements and trails
- Create gathering spaces to nurture community
- Design homes that promote health and resiliency
- Establish volunteer opportunities

RESIDENT | NON-RESIDENT

33

3

RESIDENT | NON-RESIDENT

1 0

Comments* from April 28 Public Meeting

- Goat infrastructure, turf management
- Community Gardens adjacent to like trails...YES!!!
- Paradise stronger gym, mental health services, kitchen/healthy cooking, green buildings
- Walking paths
- Sidewalks give people permission to get out of the house
- Whole, healthy foods, restaurants and shops
- Does not replace hospitals/urgent cares
- Not the first priority

** Information has not been fact-checked by the Town of Paradise*

SAFER | WELCOMING | STRONGER | **BETTER** | GREENER

All Scales of Healthcare

Recovery Project

Work to address what was lost in the fire: hospitalization and emergency room, urgent/immediate care, and primary care services. Paradise healthcare providers should engage in a dialogue with residents over residents' concerns and work to restore critical services.

RESIDENT | NON-RESIDENT

30

5

RESIDENT | NON-RESIDENT

0 0

Comments* from April 28 Public Meeting

- Need healthcare
- Suggest everyone become a member of air ambulance if have serious health issues - alternative interim solution
- FRH was a great hospital
- Ampla trying to move uphere. Top reach out to them, possible bring them here
- Ambulance service and immediate care good enough
- Specialist up here don't want to leave town
- Want services back now not enough population to support...
- Need specialist in town. Don't want to leave town to have services. Baby center back need here - still a lot of people in Magalia
- Need 24 hr Immediate care or ER. Magalia needs healthcare too. Professionals live in town
- Imperative for economic development. Puts progress on hold without knowing an answer. If you can, market and move forward
- Don't let Blue Zone replace walk-in healthcare services
- Adventis Health should be honest if coming back or not
- Need more healthcare services here. Would Adventist Health sell to another organization/healthcare provider

** Information has not been fact-checked by the Town of Paradise*

SAFER WELCOMING STRONGER BETTER **GREENER**

Beautification

Recovery Project

Where possible, restore shade and beauty in Paradise with a plant palette that supports local insect and wildlife populations without compromising fire safety. In cooperation with Butte County Fire Safe Council and Cal FIRE, the Town should accelerate efforts to develop appropriate plant palettes for private lots between setbacks and rights-of-way. Continue to seek outside grant funding for replanting.

RESIDENT | NON-RESIDENT

23 5

RESIDENT | NON-RESIDENT

3 0

Comments* from April 28 Public Meeting

- Loved new welcome sign and bring back Clark Road sign "Welcome to Paradise"
- Bring back "You are Ascending into Paradise" on Clark Road
- Fine balance between safety and erosion control
- Would like to see more shade structures in lieu of trees
- Progress would have a requirement for landscape
- Hold educational meetings/workshops on best native and drought resistant plants
- We need a monarch park
- Paradise Garden Club volunteers to help organize plantings
- We need some kind of theme
- Something special that identifies us downtown or along the streets
- Be careful when planting trees close together when they mature
- Beautify the bike path with flowers, shrubs Milkweed?
- Partner with the Camp Fire Restoration Project
- Towns need to do better education on "why" need to clear vegetation
- Would rather be safer than beautiful
- A flyer that says why we need to be cleared
- Not charge for the organization medallions on "Welcome" sign to non-profits
- Coordinate between Town and Butte Co. to remove trees on private property that are in the county
- Need to clear the rest of the dead trees off private property

** Information has not been fact-checked by the Town of Paradise*

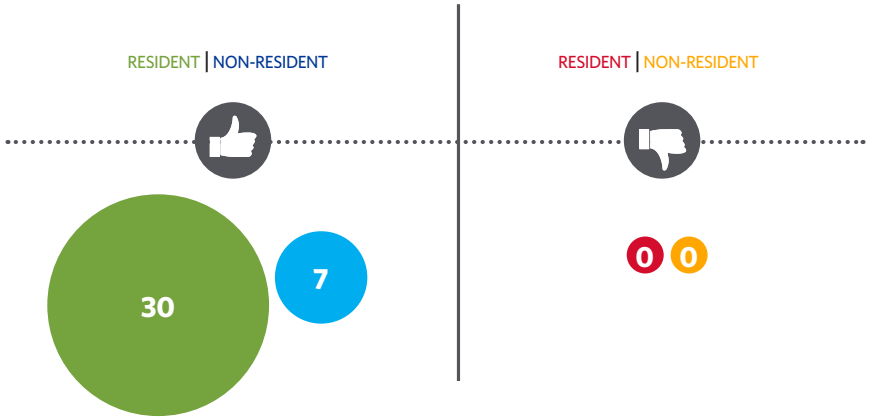
2060

SAFER WELCOMING STRONGER BETTER **GREENER**

Walkability & Bikeability

Recovery Project

Connect walking and biking facilities into neighborhoods and create extensions of the multi-use path network that is already being implemented along main public streets. Given that this was identified as a high priority for survey respondents, the Town should look for opportunities for pedestrian and bike infrastructure, like sidewalks and multi-use paths, as streets are rebuilt.



Comments* from April 28 Public Meeting

- Important vital
- Great for community as a whole
- Safety — Safer streets/Safety
- Yes, of course! Yes
- Ability to access golf carts? Lights along paths
- Promotes health
- Don't even have to think about it. No sidewalk is dangerous
- My kids want to get to school safely & be able to walk/bike
- No brainer good idea
- Would help businesses if people could walk there
- Love the new walking path by PRES
- Safety
- Yes! Connect bike paths to other areas
- Not useful for my age and disabilities
- Current bike trail not used enough
- Nice, but not as important as other things

** Information has not been fact-checked by the Town of Paradise*

2061

CDBG-DR (broad) but info sheets are only for infrastructure; either indicate infrastructure (only) or include other CDBG-DR info sheets (MHP, OOR/ReCoverCA, ED/ Workforce Development, MIT, etc)

COMMUNITY DEVELOPMENT BLOCK GRANT-DISASTER RECOVERY (CDBG-DR) PRIORITY PROJECTS

The following is a summary of project submitted by the Town for CDBG-DR funding

2062

Town of Paradise
Public Works/Engineering Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

Sewer Project

Project Priority:

#1

Project Scope:

The Paradise Sewer Project includes all of the components and activities necessary to convert the core part of the Town (the Sewer Service Area) from on-site septic tank treatment to wastewater conveyance and treatment at the Chico Water Pollution Control Plant (WPCP).

Project Description:

The Paradise Sewer Project consists of three primary components: 1) a wastewater collection system consisting of service connections of individual parcels within a designated service area to sewer lines and lift stations; 2) an 18-mile export pipeline to convey Paradise wastewater to the Chico WPCP; and 3) connection to the Chico WPCP where the Paradise wastewater will be treated.

Funding:

Total Cost: $184,675,000

Pre-Construction Cost: $32,326,000

Construction Cost: $152,349,000

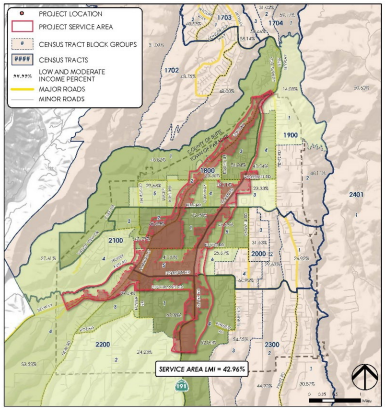
Existing Funding Resource: DFA/USDA

Unmet Need Pre-Construction: $29,926,000

Unmet Need Construction: $152,349,000

Long Term Recover Plan Tier and Project:

1 – Sewer System



Town of Paradise
Public Works/Engineering Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

On-System Road Rehabilitation

Project Priority:

#2

Project Scope:

The On-System Road Rehabilitation Project repairs damaged sections of roadway and re-striping when necessary to rehabilitate 32 miles of roadway segments of on-system roadway. The project includes a combination of pavement rehabilitation strategies depending on the severity of damage, modifications to nine signalized intersections, and construction of 48 ADA compliant curb ramps.

Project Description:

The project will repair 32 miles of on-system roadways that sustained heavy damage in the wake of the Camp Fire and debris removal efforts. The critical condition of the current roadways risks pavement failure and creates unsafe road conditions. The project will improve safety along public roads that are part of the federal-aid system. These arterial roadways are either evacuation routes or primary east-west connections to the evacuation routes.

Funding:

Total Cost: $55,439,200

Pre-Construction Cost: $3,504,000

Construction Cost: $51,935,200

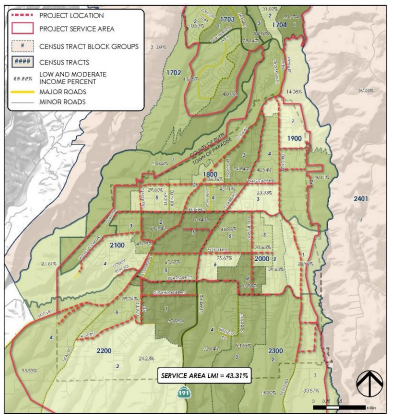
Existing Funding Resource: FHWA-Emergency Relief

Unmet Need Pre-Construction: $876,000

Unmet Need Construction: $12,983,800

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



Working together to rebuild a thriving community.

Town of Paradise
Public Works/Engineering Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

Off-System Road Rehabilitation

Project Priority:

#3

Project Scope:

The Off-System Road Rehabilitation Project repairs damaged sections of roadway and re-striping when necessary to rehabilitate 47 miles of roadway segments of on-system roadway. The project also upgrades non-compliant ADA curb ramps.

Project Description:

The project will repair 47 miles of off-system roadways that sustained heavy damage in the wake of the Camp Fire. The critical condition of the current roadways risks pavement failure and creates unsafe road conditions. The project will improve safety along public roads that are not part of the federal-aid system. These roads include local roads and rural minor collectors, which provide evacuation routes connecting to the federal-aid system.

Funding:

Total Cost: $45,043,700

Pre-Construction Cost: $3,064,000

Construction Cost: $41,979,700

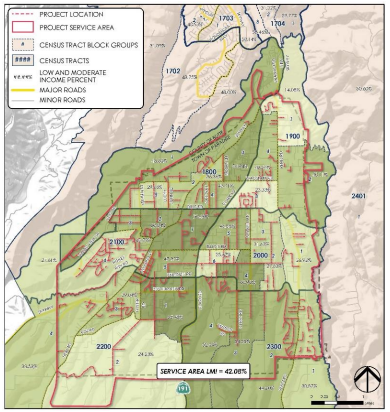
Existing Funding Resource: FEMA – Public Assistance

Unmet Need Pre-Construction: $766,000

Unmet Need Construction: $10,494,925

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



Town of Paradise
Public Works/Engineering Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

Pearson Class I

Project Priority:

#3

Project Scope:

The Pearson Class I Path project will construct 2.3-miles of Class I facility and 50 ADA ramps from Clark Road to Pentz Road.

Project Description:

The project proposes a separated Class I facility to improve access to key destinations including Downtown Paradise, Paradise Memorial Park, and K-12 schools. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 50 ADA ramps to improve mobility for people in wheelchairs and with strollers.

Funding:

Total Cost: $13,554,857

Pre-Construction Cost: $1,254,100

Construction Cost: $12,300,757

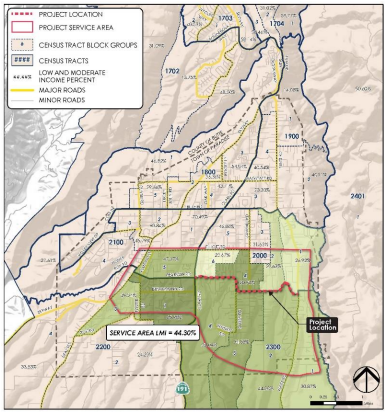
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,254,100

Unmet Need Construction: $12,300,757

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



Working together to rebuild a thriving community.

Town of Paradise
Public Works/Engineering Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

On-System Sign Replacement

Project Priority:

#4

Project Scope:

The On-System Sign Replacement Project involves sign removal, sign installation and reset of roadside signs and flashing beacons at 122 locations damaged in the 2018 Camp Fire. The project is partially funded through FHWA Emergency Relief.

Project Description:

The project will replace damaged roadway signs along federal aid routes to improve safety. Signage types include stop, no parking, signs alerting to fire station access, speed limit, curves ahead, street markers, prepare to stop/stop ahead, merge left, school crossing, flashing beacons, hospital/police, no outlet, wildlife crossing, etc.

