

Greeley City Council Agenda

Regular Meeting
Tuesday, June 6, 2023 at 6:00 p.m.

City Council Chambers at City Center South, 1001 11th Ave, Greeley, CO 80631 Zoom Webinar link: <https://greeleygov.zoom.us/j/86218464323>

NOTICE:

City Council Meetings are held on the 1st and 3rd Tuesdays of each month in the City Council Chambers. Meetings are conducted in a hybrid format, with a Zoom webinar in addition to the in person meeting in Council Chambers.

City Council members may participate in this meeting via electronic means pursuant to their adopted policies and protocol.

Members of the public are also invited to choose how to participate in Council meetings in the manner that works best for them.

Watch Meetings:



Meetings are open to the public and can be attended in person by anyone.



Meetings are televised live on GTV8 on cable television.



Meetings are livestreamed on the City's website, Greeleygov.com as well as YouTube at [Youtube.com/CityofGreeley](https://www.youtube.com/CityofGreeley)

For more information about this meeting or to request reasonable accommodations, contact the City Clerk's Office at 970-350-9740 or by email at cityclerk@greeleygov.com.

Meeting agendas, minutes, and archived videos are available on the City's meeting portal at greeley-co.municodemeetings.com

Comment in real time:

During the public input portion of the meeting and public hearings:



In person attendees can address the Council in the Chambers.



The public can join the Zoom Webinar and comment from the remote meeting.

Submit written comments:



Email comments about any item on the agenda before Noon on the day of the meeting to cityclerk@greeleygov.com



Written comments can be mailed or Dropped off at the City Clerk's office at City Hall, at 1000 10th St. Greeley, CO 80631



Mayor
John Gates

Councilmembers

Tommy Butler
Ward I

Deb DeBoutez
Ward II

Johnny Olson
Ward III

Dale Hall
Ward IV

Brett Payton
At-Large

Ed Clark
At-Large

A City Achieving
Community Excellence
Greeley promotes a healthy, diverse economy and high quality of life responsive to all its residents and neighborhoods, thoughtfully managing its human and natural resources in a manner that creates and sustains a safe, unique, vibrant and rewarding community in which to live, work, and play.

City Council Meeting Agenda

June 06, 2023 at 6:00 PM

**City Council Chambers, City Center South, 1001 11th Ave & via
Zoom at <https://greeleygov.zoom.us/j/86218464323>**

1. Call to Order
2. Pledge of Allegiance
3. Roll Call
4. Approval of the Agenda
5. Recognitions and Proclamations
6. Citizen Input
7. Reports from Mayor and Councilmembers
8. Initiatives from Mayor and Councilmembers

Consent Agenda

The Consent Agenda is a meeting management tool to allow the City Council to handle several routine items with one action.

Council Members may request an item be pulled off the Consent Agenda and considered separately under the next agenda item in the order they were listed.

9. Consideration of a motion to approve the Work Session Proceedings of May 9, 2023 and May 23, 2023; and the City Council Proceedings of May 16, 2023
10. Consideration of a Resolution finding substantial compliance with State Annexation laws for the properties collectively known as Seeley Lake annexation
11. Consideration of a Resolution to adopt the 2023 Water & Sewer Department Integrated Water Resource Plan
12. Consideration of a Resolution authorizing the City to enter into an intergovernmental agreement with the Colorado Department of Transportation for the Maintenance and Management of signs, markings and traffic signals within the City of Greeley

- [13.](#) Introduction and first reading of an Ordinance ratifying and adopting the Collective Bargaining Agreement between the Greeley Fire Fighters Union, International Association of Fire Fighters Local 888 and the City of Greeley, which agreement by its terms is for a period commencing January 1, 2024 through December 31, 2026
- [14.](#) Consideration of a Motion for Appointment to the Greeley/Weld Housing Authority
- [15.](#) Consideration of a Resolution appointing Tammy Hitchens to position of Interim Finance Director and Interim Ex-Officio City Treasurer

End of Consent Agenda

16. Pulled Consent Agenda Items
- [17.](#) Public hearing and second reading of an Ordinance amending Title 6, Chapter 2 of the Greeley Municipal Code relating to Vendor Responsible for Tax
- [18.](#) Consideration of a Resolution to approve entering into an agreement with the State of Colorado Department of Revenue, and use of Sales and Use Tax System (SUTS)
- [19.](#) 2022 Annual Financial Report Briefing
- [20.](#) 2024 Budget Development Process
- [21.](#) Scheduling of Meetings, Other Events
22. Consideration of a motion authorizing the City Attorney to prepare any required resolutions, agreements, and ordinances to reflect action taken by the City Council at this meeting and any previous meetings, and authorizing the Mayor and City Clerk to sign all such resolutions, agreements, and ordinances
23. Adjournment



Council Agenda Summary

Title

Recognitions and Proclamations

Summary

Mayor Gates will present the following proclamations:

Juneteenth
Pride Month

Mayor Pro Tem Payton will present the *What's Great about Greeley* Report.