Funding:

Total Cost: $285,200

Pre-Construction Cost: $26,000

Construction Cost: $259,200

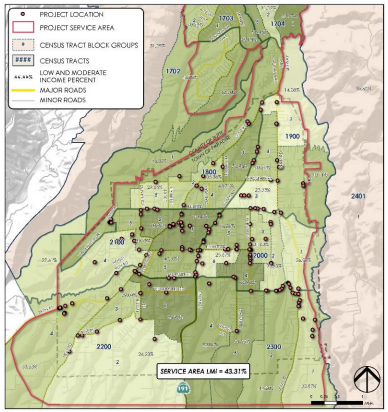
Existing Funding Resource: FHWA-Emergency Relief

Unmet Need Pre-Construction: $6,500

Unmet Need Construction: $64,800

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



Town of Paradise
Public Works/Engineering Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

Roe Road Phase 1

Project Priority:

#4

Project Scope:

Roe Road Phase 1 Project will construct a new three lane 1.25-mile roadway with wide shoulders. The project will include a Class I multi-use pathway, ADA curb ramps, storm drain infrastructure, and intersections with Pentz Road, Edgewood Lane, and South Libby Road.

Project Description:

Roe Road Phase 1 project is part of a five-phase project to construct a new east-west roadway connection between Skyway and Pentz Road. The proposed project will construct 1.25-miles of roadway between South Libby Road and Pentz Road to improve circulation and connectivity throughout the Town and provide alternative ingress/egress routes for residential neighborhoods. The project will also construct a parallel Class I bikeway for travel by people walking and bicycling and provides first responders a dedicated bi-directional travel lane during emergency events.

Funding:

Total Cost: $60,400,000

Pre-Construction Cost: $14,500,000

Construction Cost: $45,900,000

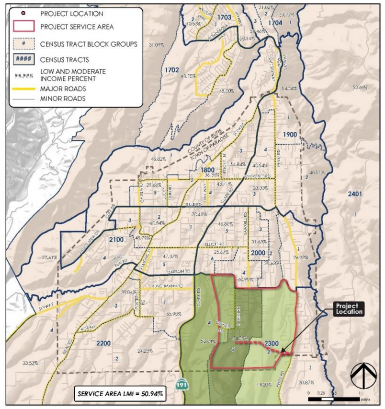
Existing Funding Resource: None

Unmet Need Pre-Construction: $14,500,000

Unmet Need Construction: $45,900,000

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



Town of Paradise
Public Works/Engineering Department
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

Pearson Road Reconfiguration

Project Priority:

#5

Project Scope:

The Pearson Road Reconfiguration project involves restriping the roadway, adding a Class II bike lane, pavement slurry seal, and sidewalk and curb ramp reconstruction in compliance with current ADA standards along a 0.17-mile segment of roadway.

Project Description:

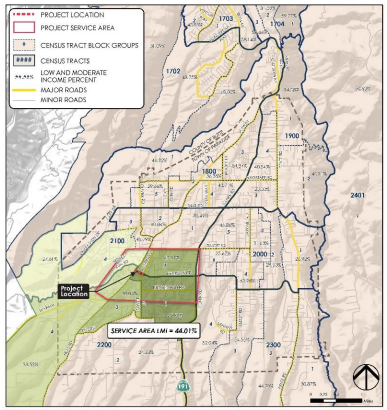
The Pearson Road Reconfiguration project will redefine and restripe the existing space between existing curb lines to provide increased evacuation capacity, add defined space for bicyclists and/or pedestrians, enhance the business setting, and provide a safer overall street environment than encourages commercial redevelopment. The project includes slurry seal and reconstructing pedestrian ramps to ADA standards and minor sidewalk improvements where necessary.

Funding:

Total Cost: $600,000
Pre-Construction Cost: $78,300
Construction Cost: $521,700
Existing Funding Resource: None
Unmet Need Pre-Construction: $78,300
Unmet Need Construction: $521,700

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Roe Road Phase 2

Project Priority:

#5

Project Scope:

Roe Road Phase 2 will construct a new 1-mile roadway extending from South Libby Road to Clark Road/State Route 191. The project will include a Class I multi-use pathway, ADA curb ramps, bridge or culvert over Clear Creek, and storm drainage infrastructure.

Project Description:

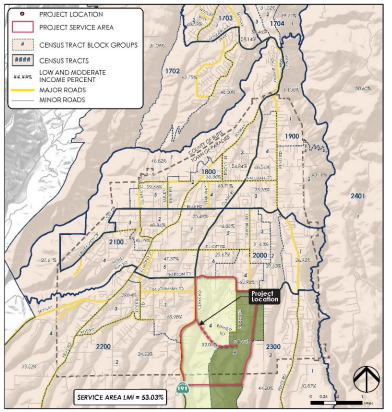
Roe Road Phase 2 is part of a larger project to construct a new east-west roadway between Skyway and Pentz Road to improve circulation and connectivity throughout the Town and provide alternative ingress/egress routes for residential neighborhoods. The project will create a new roadway between South Libby Road and Clark Road. It will also construct a parallel Class I pathway for people walking and biking that will also provide first responders with a dedicated bi-directional travel lane during emergency events.

Funding:

Total Cost: $42,622,089
Pre-Construction Cost: $6,874,600
Construction Cost: $35,747,489
Existing Funding Resource: None
Unmet Need Pre-Construction: $6,874,600
Unmet Need Construction: $35,747,489

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Oliver Curve Pathway Phase I

Project Priority:

#32

Project Scope:

The Oliver Curve Pathway Phase I project will construct 3,696 linear feet of a 10-foot-wide Class I multi-use facility complete with 2-foot-wide shoulders, lighting, and storm drain accommodations. Additional improvements include 17 new ADA ramps, 1 new crosswalk, and retaining walls.

Project Description:

The Oliver Curve Pathway Project Phase I proposes a Class I pathway on Oliver Road, stretching three-quarters of a mile from Skyway to Bille Road. The multi-use facility is 10 feet wide with 2-foot shoulders and includes 17 ADA ramps, pathway lighting, and retaining walls along Honey Run Creek. The project will provide improved access for people walking and bicycling to access destinations throughout Town including improved connectivity to the Yellowstone Kelly Heritage Trail.

Funding:

Total Cost: $5,403,547

Pre-Construction Cost: $699,100

Construction Cost: $4,704,447

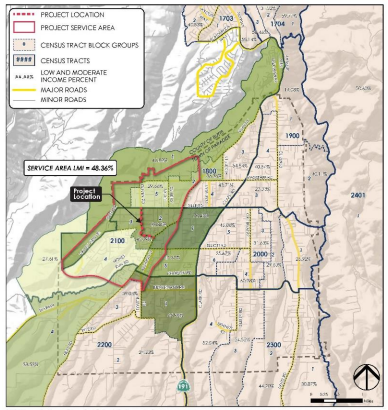
Existing Funding Resource: Congestion Mitigation and Air Quality

Unmet Need Pre-Construction: $349,100

Unmet Need Construction: $4,704,447

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Oliver Curve Pathway Phase II

Project Priority:

#6

Project Scope:

The Oliver Curve Pathway Phase II Project Construct one-half-mile of paved Class I facility, 10 ADA ramps, and storm drainage facilities between Bille Road and Wagstaff Road.

Project Description:

The project proposes a separated Class I facility to improve connections to key destinations including Downtown Paradise, Bille Park, and the Terre Ashe Recreation Center. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 10 ADA ramps to improve mobility for people in wheelchairs and with strollers. The project will extend the improvements in Oliver Curve Pathway Phase I, providing access to Skyway and downtown.

Funding:

Total Cost: $3,787,009

Pre-Construction Cost: $574,200

Construction Cost: $3,212,809

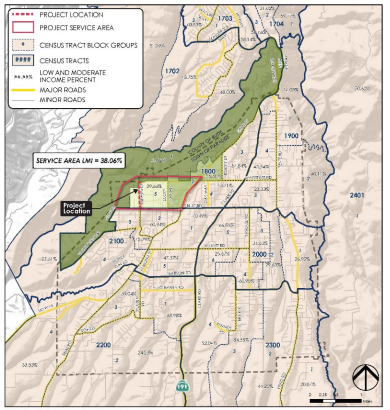
Existing Funding Resource: None

Unmet Need Pre-Construction: $574,200

Unmet Need Construction: $3,212,809

Long Term Recover Plan Tier and Project:

1 – Interconnect Path System



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Project Name:

Roe Road Phase 3

Project Priority:

#6

Project Scope:

Roe Road Phase 3 will construct a 0.76-mile roadway extending from the eastern terminus of Roe Road at Scottwood Road to Clark Road. The project will include a Class I multi-use pathway, ADA curb ramps, and storm drainage infrastructure.

Project Description:

Roe Road Phase 3 is part of a larger project to construct a new east-west roadway between Skyway and Pentz Road to improve circulation and connectivity throughout the Town and provide alternative ingress/egress routes for residential neighborhoods. The project will create a new roadway between Scottwood Road and Clark Road/State Route 191. It will also construct a parallel Class I pathway for people walking and biking that will also provide first responders with a dedicated bi-directional travel lane during emergency events.

Funding:

Total Cost: $11,105,512

Pre-Construction Cost: $1,628,200

Construction Cost: $9,477,312

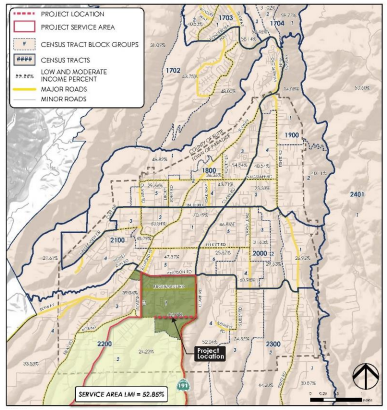
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,628,200

Unmet Need Construction: $9,477,312

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Pentz Road Widening

Project Priority:

#7

Project Scope:

The Pentz Road Widening project will widen Pentz Road from Skyway to the southern Town limits to include a 12-foot-wide center turn lane, widened shoulders, and a multi-use pathway. The project builds upon the FHWA disaster recovery efforts that are rehabilitating the existing roadway pavement.

Project Description:

Pentz Road serves as a primary north-south ingress/egress route for Town residents. Widening the road will improve evacuation efficiency along this route, provide an adequate shoulder to park disabled vehicles and reduce fire fuel proximity to the traveling public. The project proposes a 10-foot-wide Class I multi-use facility with 2-foot shoulders, lighting, storm drain accommodations, ADA ramps, and crossing surface improvements.

Funding:

Total Cost: $88,865,680

Pre-Construction Cost: $33,548,330

Construction Cost: $55,317,350

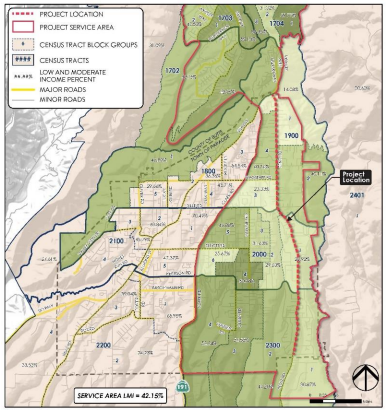
Existing Funding Resource: Unsecured

Unmet Need Pre-Construction: $33,548,330

Unmet Need Construction: $55,317,350

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Early Warning System

Project Priority:

#8

Project Scope:

The Early Warning System project will design, install, and implement a network of emergency warning systems for the purpose of rapid hazard notification.

Project Description:

This project will provide an early warning system with multiple notification channels, including IPAWS/WEA, AM Radio, SMS, social media, and outdoor siren/speakers capable of broadcasting audible alert tones and clear voice messages. The siren/speaker system will be installed in 21 locations throughout Paradise. The system is intended to have battery backup, AC, solar power, user friendly cloud-based software, and a reliable connection that is not reliant on local power or cell towers.

Funding:

Total Cost: $3,207,400

Pre-Construction Cost: $7,400

Construction Cost: $3,026,875

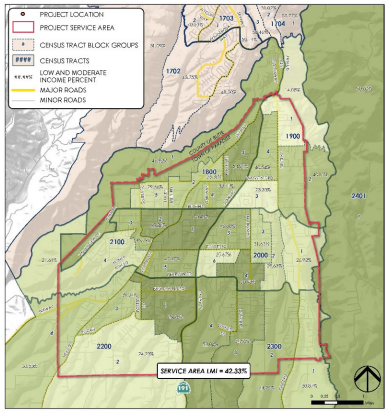
Existing Funding Resource: None

Unmet Need Pre-Construction: N/A

Unmet Need Construction: $3,200,000

Long Term Recover Plan Tier and Project:

1 – Emergency Notification



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Project Name:

Elliott Road Extension

Project Priority:

#9

Project Scope:

The Elliott Road Extension Project will extend the existing roadway 0.7-miles from its easterly terminus to Pentz Road. The extension will include a two-lane roadway with sidewalks, bike lanes, and lighting.

Project Description:

The project will extend Elliott Road 0.7-miles east to Pentz Road and provide alternative ingress/egress for the neighborhood as well as interconnectivity between primary evacuation routes within Town. The project also supports daily multimodal access and circulation needs of the community. The project improves access to evacuation routes, completes missing road segments, reduces dead-end streets, reduces fire fuel proximity to the roadway, and is consistent with Town Long-Term Recovery Plan.

Funding:

Total Cost: $7,050,742

Pre-Construction Cost: $2,344,688

Construction Cost: $4,706,054

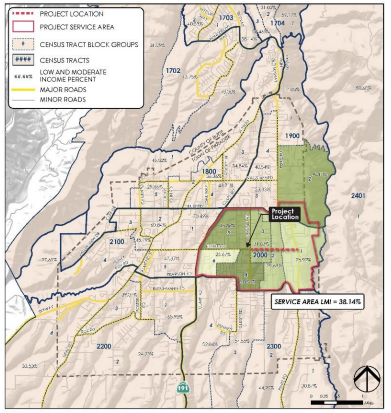
Existing Funding Resource: None

Unmet Need Pre-Construction: $2,344,688

Unmet Need Construction: $4,706,054

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Pentz/Pearson Intersection Improvements

Project Priority:

#9

Project Scope:

The Pentz/Pearson Intersection Improvements project will increase capacity with the construction of additional turn lanes and will provide for large vehicle turning radius. The project will require right-of-way acquisition.

Project Description:

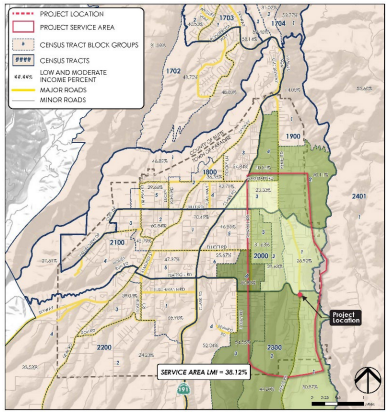
The Pentz/Pearson Intersection Improvements project will construct additional turn lanes and a traffic signal system or a roundabout at the existing narrow, All-Way Stop Controlled Pentz/Pearson intersection. Additional capacity and large vehicle turning space is needed at this location for more efficient emergency services. The control type decision will be made early, during the engineering feasibility study phase of the project. The project includes right-of-way acquisition in the intersection vicinity which is required to accommodate the larger intersection footprint that is anticipated.

Funding:

Total Cost: $4,500,000
Pre-Construction Cost: $587,000
Construction Cost: $3,913,000
Existing Funding Resource: None
Unmet Need Pre-Construction: $587,000
Unmet Need Construction: $3,913,000

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Elliott Class I

Project Priority:

#10

Project Scope:

The Elliott Road Class I Path Project will construct 2-miles of paved Class I facility and 42 ADA ramps between Skyway and Sawmill Road.

Project Description:

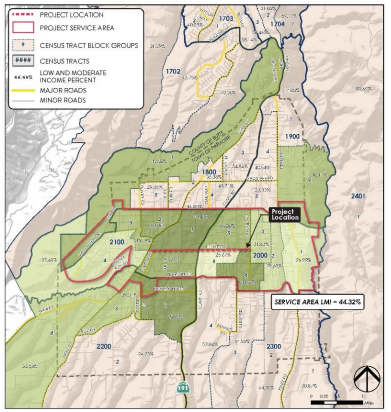
The Elliot Road Class I Path Project will improve connections for multi-modal transportation users in the Town of Paradise. The project proposes a separated Class I facility to improve connections to key destinations including Downtown Paradise, the Terre Ashe Recreation Center, and the Yellowstone Kelly Heritage Trail. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 42 ADA ramps to improve mobility for people in wheelchairs and with strollers.

Funding:

Total Cost: $12,718,561
Pre-Construction Cost: $2,555,200
Construction Cost: $10,163,361
Existing Funding Resource: None
Unmet Need Pre-Construction: $2,555,200
Unmet Need Construction: $12,718,561

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Neal Road Rehabilitation

Project Priority:

#10

Project Scope:

The project rehabilitates approximately 1.63 miles of Neal Road within the Town limits between Skyway and Wayland. The project work includes 1-inch Cold Plane and 3-inch asphalt concrete (AC) overlay for the entire roadway section with digout areas of 12-inch asphalt AC for sections with severe rutting and cracking damage.

Project Description:

Neal Road is an on-system, principal arterial, major connector route in from the Town of Paradise to State Route 99 (SR 99) and it is designated as a federal aid route within the Town Limits. Neal Road is one of the primary routes between the Neal Road Landfill just east of SR 99 and the Town. The rehabilitation consists of asphalt concrete overlays and structural section repair (digouts) for severely damaged locations.

Funding:

Total Cost: $1,588,300

Pre-Construction Cost: $143,000

Construction Cost: $1,445,300

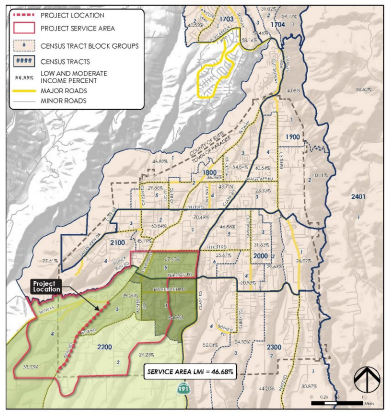
Existing Funding Resource: FEMA - Emergency Relief

Unmet Need Pre-Construction: $35,750

Unmet Need Construction: $361,325

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Off-System Culvert Replacement

Project Priority:

#11

Project Scope:

The Off-System Culvert Replacement Project involves replacing damaged On-System High Density Poly Ethylene (HDPE) culverts and rehabilitation of the roadway section above the pipe at 31 locations.

Project Description:

The project will repair damaged culverts at 31 locations along neighborhood roads connecting to evacuation routes to improve safety and provide safe and effective management of storm water runoff. The culverts targeted for inspection were identified by using the Town's Acela inventory database. Plastic culverts that were listed as off the federal and state system and located within the burn areas were identified.

Funding:

Total Cost: $750,000

Pre-Construction Cost: $53,000

Construction Cost: $697,000

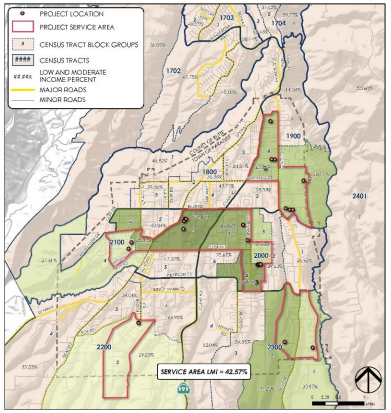
Existing Funding Resource: FEMA Public Assistance

Unmet Need Pre-Construction: $13,250

Unmet Need Construction: $174,250

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Reseeding Program

Project Priority:

#11

Project Scope:

The Reseeding Program phase one will plan and scope the areas for reseeding for erosion control and controlling the growth of noxious weeds throughout the Town.

Project Description:

This project will develop a team with a reseeding expert to perform an assessment to scope the area, type, and methods for reseeding and establish priority areas.

Funding:

Total Cost: $53,600

Pre-Construction Cost: N/A

Construction Cost: $53,600

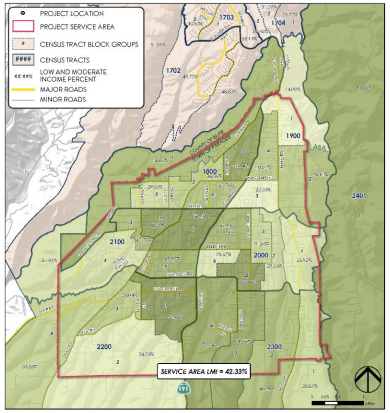
Existing Funding Resource: None

Unmet Need Pre-Construction: N/A

Unmet Need Construction: $53,600

Long Term Recover Plan Tier and Project:

1 - Fuels Management Plan



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Project Name:

Buschmann Extension

Project Priority:

#12

Project Scope:

Buschmann Extension project will construct a 0.74-mile two lane road extension from easterly terminus at Clark Road (State Route 191) to South Libby Road. The project will include two travel lanes, wide shoulders, sidewalks, storm drainage infrastructure, and bridge over Clear Creek.

Project Description:

Bushmann Road is an east-west route located south of Pearson Road, surrounded by mixed land uses including residences, schools, and parks. The route currently accesses one evacuation route within Town, and the project proposes to extend Buschmann Road 0.74-miles east to connect with residential dead-end street South Libby Road. The project will provide ingress/egress routes for neighborhoods in the South Libby Road area and provide more direct access to an evacuation route, Clark Road.

Funding:

Total Cost: $6,763,021

Pre-Construction Cost: $2,380,120

Construction Cost: $4,382,901

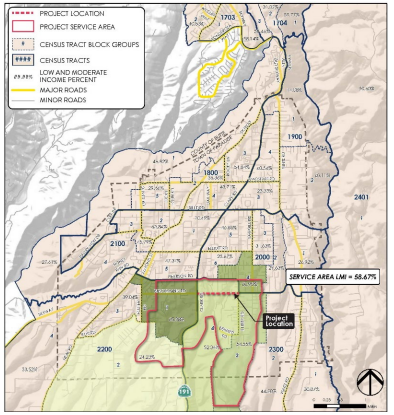
Existing Funding Resource: None

Unmet Need Pre-Construction: $2,380,120

Unmet Need Construction: $4,382,901

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Buschmann Extension West

Project Priority:

#13

Project Scope:

The Buschmann Road West Extension project will construct a 0.35-mile extension the westerly terminus at Foster Road to Skyway. The project will consist of two lanes, wide shoulders, sidewalks, and storm drainage infrastructure.

Project Description:

The project will extend the roadway 0.35-miles west to Skyway and provide alternative ingress/egress routes for surrounding neighborhoods, as well as interconnectivity between primary evacuation routes within Town. The project improves access to evacuation routes, completes missing road segments, reduces dead-end streets, reduces fire fuel proximity to the roadway, and is consistent with Town Long-Term Recovery Plan.

Funding:

Total Cost: $3,290,571

Pre-Construction Cost: $1,385,152

Construction Cost: $1,905,419

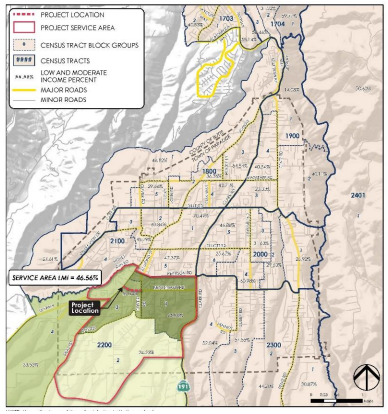
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,385,152

Unmet Need Construction: $1,905,419

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Sawmill Extension South

Project Priority:

#13

Project Scope:

The Sawmill Road Extension South project constructs a 0.6-mile two-lane roadway extension from its southerly terminus to connect to South Libby Road. The Project will include wide shoulders, Class I path, and storm drainage infrastructure.

Project Description:

Sawmill Road is a dead-end residential street extending south of Pearson Road, resulting in limited ingress/egress options for residents on Sawmill Road as well as residents on 17 directly adjoining dead-end residential streets. The existing network creates hazardous conditions where high volumes of vehicle traffic overload Sawmill Road to access evacuation routes. The project will extend Sawmill Road by 0.6-miles to connect with South Libby Road and provide an alternative ingress/egress for the neighborhood residents surrounding both roadways as well as access to the future Roe Road Phase 1.

Funding:

Total Cost: $3,337,373

Pre-Construction Cost: $1,151,240

Construction Cost: $2,186,133

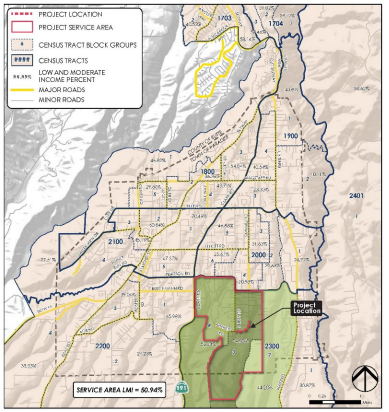
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,151,240

Unmet Need Construction: $2,186,133

Long Term Recover Plan Tier and Project:

1 - Long Dead-End Streets



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Project Name:

Roe Road Phase 4

Project Priority:

#14

Project Scope:

Roe Road Phase 4 will construct a new 0.67-mile roadway extending from the Roe Road western terminus on Neal Road to Skyway Road. The project will include a Class I multi-use pathway, ADA curb ramps, and storm drainage infrastructure.