Attachments

Juneteenth Proclamation
Pride Month Proclamation
What's Great about Greeley Report



RECOGNIZING JUNETEENTH INDEPENDENCE DAY

WHEREAS, President Abraham Lincoln’s Emancipation Proclamation was issued January 1, 1863; and

WHEREAS, on June 19, 1865, Union soldiers, led by Major General Gordon Granger, arrived in Galveston, Texas, with news that the Civil War had ended and that the enslaved were free; and

WHEREAS, African Americans who had been slaves in the Southwest celebrated June 19, commonly known as “Juneteenth Independence Day”, as inspiration and encouragement for future generations; and

WHEREAS, the City of Greeley acknowledges the historical significance of Juneteenth Independence Day to the United States and recognizes that the end of slavery is an important part of the history and heritage of the United States; and

WHEREAS, Juneteenth Independence Day provides an opportunity for the people of the United States to learn more about the past and to better understand the experiences that have shaped the United States; and

WHEREAS, the City of Greeley encourages all residents to commit themselves to the work of equity, equality, and justice.

THEREFORE, I, John Gates, by virtue of the authority vested in me as Mayor of the City of Greeley, do hereby proclaim June 19, 2023, as Juneteenth Independence Day in the City of Greeley, and encourage all residents to celebrate Juneteenth at the Marcus Garvey Cultural Center on the campus of the University of Northern Colorado.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the official seal of the City of Greeley, Colorado, this 6th day of June 2023.

John Gates
Mayor



Pride Month

WHEREAS, the month of June is recognized as Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) “Pride Month” across the country; and

WHEREAS, all human beings are born free and equal in dignity and rights. LGBTQ individuals have had immeasurable impact to the cultural, civic and economic successes of our country; and

WHEREAS, the City of Greeley is committed to supporting visibility, dignity and equality for LGBTQ people in our diverse community; and

WHEREAS, this nation was founded on the principle that every individual has infinite dignity and worth, and it is called upon of the people of this community to embrace this principle and work to eliminate prejudice everywhere it exists; and

WHEREAS, celebrating Pride Month influences awareness and provides support for Greeley’s LGBTQ community, and is an opportunity to take action and engage in dialogue to strengthen alliances, build acceptance and advance equal rights.

NOW, THEREFORE, I, John Gates, by virtue of the authority vested in me as Mayor of the City of Greeley, Colorado, do hereby proclaim the month of June 2023 as Pride Month in the City of Greeley in support of the LGBTQ community.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the official seal of the City of Greeley, Colorado, this 6th day of June 2023.

John Gates
Mayor



City Council Meeting
June 6, 2023

A Story Best Lived In.

***In all ways, we will transmit
this City not only, not less, but
greater and more beautiful than
it was transmitted to us.***

- Athenian Oath

Greeley to Participate in National League of Cities “Good Jobs, Great Cities” Learning Network

- Learning Network is a collaboration between NLC and the Department of Labor
- Program will help the City tap into economic and entrepreneurial opportunities