Project Description:

Roe Road Phase 4 is part of a larger project to construct a new east-west roadway between Skyway and Pentz Road to improve circulation and connectivity throughout the town and provide alternative ingress/egress routes for residential neighborhoods. The project will create a new roadway segment between Neal Road and Skyway to extend Roe Road. It will also construct a parallel Class I pathway for pedestrians and cyclists that will also function as a dedicated bi-directional travel lane for first responders during emergency events.

Funding:

Total Cost: $20,380,141

Pre-Construction Cost: $3,667,400

Construction Cost: $16,712,741

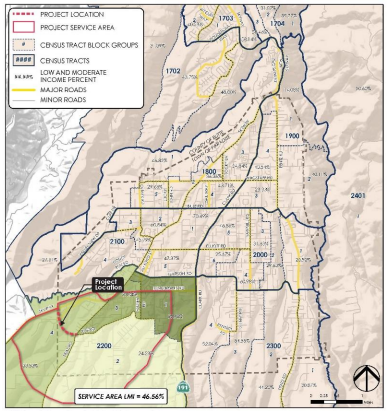
Existing Funding Resource: None

Unmet Need Pre-Construction: $3,667,400

Unmet Need Construction: $16,712,741

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Roe Road Phase 5

Project Priority:

#15

Project Scope:

Roe Road Phase 5 will consist of a 3-lane widening of existing Roe Road (1.6 miles) between Scottwood Road and Neal Road as well as addition of a Class I path and stormwater infrastructure.

Project Description:

The Roe Road Extension Phase 5 is part a larger project to construct a new east-west roadway between Skyway and Pentz Road to improve circulation and connectivity throughout the Town and provide alternative ingress/egress routes for residential neighborhoods. The project will widen existing Roe Road between Skyway and Scottwood Drive to provide increased capacity during evacuation events. The project will also construct a parallel Class I bikeway for travel by people walking and bicycling and provides first responders a dedicated bi-directional travel lane during emergency events.

Funding:

Total Cost: $21,049,870

Pre-Construction Cost: $5,298,320

Construction Cost: $15,751,550

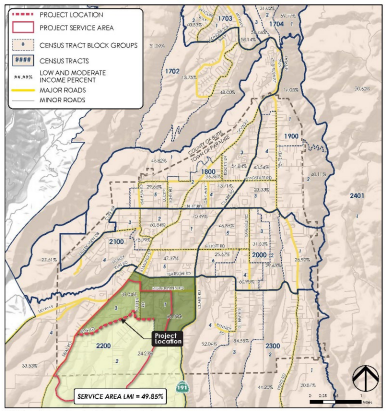
Existing Funding Resource: None

Unmet Need Pre-Construction: $5,298,320

Unmet Need Construction: $15,751,550

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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(530) 872-6291

Project Name:

Sawmill Class I

Project Priority:

#16

Project Scope:

The Sawmill Class I Project will construct 1.5-miles of paved Class I facility and 44 ADA Ramps between Bille Road and Pearson Road.

Project Description:

The Sawmill Class I Project will improve connections for multi-modal transportation users in the Town. The project proposes a separated Class I facility to improve connections to key destinations including Bille Park, Paradise Memorial Park, and residential neighborhoods. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 44 ADA ramps to improve mobility for people in wheelchairs and with strollers.

Funding:

Total Cost: $9,129,765

Pre-Construction Cost: $1,103,400

Construction Cost: $8,026,365

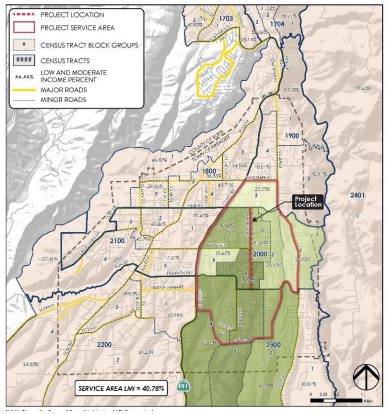
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,103,400

Unmet Need Construction: $8,026,365

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Upper Skyway Widening

Project Priority:

#16

Project Scope:

The Upper Skyway Widening project will widen Upper Skyway from Bille Road to Pentz Road (2.7 miles) to include a 12-foot-wide center turn lane, widened shoulders, and a multi-use pathway. The project builds upon the FHWA disaster recovery efforts.

Project Description:

Skyway serves as the primary ingress/egress route for Town residents. Widening the road will improve evacuation along this route, provide an adequate shoulder to park disabled vehicles and reduce fire fuel proximity to the traveling public. The project includes a grade separated multi-use bike and pedestrian pathway create an interconnected path system. This pathway can function as an emergency ingress/egress during future evacuation events and provide an additional fire break.

Funding:

Total Cost: $49,067,998

Pre-Construction Cost: $19,195,610

Construction Cost: $29,872,388

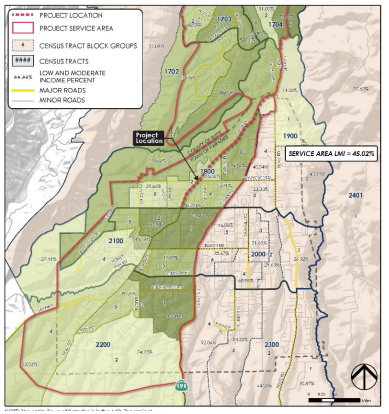
Existing Funding Resource: None

Unmet Need Pre-Construction: $19,195,610

Unmet Need Construction: $29,872,388

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Neal Road Widening

Project Priority:

#17

Project Scope:

The Neal Road Widening project will widen Neal Road from Skyway to the southern Town limits to include a 12-foot-wide center turn lane, increased shoulder widths, and installation of a new multi-use pathway. The project builds upon the FHWA disaster recovery efforts to reconstruct the existing pavement.

Project Description:

Widening the road will improve evacuation efficiency along this route, provide an adequate shoulder to park disabled vehicles, provide additional evacuation capacity, and reduce fire fuel proximity to the traveling public. The project includes a grade separated multi-use bike and pedestrian pathway to create an interconnected path system. This pathway can also function as emergency vehicle ingress/egress during future evacuation events and provide an additional fire break.

Funding:

Total Cost: $25,308,880

Pre-Construction Cost: $8,215,670

Construction Cost: $17,093,210

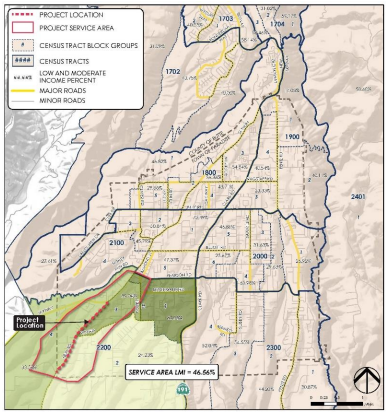
Existing Funding Resource: Unsecured

Unmet Need Pre-Construction: $8,215,670

Unmet Need Construction: $17,093,210

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

On-System Culvert Replacement

Project Priority:

#18

Project Scope:

The On-System Culvert Replacement Project involves replacing damaged On-System High Density Poly Ethylene (HDPE) “plastic” culverts with Reinforced Concrete Pipe (RCP) culverts, including restoration of the roadway section above the pipe at various locations. The project is funded through FHWA Emergency Relief.

Project Description:

The project will repair damaged culverts at 25 locations along evacuation routes to improve safety and provide safe and effective management of storm runoff. Consistent with the Long-Term Recovery Plan, the project provides for a more sustainable and greener community.

Funding:

Total Cost: $880,400

Pre-Construction Cost: $73,900

Construction Cost: $806,500

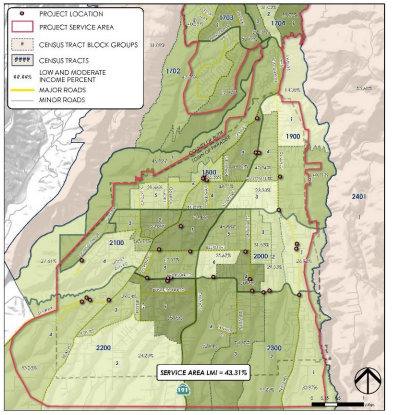
Existing Funding Resource: FHWA-Emergency Relief

Unmet Need Pre-Construction: $18,475

Unmet Need Construction: $201,625

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Valley View Class I

Project Priority:

#18

Project Scope:

Construct 1.2-miles of paved Class I facility and 30 ADA ramps.

Project Description:

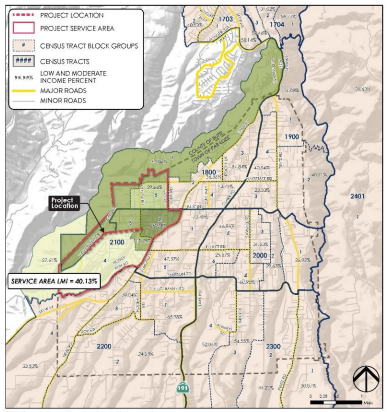
The Valley View Class I Project will improve connections for multi-modal transportation users in the Town of Paradise. The project proposes a separated Class I facility to improve connections to key destinations including Downtown Paradise, Bille Park, and the Terre Ashe Recreation Center. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 30 ADA ramps to improve mobility for people in wheelchairs and with strollers.

Funding:

Total Cost: $8,973,865
Pre-Construction Cost: $947,500
Construction Cost: $8,026,365
Existing Funding Resource: None
Unmet Need Pre-Construction: $947,500
Unmet Need Construction: $8,026,365

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Upper Clark Road Widening

Project Priority:

#19

Project Scope:

The Upper Clark Road Widening project will widen Clark Road from Wagstaff Road to Skyway (1.5-mile segment) to include a 12-foot-2ide center turn lane, widened shoulders, and a multi-use pathway. The project builds upon the FHWA disaster recovery efforts.

Project Description:

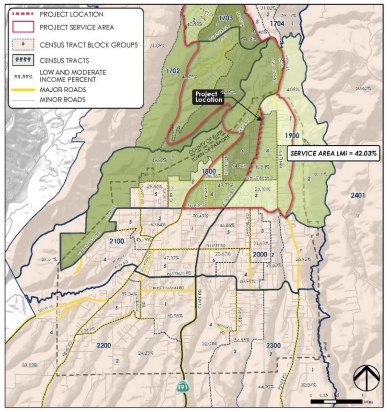
Widening the road will improve evacuation along this route, provide an adequate shoulder to park disabled vehicles and reduce fire fuel proximity to the traveling public. Consistent with the Long-Term Recovery Plan, the project includes a grade separated multi-use bike and pedestrian pathway to create an interconnect path system. This pathway can function as emergency ingress/egress during future evacuation events and provide an additional fire break.

Funding:

Total Cost: $25,007,475
Pre-Construction Cost: $8,409,865
Construction Cost: $16,597,610
Existing Funding Resource: None
Unmet Need Pre-Construction: $8,409,865
Unmet Need Construction: $16,597,610

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Wagstaff Class I

Project Priority:

#19

Project Scope:

The Wagstaff Class I Project will construct 2-miles of paved Class I facility and 52 ADA ramps between Oliver Road and Bille Road.

Project Description:

The Wagstaff Class I Project will improve connections for multi-modal transportation users in the Town of Paradise. The project proposes a separated Class I facility to improve connections to key destinations including Downtown Paradise, Bille Park, Yellowstone Kelly Heritage Trail, and the Terre Ashe Recreation Center. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 52 ADA ramps to improve mobility for people in wheelchairs and with strollers.

Funding:

Total Cost: $12,638,530

Pre-Construction Cost: $1,945,300

Construction Cost: $10,693,230

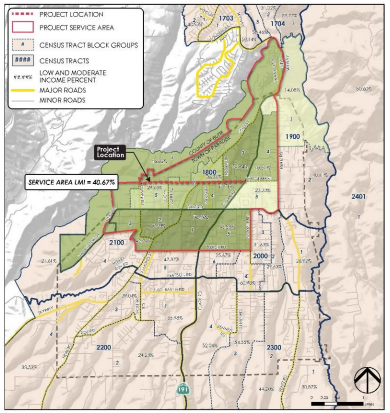
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,945,300

Unmet Need Construction: $10,693,230

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Elliott Road West Extension

Project Priority:

#20

Project Scope:

The Elliott Road West Extension will construct a 0.45-mile new roadway alignment from its westerly terminus at Oakmore Drive to Pinewood Drive. The project will include a two-lane roadway, wide shoulders, Class I multi-use pathway, storm drainage infrastructure, and bridge over Honey Run Creek.

Project Description:

The project will extend Elliott Road to create an alternative ingress/egress route for the residential neighborhood and connection with Skyway evacuation route, reducing driving distance by up to 1-mile. The project improves access to evacuation routes, completes missing road segments, reduces dead-end streets, reduces fire fuel proximity to the roadway, adds a multi-use path to contribute to the interconnected path system, and is consistent with Paradise Long-Term Recovery Plan.

Funding:

Total Cost: $850,011

Pre-Construction Cost: $482,600

Construction Cost: $367,411

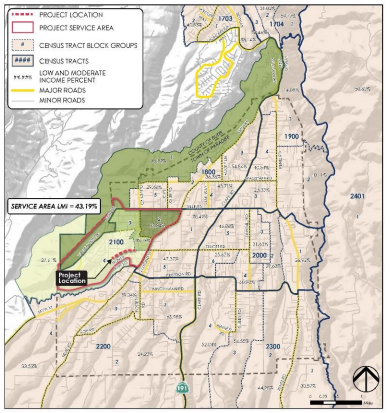
Existing Funding Resource: None

Unmet Need Pre-Construction: $38,000

Unmet Need Construction: $291,600

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Category 4 Tree Removal

Project Priority:

#21

Project Scope:

The Category 4 Tree Removal project will remove the standing burnt trees within the Town of Paradise (Category 4 trees) which were burned due to the Camp Fire.

Project Description:

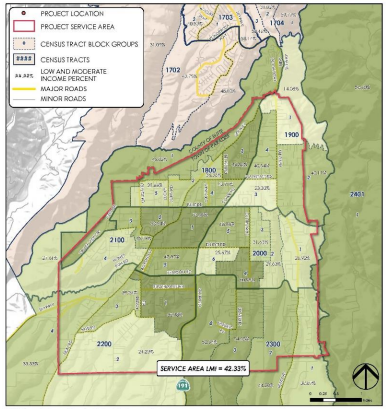
Category 4 trees are defined as hazard trees on private property that constitute a fire hazard. This project will remove between 30,000 and 55,000 trees, including an estimated 222,700 trees on the "back forty" of private property, to reduce the fire hazard and the risk of Bark Beetle infestation.

Funding:

Total Cost: $11,747,128
Pre-Construction Cost: N/A
Construction Cost: $11,747,128
Existing Funding Resource: None
Unmet Need Pre-Construction: N/A
Unmet Need Construction: $11,747,128

Long Term Recover Plan Tier and Project:

1 - Standing Burnt Tree Removal



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Project Name:

Category 4 Tree Removal Additional

Project Priority:

#22

Project Scope:

The Category 4 Tree Removal project will remove the standing burnt trees within the Town of Paradise (Category 4 trees) which were burned due to the Camp Fire.

Project Description:

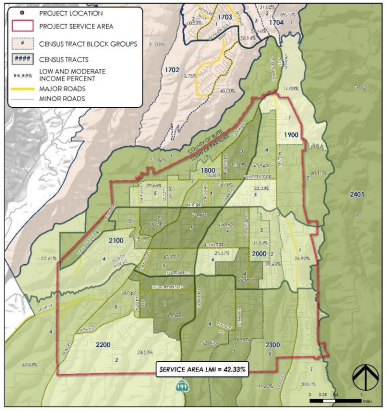
Category 4 trees are defined as hazard trees on private property that constitute a fire hazard. This project will remove between 30,000 and 55,000 trees, including an estimated 222,700 trees on the "back forty" of private property, to reduce the fire hazard and the risk of Bark Beetle infestation.

Funding:

Total Cost: $10,000,000
Pre-Construction Cost: N/A
Construction Cost: $10,000,000
Existing Funding Resource: None
Unmet Need Pre-Construction: N/A
Unmet Need Construction: $10,000,000

Long Term Recover Plan Tier and Project:

1 - Standing Burnt Tree Removal



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Project Name:

Forest Service Road Improvements & Extension

Project Priority:

#22

Project Scope:

The project acquires the right of way and improves approximately 1,940 feet of Forest Service Road by removing a layer of existing pavement via Cold Plane (CP) and resurfacing with hot mix asphalt overlay (HMA). In addition, the project extends the road from its current east-west alignment 900 feet west to connect to Skyway. Improvements include paving, striping, new shoulders, bike lane, and drainage facilities.

Project Description:

The project improves and extends Forest Service Road, an east-west route connecting Clark Road to a public roadway. Butte County Fire Station 35 is at the corner of Forest Service Road and Moore Road. The improved roadway will provide a missing connection between Skyway and Clark Road, primary evacuation routes for the community.

Funding:

Total Cost: $1,706,351

Pre-Construction Cost: 1,213,444

Construction Cost: $542,907

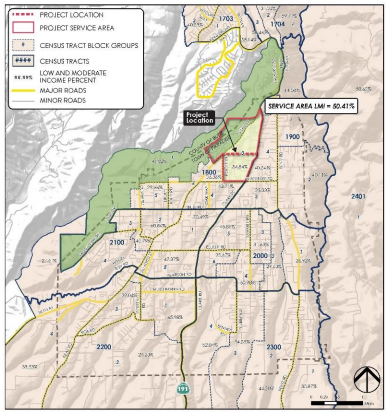
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,213,444

Unmet Need Construction: $542,907

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Black Olive/Foster Intersection Improvements

Project Priority:

#23

Project Scope:

The Black Olive/Foster Intersection Improvements project will include roadway realignment, the construction of turn lanes, and the installation of a traffic signal or a roundabout.

Project Description:

The Black Olive/Foster Intersection Improvements project will realign Black Olive Drive both horizontally and vertically through the Foster Drive intersection, construct additional turn lanes, and revise the intersection controls. The project includes constructing either a traffic signal system or roundabout. The intersection control decision will be made during the engineering feasibility study (early phase) of the project. The project includes right-of-way acquisition in the intersection vicinity which will be required to realign the roadway in accordance with nationally recognized design guidelines.

Funding:

Total Cost: $5,000,000

Pre-Construction Cost: $652,200

Construction Cost: $4,347,800

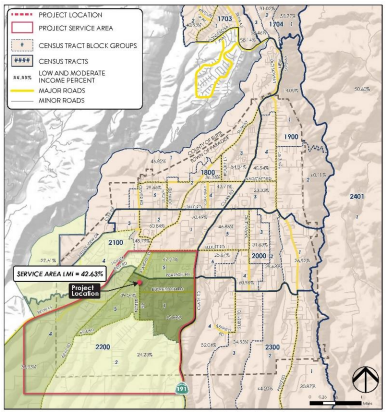
Existing Funding Resource: None

Unmet Need Pre-Construction: $652,200

Unmet Need Construction: $4,347,800

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

General Plan Update

Project Priority:

#23

Project Scope:

The General Plan Update project will complete a comprehensive General Plan and Zoning Ordinance update. The Town's General Plan has not been updated since 1994.

Project Description:

Updating development goals and reaffirming land use patterns is central to recovery. A comprehensive General Plan Update will be a community-driven process that allows for meaningful community engagement and aligns local priorities and needs to post-fire reconstruction.

Funding:

Total Cost: $1,200,000

Pre-Construction Cost: $1,200,000

Construction Cost: N/A

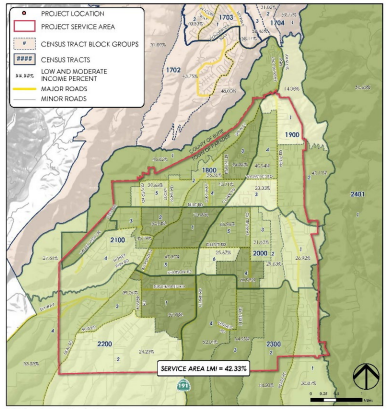
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,200,000

Unmet Need Construction: N/A

Long Term Recover Plan Tier and Project:

1 - Planning and Zoning



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Project Name:

Changeable Message Sign Network

Project Priority:

#24

Project Scope:

The Changeable Message Sign Network project provides approximately 10 mobile, changeable message signs equipped with remote and manual programming capabilities that can be mounted to trailers as needed.

Project Description:

The Changeable Message Sign Network project will provide approximately 10 mobile (trailer mounted) changeable message signs to be deployed along evacuation routes and at key intersections in the Town of Paradise during emergency events. The signs are intended to be equipped with remote programming/controls, noting that wireless communications could potentially be down during an emergency and manual programming would then be required. Some signs may be used regularly or during pending events to relay important information.

Funding:

Total Cost: $130,000

Pre-Construction Cost: $15,000

Construction Cost: $115,000

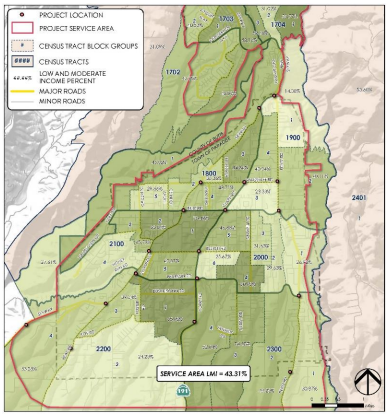
Existing Funding Resource: None

Unmet Need Pre-Construction: $15,000

Unmet Need Construction: $115,000

Long Term Recover Plan Tier and Project:

1 - Emergency Notification



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Project Name:

Sewer Service Area Specific Plan

Project Priority:

#24

Project Scope:

The Sewer Service Area Specific Plan project will analyze the impacts of installing a sewer system in the Town's Downtown and Commercial areas.

Project Description:

The project will study the impacts of constructing a sewer system along Skyway, Pearson Road, and Clark Road as well as in Downtown. The specific plan will study how the sewer system will influence commercial and residential rebuilding efforts, land use patterns, and economic revitalization.

Funding:

Total Cost: $800,000

Pre-Construction Cost: $800,000

Construction Cost: N/A

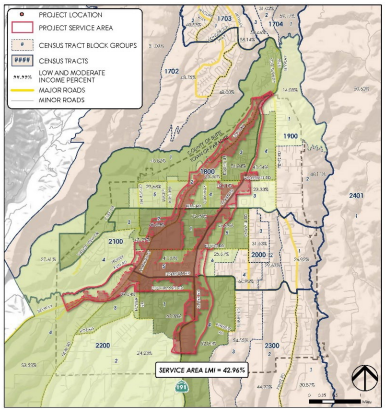
Existing Funding Resource: None

Unmet Need Pre-Construction: $800,000

Unmet Need Construction: N/A

Long Term Recover Plan Tier and Project:

1 – Sewer System



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Project Name:

Clark Spot Widening

Project Priority:

#25

Project Scope:

The Clark Road Spot Widening Project will widen 0.22-miles of Clark Road between Wagstaff Road and Bille Road to include a 12-foot wide two way left turn lane.

Project Description:

Clark Road serves as a primary evacuation route for not only the Town but also the communities of Magalia, Paradise Pines, DeSabla, Lovelock, and Sterling City. There is a critical chokepoint between Wagstaff Road and Bille Road. The chokepoint is a result of a one-lane reduction from five to four lanes, where the roadway loses a two way left turn lane for 0.22-miles. During evacuation events, Clark Road will serve one-way vehicle throughput, whereas the lane reduction will force lane merging and cause evacuation efficiency delays.

Funding:

Total Cost: $1,684,300

Pre-Construction Cost: $194,300

Construction Cost: $1,490,000

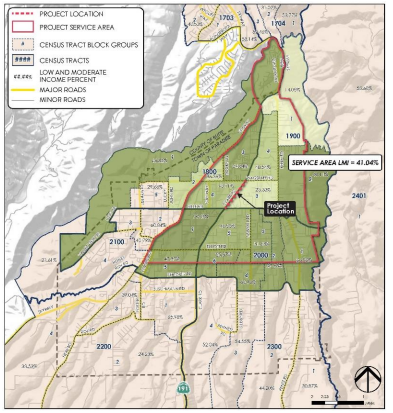
Existing Funding Resource: None

Unmet Need Pre-Construction: $194,300

Unmet Need Construction: $1,490,000

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Defensible Space Code Enforcement

Project Priority:

#25

Project Scope:

The Defensible Space Code Enforcement project will update residential codes and standards to improve fire resiliency.

Project Description:

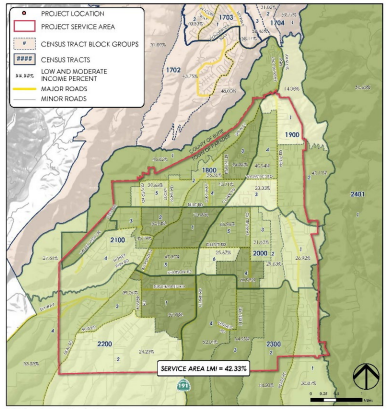
The project will assist in providing certainty to homeowners during the rebuilding process and beyond. Hardened building envelopes combined with aggressive fuel reduction would increase safety.

Funding:

Total Cost: $691,460
Pre-Construction Cost: N/A
Construction Cost: $691,460
Existing Funding Resource: FEMA HMGP
Unmet Need Pre-Construction: N/A
Unmet Need Construction: $172,865

Long Term Recover Plan Tier and Project:

1 - Updated Rebuilding Codes/Standards



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(530) 872-6291

Project Name:

Hazardous Fuel Reduction Program

Project Priority:

#25

Project Scope:

The Defensible Space Code Enforcement project will remove hazardous fuel in the wake of the Camp Fire within Town.

Project Description:

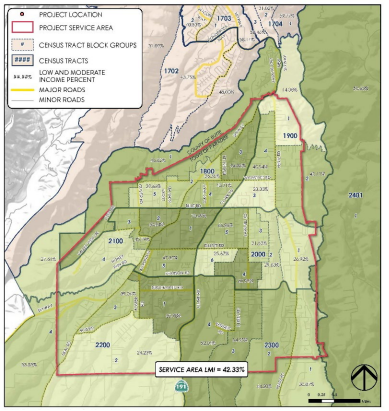
The project will dispose of most vegetative debris at the Green Waste Yard adjacent to the Public Works yard on American Way in Paradise.

Funding:

Total Cost: $8,465,986
Pre-Construction Cost: N/A
Construction Cost: $8,465,986
Existing Funding Resource: FEMA HMGP
Unmet Need Pre-Construction: N/A
Unmet Need Construction: $2,116,497

Long Term Recover Plan Tier and Project:

1 - Fuels Management Plan



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Project Name:

Clark Class I

Project Priority:

#26

Project Scope:

The Clark Road Class I Path Project will construct 3.4-miles of paved Class I facility, 12 ADA camps, 1 new crosswalk, and 1 rectangular rapid flashing beacon (RRFB) from Skyway to Pearson Road.

Project Description:

The project proposes a separated Class I facility to improve connections to key destinations including Downtown Paradise, Paradise Memorial Park, Terre Ashe Recreation Center, and Moore Road Park. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 12 ADA ramps to improve mobility for people in wheelchairs and with strollers. A new crosswalk with a RRFB will be installed to improve visibility of pedestrians and bicyclists at the crossing.

Funding:

Total Cost: $21,554,691

Pre-Construction Cost: $4,001,100

Construction Cost: $17,553,591

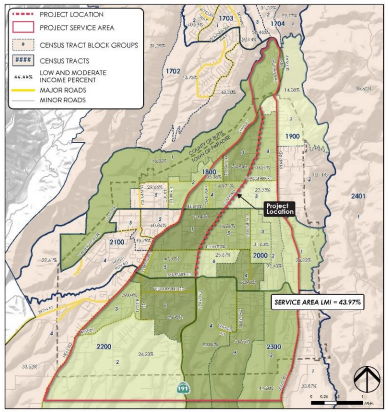
Existing Funding Resource: None

Unmet Need Pre-Construction: $4,001,100

Unmet Need Construction: $17,553,591

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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(530) 872-6291

Project Name:

Libby Road Extension

Project Priority:

#26

Project Scope:

The Libby Road Extension will construct a 0.25-mile facility between Nunneley Road and Elliott Road. The project will include two travel lanes, wide shoulders, sidewalks, and storm drainage infrastructure.

Project Description:

Libby Road is a north-south corridor within the Town with a critical missing link between Nunneley Road and Elliott Road. The 0.25-mile missing roadway segment will be completed by the proposed project to provide Town residents an alternative ingress/egress route connecting with evacuation corridors. The project will also improve the existing Libby Road from Pearson Road to Nunneley Road.

Funding:

Total Cost: $5,898,678

Pre-Construction Cost: $1,317,084

Construction Cost: $4,581,594

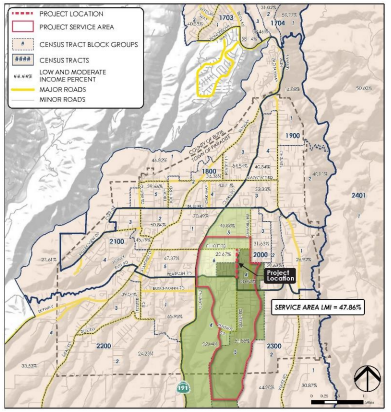
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,317,084

Unmet Need Construction: $4,581,594

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

On-System Hardscape Replacement

Project Priority:

#26

Project Scope:

The On-System Hardscape Replacement Project involves removal and replacement of damaged concrete curb, gutter, and sidewalk at 22 locations along on-system roads that are part of the federal-aid system. The project is partially funded through FHWA Emergency Relief.

Project Description:

The project will repair damaged hardscape along on-system roads to improve safety. The Town's hardscape sustained heavy damage in the wake of the Camp fire. Damaged areas pose a hazard to pedestrians and bicyclists. Consistent with the Long-Term Recovery Plan, the project repairs will support an interconnected path system and walkable downtown.

Funding:

Total Cost: $767,100

Pre-Construction Cost: $73,900

Construction Cost: $693,200

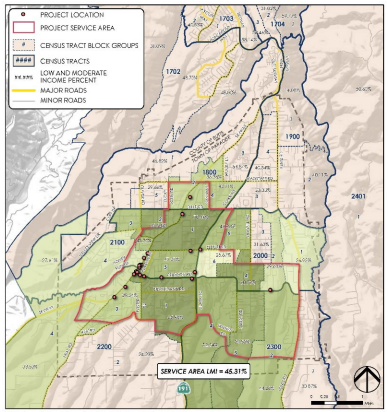
Existing Funding Resource: FHWA-Emergency Relief

Unmet Need Pre-Construction: $18,475

Unmet Need Construction: $173,300

Long Term Recover Plan Tier and Project:

1 - Walkable Downtown



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Project Name:

Shay Lane Extension

Project Priority:

#27

Project Scope:

The Shay Lane Extension project constructs a 0.07-mile roadway from its southerly terminus to Center Pine Drive. The extension will consist of a two-lane roadway with wide shoulders, sidewalks, and storm drainage infrastructure.

Project Description:

The project will extend Shay Lane by 0.07-miles to connect with Center Pine Drive and Stark Lane, providing an alternative ingress/egress route to connect with Pentz Road. The project improves access to evacuation routes, completes missing road segments, reduces dead-end streets, reduces fire fuel proximity to the roadway and is consistent with the Town Long-Term Recovery Plan.

Funding:

Total Cost: $849,633

Pre-Construction Cost: $348,128

Construction Cost: $501,505

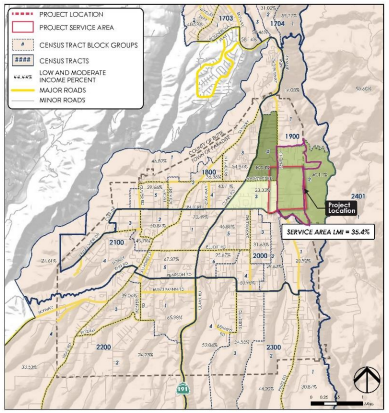
Existing Funding Resource: None

Unmet Need Pre-Construction: $348,128

Unmet Need Construction: $501,505

Long Term Recover Plan Tier and Project:

1 - Long Dead-End Streets



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Project Name:

Storm Drain Master Plan

Project Priority:

#27

Project Scope:

Develop a master plan to guide the implementation of new comprehensive drainage infrastructure improvements that will provide safe and effective management of storm water runoff. The plan will review 100 miles of existing stormwater infrastructure and study future needs, including impacts from the 2018 Camp Fire.

Project Description:

The project will develop a Storm Drain Master plan to effectively implement drainage and infrastructure improvements to protect the Town from storm water runoff. The plan would provide the Town with critical information to prioritize and implement needed storm water infrastructure improvements that will decrease the quantity of runoff, reduce risk of flooding and improve the quality of water.

Funding:

Total Cost: $513,774

Pre-Construction Cost: $513,774

Construction Cost: N/A

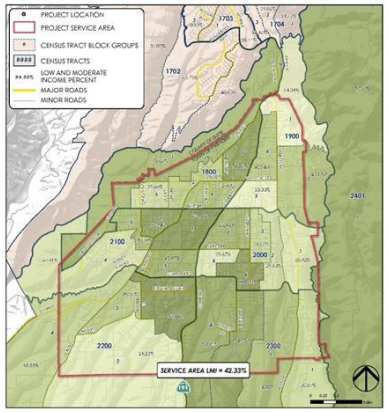
Existing Funding Resource: FEMA Hazard Mitigation Grant

Unmet Need Pre-Construction: $128,444

Unmet Need Construction: N/A

Long Term Recover Plan Tier and Project:

2 - Sustainable Stormwater and Drainage



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Project Name:

Moore Road Improvements

Project Priority:

#28

Project Scope:

The project acquires the right of way and improves 2,413.12 linear feet (approximately 0.5 miles) of Moore Road to a public roadway. The project removes a layer of existing pavement via Cold Plane (CP) and resurfaces with hot mix asphalt overlay (HMA). Improvements include paving, pavement marking, sidewalks, and storm drain infrastructure.

Project Description:

The project improves Moore Road, a north-south route connecting Forest Service Road through Herb Lane to the northern limit of Skyway. Rehabilitation of Moore Road will improve egress/ingress of emergency response vehicles. This project combined with the Forest Service Road Improvements & Extension project, increase access to Skyway and Clark Road are primary evacuation routes for the community.

Funding:

Total Cost: $1,436,639

Pre-Construction Cost: $1,305,176

Construction Cost: $401,463

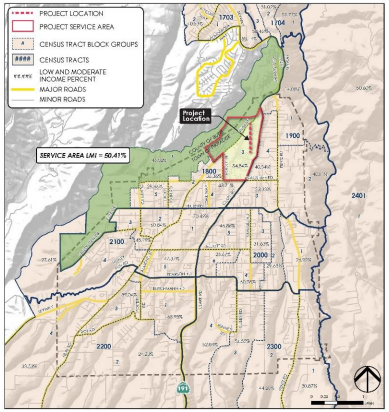
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,305,176

Unmet Need Construction: $401,463

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Residential Ignition Resistant Improvement Program

Project Priority:

#28

Project Scope:

The Residential Ignition Resistant Improvement Program will update protocols for assessing compliance with current codes and standards for structures that survived the Camp Fire. It will also develop improvements as well as establish the process for improvement applications/application approval and subsequent improvement implementation.

Project Description:

This project is split between two phases. Phase one is update protocols for assessing compliance with current codes and standards for structures that survived the Camp Fire. After the process is developed, the Town would then begin accepting and approval of applications through completion of the actual project. Phase two will consist of approving projects and notifying the homeowner to proceed with the approved scope of work.

Funding:

Total Cost: $8,465,986

Pre-Construction Cost: N/A

Construction Cost: $8,465,986

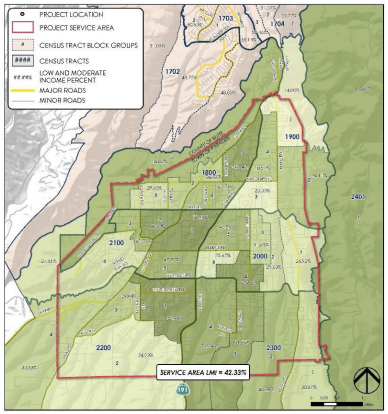
Existing Funding Resource: None

Unmet Need Pre-Construction: N/A

Unmet Need Construction: $8,465,986

Long Term Recover Plan Tier and Project:

2 - Education Program



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Project Name:

Skyway Class I

Project Priority:

#28

Project Scope:

Construct 0.3-miles of paved Class I facility and 1 ADA ramp from Oliver Road to the Yellowstone Kelly Heritage Trail.

Project Description:

The project proposes a separated Class I facility to improve connections to key destinations including Downtown Paradise, Bille Park, and the Terre Ashe Recreation Center. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 1 ADA ramp to improve mobility for people in wheelchairs and with strollers.

Funding:

Total Cost: $3,371,677

Pre-Construction Cost: $1,763,800

Construction Cost: $1,607,877

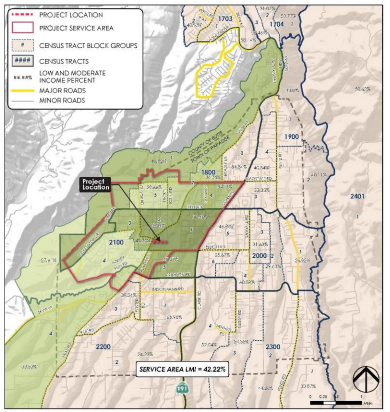
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,763,800

Unmet Need Construction: $1,607,877

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Skyway Connectivity

Project Priority:

#29

Project Scope:

The Skyway Connectivity Project will construct 5 segments of sidewalk infill totaling 4,255 linear feet, 20 new ADA ramps, and stripe 3,165 linear feet of on-street bicycle lanes between Wagstaff Road and Bille Road. The project also constructs 20 ADA ramps and undergrounds overhead utilities.

Project Description:

The proposed project will provide infrastructure improvements for people walking and bicycling in the corridor to reach destinations throughout Town. The proposed improvements serve a dual purpose and provide increased capacity for citizens as well as ingress/egress for emergency response vehicles during evacuation events.

Funding:

Total Cost: $4,461,689

Pre-Construction Cost: $656,000

Construction Cost: $3,805,689

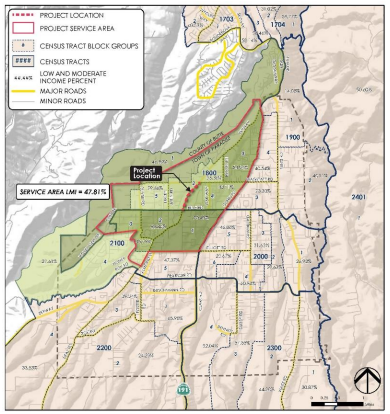
Existing Funding Resource: None

Unmet Need Pre-Construction: $656,000

Unmet Need Construction: $3,805,689

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Toyon Lane Reconstruction

Project Priority:

#29

Project Scope:

The scope includes acquisition of a 0.5 mile long, privately-owned roadway and reconstruction of the roadway to two lanes with shoulders to improve circulation, emergency preparedness, response, and provide an additional north-south evacuation route for area residents.

Project Description:

Toyon Lane is currently a private road that connects Roe Road and Foster Road. It is approximately 0.5 miles long. Acquiring the road and reconstructing it to Town standards will improve circulation and access by providing another north-south connector that will increase evacuation capacity, improve public safety, and provide compatibility for affordable multi-family housing for the region. In addition, an extension of Roe Road is planned to establish a cross-town connection to Neal Road, a primary evacuation route.

Funding:

Total Cost: $3,880,420

Pre-Construction Cost: $1,263,750

Construction Cost: $2,616,670

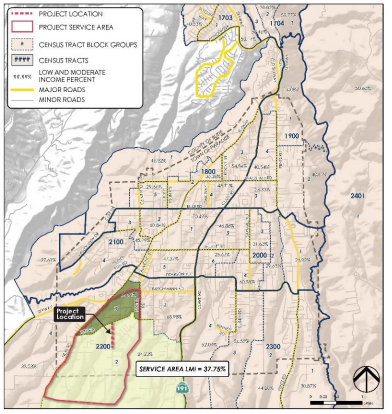
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,263,750

Unmet Need Construction: $2,616,670

Long Term Recover Plan Tier and Project:

2 - Sustainable Stormwater and Drainage



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Project Name:

Pentz Pathway Phase II

Project Priority:

#30

Project Scope:

The Pentz Pathway Phase II Project will construct 16,896 linear feet of a 10-foot-wide Class I multi-use facility complete with 2-foot-wide shoulders, lighting, and storm drain accommodations between Skyway to Wagstaff Road and Bille Road to Malibu Drive. Additional improvements include 80 new ADA ramps, 7 new RRFB signals, and 27 crossing surface improvements.

Project Description:

The proposed project will provide infrastructure improvements for people walking and bicycling in the corridor to reach destinations throughout Town. The project will extend from the recently constructed Pentz Project Phase I north to Skyway, as well as south to Pearson. The project proposes a 10-foot-wide Class I multi-use facility with 2-foot shoulders, lighting, storm drain accommodations, ADA ramps, RRFB's, and crossing surface improvements.

Funding:

Total Cost: $27,164,964

Pre-Construction Cost: $2,334,200

Construction Cost: $24,830,764

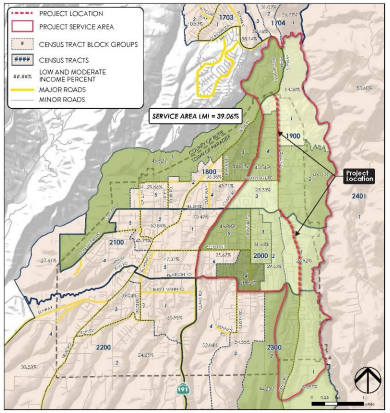
Existing Funding Resource: Congestion Mitigation and Air Quality

Unmet Need Pre-Construction: $1,634,200

Unmet Need Construction: $24,830,764

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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5555 Skyway
Paradise, CA 95969
(530) 872-6291

Project Name:

Traffic Management Center

Project Priority:

#30

Project Scope:

The Traffic Management Center project will construct a central Traffic Management Center (TMC) hub, including acquiring appropriate computer and software systems and will require hiring trained personnel to monitor signals.

Project Description:

The project would construct a Traffic Management Center (TMC) for the Town of Paradise. The TMC will be the central hub for Town control of the roadway network during an emergency, particularly the signalized intersections (approximately 16 signals). Within the TMC, trained personnel will be able to monitor traffic signals in-real time and manage the signals and roadway system. TMC personnel will have the ability to share information and coordinate with state and local authorities during emergencies.

Funding:

Total Cost: $3,500,000

Pre-Construction Cost: $456,500

Construction Cost: $3,043,500

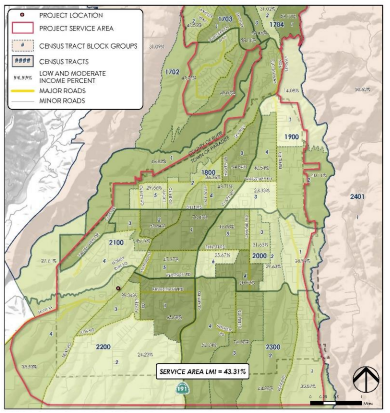
Existing Funding Resource: None

Unmet Need Pre-Construction: $456,500

Unmet Need Construction: $3,043,500

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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(530) 872-6291

Project Name:

Paradise Gateway

Project Priority:

#31

Project Scope:

The Paradise Gateway Project will construct an 8,554-foot long, grade-separated, Class I multi-use facility along Neal Road and 4,752 linear feet of sidewalk infill along Skyway between Neal Road and Pearson Road. The project also constructs 50 ADA ramps, up to 3 Rectangular Rapid Flashing Beacons (RRFBs), and undergrounds overhead utilities.

Project Description:

The proposed project will provide infrastructure improvements for people walking and bicycling in the corridor to reach destinations throughout Town. The project will provide an 8,554-foot grade-separated, Class I multi-use facility along Neal Road, 50 ADA ramps, up to 3 RRFBs, and 4,752 linear feet of sidewalk infill along Skyway between Neal Road and Pearson Road.

Funding:

Total Cost: $10,066,526

Pre-Construction Cost: $1,500,000

Construction Cost: $24,830,764

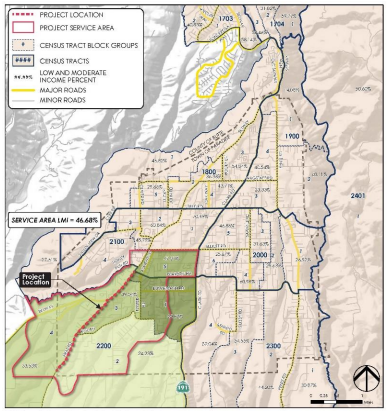
Existing Funding Resource: Congestion Mitigation and Air Quality

Unmet Need Pre-Construction: $950,000

Unmet Need Construction: $8,566,526

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Traffic Signal Interconnect

Project Priority:

#31

Project Scope:

The Traffic Signal Interconnect project will install updated, underground interconnect infrastructure that will service all 16 signals within the Town's limits. Existing equipment will be upgraded at controllers and cabinets as needed.

Project Description:

The Traffic Signal Interconnect project will provide signal interconnect to all signalized intersections in the Town of Paradise (16 signals) connecting to the proposed Traffic Management Center (TMC). The purpose of the project is to provide remote monitoring of intersections and changing of signal timings in real-time during an evacuation or other emergency events to reduce evacuation times. The interconnect infrastructure should be underground and hardened to protect against fire threat.

Funding:

Total Cost: $10,500,000

Pre-Construction Cost: $1,369,600

Construction Cost: $9,130,400

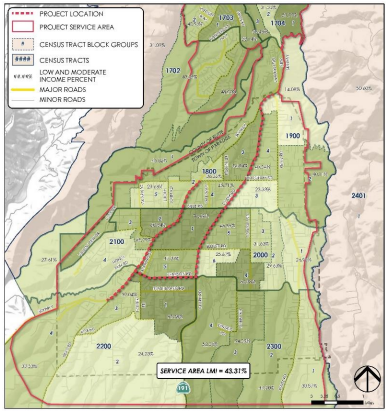
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,369,600

Unmet Need Construction: $9,130,400

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Bille Road Class I

Project Priority:

#33

Project Scope:

The Bille Road Class I Path project will construct 3-miles of grade-separated paved Class I facility and 84 ADA ramps between Bille Park and Pentz Road.

Project Description:

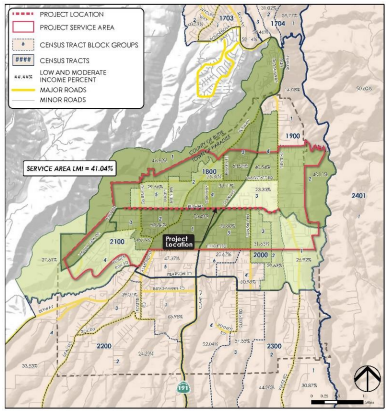
The Bille Road Class I Path Project will improve connections for multi-modal transportation users in the Town. The project proposes a separated Class I facility to improve connections to key destinations including Bille Park, Yellowstone Kelly Heritage Trail, and Ponderosa Elementary School. The Class I facility will be 10-feet wide to provide bi-directional lanes for people walking and bicycling, will include dark sky pathway lighting to retain the Town's rural characteristics, and will provide 84 ADA ramps to improve mobility for people in wheelchairs and with strollers.

Funding:

Total Cost: $17,865,526
Pre-Construction Cost: $2,361,700
Construction Cost: $15,503,826
Existing Funding Resource: None
Unmet Need Pre-Construction: $2,361,700
Unmet Need Construction: $15,503,826

Long Term Recover Plan Tier and Project:

1 - Interconnect Path System



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Project Name:

Bille Road Extension

Project Priority:

#34

Project Scope:

The Bille Road Extension project will construct 0.3-mile extension of Bille Road from its easterly terminus to Mountain View Drive. The project will consist of a two-lane roadway with wide shoulders, sidewalks, and storm drainage infrastructure.

Project Description:

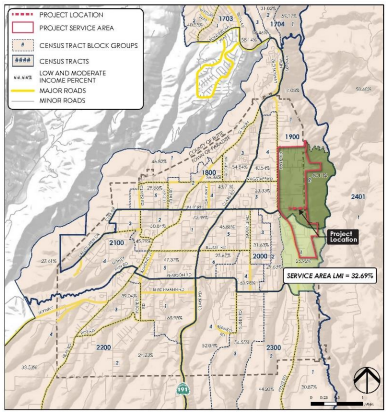
Bille Road dead-ends east of Alexander Court, 0.2-miles east of primary evacuation route, Pentz Road. Residences on Stark Lane and Mountain View Drive currently have only one ingress/egress route. The project will extend Bille Road 0.3-miles east to Mountain View Drive and provide an alternative ingress/egress route for residents to access Pentz.

Funding:

Total Cost: $2,598,810
Pre-Construction Cost: $691,624
Construction Cost: $1,907,186
Existing Funding Resource: None
Unmet Need Pre-Construction: $691,624
Unmet Need Construction: $1,907,186

Long Term Recover Plan Tier and Project:

1 - Missing Road Segment



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Project Name:

Honey Run Road Improvements

Project Priority:

#35

Project Scope:

The Honey Run Road Improvements Project will reconfigure the roadway to improve capacity and address evacuation needs. The project will provide roadway restriping and spot widening.

Project Description:

The proposed project will restripe the existing right of way and remove any vertical elements within the roadway. The improvements will enhance a secondary evacuation route and connection to Skyway.

Funding:

Total Cost: $80,000

Pre-Construction Cost: $20,000

Construction Cost: $60,000

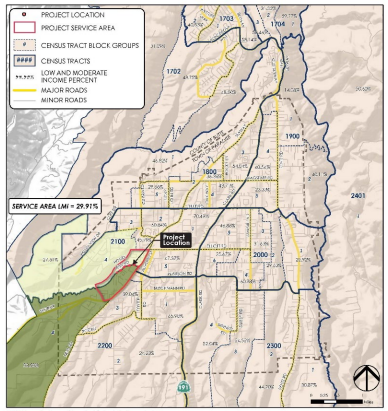
Existing Funding Resource: None

Unmet Need Pre-Construction: $20,000

Unmet Need Construction: $60,000

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Project Name:

Skyway/Pentz Intersection Improvements

Project Priority:

#36

Project Scope:

The Skyway/Pentz Intersection Improvements project will increase capacity with the construction of additional turn lanes and will provide for large vehicle turning radius. The project will require right-of-way acquisition.

Project Description:

The Skyway/Pentz Intersection Improvements project will construct additional turn lanes and a traffic signal system or a roundabout at the existing narrow, Two-Way Stop Controlled Skyway/Pentz intersection. Additional capacity and large vehicle turning space is needed at this location for more efficient emergency services. The control type decision will be made early, during the engineering feasibility study phase of the project. The project includes right-of-way acquisition in the intersection vicinity which is required to accommodate the larger intersection footprint that is anticipated.

Funding:

Total Cost: $4,500,000

Pre-Construction Cost: $1,350,000

Construction Cost: $3,150,000

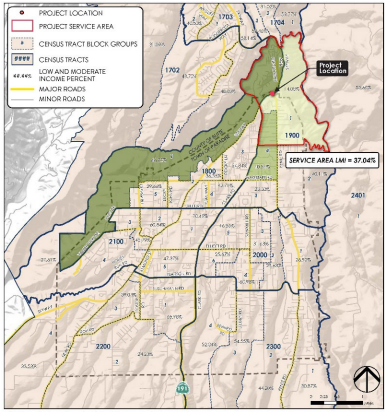
Existing Funding Resource: None

Unmet Need Pre-Construction: $1,350,000

Unmet Need Construction: $3,150,000

Long Term Recover Plan Tier and Project:

1 - Evacuation Routes



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Town of Paradise

Council Agenda Summary

Date: November 7, 2022

Agenda Item: 6(j)

ORIGINATED BY:	Colette Curtis, Recovery and Economic Development Director
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	Business Assistance Program Guidelines
LONG TERM RECOVERY PLAN:	Yes

COUNCIL ACTION REQUESTED:

1. Consider approving the guidelines for the Commercial Sign Removal Program; and the Business Investment Grant Program; or
2. Give alternate direction to staff. (ROLL CALL VOTE)

Background:

On July 12, 2022, Paradise Town Council approved the 2022-23 Budget, which included $200,000 for business assistance programs from the American Rescue Plan Act (ARPA) funds. Generally, these funds were designated to be used for:

1. A program to remove commercial signs after the Camp Fire.
2. A program or programs to assist new and existing businesses in Paradise.

On August 9 ,2022, Paradise Town Council appointed two of its members to sit on a committee to draft guidelines for these programs – Councilmember Jody Jones and Councilmember Steve Culleton. The committee met four times between September 14 and October 27, 2022 and was comprised of representatives from the Chamber of Commerce, 3CORE, Councilmembers Jones and Culleton, and Town staff.

Analysis:

Through discussion, the Business Assistance Program Committee developed guidelines for two programs to assist local Paradise businesses:

1. The Commercial Sign Removal Program**:** A grant program which will pay for the removal of commercial signs left after the fire that are either damaged or no longer associated with a standing business on the property. $100,000 total has been allocated for this program, and applications will be accepted until funds are expended.
2. The Business Investment Grant Program: A program for new and existing businesses which provides $5,000 grants to new and existing businesses as an incentive and a thank you for investing in Paradise. This grant has two components:
    - **a.** For newly established and existing businesses: $75,000 total available on a lottery basis.
    - **b.** For new businesses: $25,000 total available until funds are expended.

The full program guidelines and applications are available following this agenda summary.

Both programs will be advertised directly to business and property owners, as well as broadly for general community awareness.

Financial Impact:

These programs will be funded by American Rescue Plan Act (ARPA) Funds and have been budgeted in the Recovery and Economic Development Department budget.

Town of Paradise
5555 Skyway
Paradise, CA 95969
(530) 872-6291

Town of Paradise
Business Investment Grant (BIG) Program Guidelines

The Town of Paradise Business Investment Grant Program is funded through the American Rescue Plan Act (ARPA) of 2021. The purpose of this program is to financially assist existing, new, and returning businesses in Paradise after the 2018 Camp Fire.

Assistance through this program is provided in the form of a grant of $5,000. After the application period, grants will be awarded on a lottery basis until all allocated funds have been exhausted. A total of $100,000 has been allocated for this program. $75,000 will be available through the lottery process to existing and newly opened businesses. $25,000 will be retained to be granted to new businesses as they open.

This is a grant and will be reported to the Internal Revenue Service as Income. Awardees will be required to execute a grant agreement and W-9.

Eligible business applicants must meet the following criteria:

- For-profit business located within the Town of Paradise Town limits.
- Evidence of a current business license, and if applicable, a Fictitious Business Name Statement.
- Business owners who own property or who lease property.
- If an applicant is a tenant, a copy of the lease will also be required.
- New businesses must show an active building permit, certificate of occupancy, lease, or proof of property ownership.

The following will make a business ineligible for funding through this program:

- Having previously received federal funding through CARES or ARPA funding for the same purpose. Applicant must self-attest to not using these grant funds for the same purpose as other federal, state, or local funding received.
- Debarred by the federal government. *
- Outstanding local, state, federal tax liens or judgements. *

**Verified through credit check. No minimum credit score required.*

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Town of Paradise
Business Investment Grant Program Application

Business Information

Business Name _____

Tax ID_____

Business Address _____

Business Owner's Name _____

Property Owner's Name (if different) _____
(If applicant is a tenant, please provide a copy of the lease.)

Business Owner's Mailing Address_____

Business Owner's Email Address_____

Business Owner's Cell Phone Number_____

Type of Business

Type of Business_____

Certifications for Applicants

I understand that grants will be awarded on a lottery basis, and I attest that these funds will not be used for the same purpose as other federal, state, or local funding I have received.

_____

Applicant Signature and date

For Town of Paradise Use

Date Received _____
Staff Approval _____

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Town of Paradise
Commercial Sign Removal Program Guidelines

The Town of Paradise Commercial Sign Removal Program (Program) is funded through the American Rescue Plan Act (ARPA) of 2021. The purpose of this Program is to assist former and current Paradise businesses with the cost to remove free-standing commercial signs after the 2018 Camp Fire. After the fire, many commercial signs remained, damaged and undamaged, on properties without a standing commercial structure. The Town of Paradise Commercial Sign Removal Program will pay for free-standing commercial signs to be removed which:

1. Were damaged by the Camp Fire.
2. Are undamaged but are located on a vacant property.

Grants will be awarded on a first come first serve basis, until all allocated funds have been expended. A total of $100,000 has been allocated for this program. After an application is approved, the Town will work with the business and contractor to have the sign removed and will pay the contractor directly for the service.

Contractors will be selected by the applicant and must hold an active license for sign removal (C-21 License – Building Moving and Demolition). Appropriately licensed contractors may be found on the Contractors State Licensing Board website: https://www.cslb.ca.gov/OnlineServices/CheckLicenseII/ZipCodeSearch.aspx.

This is a grant and will be reported to the Internal Revenue Service as Income. Awardees will be required to execute a grant agreement and W-9.

Eligible business applicants must meet the following criteria:

- Sign is located within Town of Paradise Town limits.
- Property owners or business owners who own property or who lease property.
- If an applicant is a tenant, a Landlord's Consent must be provided confirming the property owner's approval of the sign removal. A copy of the lease will also be required.
- Applicant must have no outstanding local, state, or federal tax liens nor judgements. *
- Applicant must not be debarred by the federal government. *

**Verified through credit check. No minimum credit score required.*

Town of Paradise
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Town of Paradise
Commercial Sign Removal Program Application

Property Information

Physical Address of Sign to be removed _____

Property Owner's Name_____

Business Owner's Name (if different) _____
(If applicant is a tenant, please provide a Landlord's Consent affirming approval of the sign removal, and a copy of the lease.)

Property Owner's Mailing Address_____

Property Owner's Email Address_____

Property Owner's Cell Phone Number_____

Applicant's Tax ID _____

Contractor Information

Name of Contractor _____
(Contractor must hold a C-21 License – Building Moving and Demolition. To find a C-21 licensed contractor, refer to the attached list or visit www.cslb.ca.gov)

License Number _____

Removal Estimate _____
**Note – if the estimate is over $10,000, three (3) bids must be provided.*

Certifications for Applicants

I understand that if my application is approved the Town of Paradise will work with my selected contractor to remove the sign on my property, and payment will be made directly to the contractor.

_____
Applicant Signature and date

For Town of Paradise Use

Date Received _____
Contractor License Valid: Yes / No
Staff Approval _____

Town of Paradise

Council Agenda Summary **Agenda Item: 6(k)**

Date: November 7, 2022

ORIGINATED BY:	Susan Hartman, Community Development Director – Planning & Wastewater
REVIEWED BY:	Kevin Phillips, Town Manager
SUBJECT:	Short-term Rental Discussion
LONG TERM RECOVERY PLAN:	No

COUNCIL ACTION REQUESTED:

1. Consider discussion and providing staff with consensus on proposed standards for an Ordinance relating to the creation of short-term rental zoning regulations to present for adoption at a future council meeting; or,
2. Provide alternative direction to town staff.

Background:

At the September 13, 2022 Town Council meeting, staff and council members had a discussion as to the possibility of creating a short-term rental ordinance that would allow for home rentals that were less than 31 days. Currently, only bed and breakfast facilities are potentially permitted as short-term rentals in residential zones. Different standards, from jurisdictions already regulating short-term rentals, were reviewed and discussed. At the end of the conversation, staff was directed to prepare a list of proposed standards for Council consideration before formally drafting an Ordinance for Planning Commission review.

Analysis:

Local zoning regulations can be used to establish various standards for short-term rentals. These regulations may be aimed at attempting to address some of the following issues:

- Development of a detailed definition for short-term rentals and/or hosted homestays.
- Requirements for providing off-street parking.
- Noise and nuisance provisions or reference(s) to other ordinances addressing such issues.
- Minimum setback from other off-site short-term rentals. A particular interval of feet may be used to assure that a given area that may be more desirable than another does not become overly saturated with short-term rentals.
- Limits to occupancy levels by the numbers of available bedrooms – or for units served by on-site septic systems.
- Proof of code compliance, fire safety measures, adequate water and electrical service, or other utilities or infrastructure that may be of particular concern.
- Requirements for notifying neighbors, or perhaps even for their agreement.
- Limitations on the total number of nights per year the unit can be rented.

- Imposition of a special use permit or conditional use permit requirement, allowing for scrutiny of the factual characteristics of a short-term rental property before allowing such a use.
- Limiting the number of short-term rentals on a single site.
- Setting thresholds and processes for permit revocation.

Based on research of neighboring jurisdictions' short-term rental ordinances and discussion with councilmembers at the September 13, 2022 Town Council meeting, staff proposes the following standards for Council consideration:

Category	Proposed Standard
Planning Permit Required	Yes – Administrative Permit (no hearing)
Business License	Yes & TOT
Renewal Frequency	Business license – annually
Setback from other STRs	None
Threshold for Revocation	Any violation grounds for revocation
Quiet hours	10pm-7am (PMC times for music and loudspeakers)
Max number of occupants	2/bedroom
Max number of rental rooms	None
Max number of rentals on lot	None
Min/Max annual nights per mo/yr	None
Max number of STRs townwide	None
Hosted homestay (Room rental with owner on-site)	Yes
Parking rules	1 on-site space per bedroom
Zoning districts	All that allow residential use
Property Owner/Manager	Available 24/7 and within 30 minutes
Neighborhood noticing	Yes, within 300' and on a private road
Special events	Prohibited
Exterior Signage	Prohibited
Interior posting requirements	Inside – contact info, evacuation info & rules
Fire Inspection	Yes, annually (extinguisher, alarms, defensible space)
Transferrable permit	No

In addition to the proposed standards, staff recommends the following prohibitions and restrictions:

- No incidental camping in tents or RVs/travel trailers.
- No open wood burning pits, bonfires, or campfires.
- When a Red Flag Warning is in effect, all sources of outdoor open flame are prohibited.
- Structures with deed restrictions or agreement restricting its use as affordable housing shall not be used for short-term rentals.
- Short-term rentals are not allowed in structures not constructed for residential occupancy under the California Building Code.
- Short-term rentals shall not be rented during construction, remodeling, additions, or an active building permit.

Financial Impact:

If a future ordinance is ultimately adopted, additional TOT revenues would potentially be realized as currently non-compliant short-term rentals became permitted and tracked for compliance. The staff cost for review and issuance of the zoning permit and the fire prevention inspections would be covered by the Council-adopted fees for those services. The cost of tracking software, to physically locate rentals being advertised, cost neighboring jurisdictions in the range of $10,000 per year.