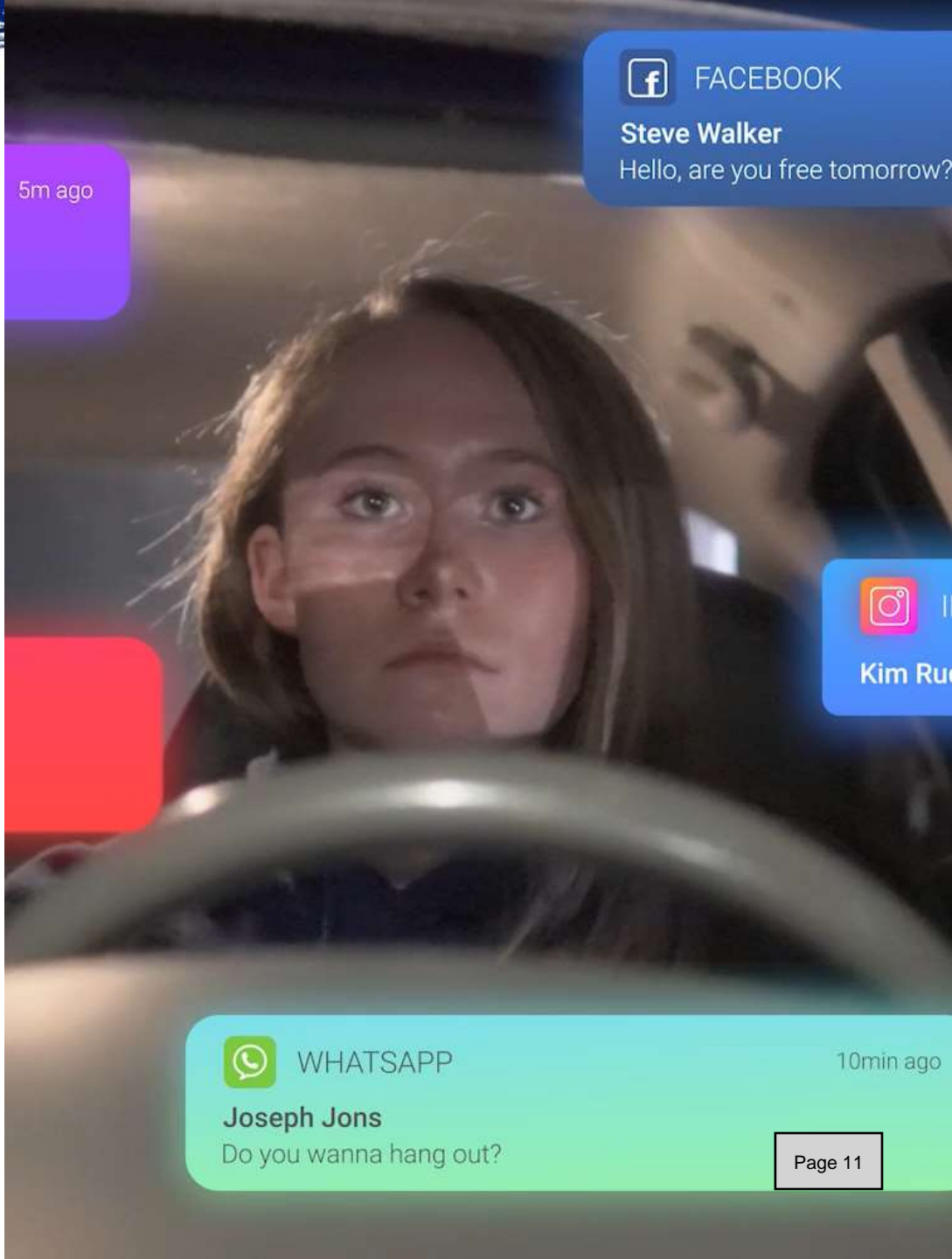
Allie Pressler Two-Time Winner of Mrs. Colorado Petite

- More than 50 women from across the United States were a part of the competition
- Allie's platform is focused on recovery from domestic violence



Greeley West's Kaileen Rudolph Wins CDOT Distracted Driving Video Contest

- Video will be featured in CDOT's distracted driving campaign





 FACEBOOK
Steve Walker
 Hello, are you free tomorrow?

5m ago



 Kim Ru...


 WHATSAPP 10min ago
Joseph Jons
 Do you wanna hang out?

UNC Softball Captures First Big Sky Championship

- Advanced to the NCAA tournament
- The team was picked to finish last in preseason rankings



Greeley Village Named 'Best Assisted Living Community' By U.S. News & World Report

- Communities rated on satisfaction with safety, care, community management and staff, value, and other services and amenities



UNC Graduate Programs Ranked Among Nation's Best by U.S. News

- Rehabilitation Counseling #13
- Public Health #17
- Audiology #40
- Nursing #78
- Speech-Language Pathology #92
- Statistics #99





A Story Best Lived In.



Council Agenda Summary

Title

Citizen Input

Summary

During this 15-minute portion of the meeting, anyone may address the Council on any item of City Business appropriate for Council consideration that is not already listed as a public hearing on this evening's agenda.

As this meeting is being conducted in a hybrid format, citizen input will be accepted first from those in the City Council Chambers, and then from the virtual meeting audience via the meeting's webinar.

Written comments submitted for any item on the agenda will be placed in the public record and provided to the Council for their review and should include the name and city of residence of the person submitting the comments for the record.



Council Agenda Summary

Title

Reports from Mayor and Councilmembers

Summary

During this portion of the meeting any Councilmember may offer announcements or reports on recent events and happenings. These reports should be a summary of the Councilmember's attendance at assigned board/commission meetings and should include key highlights and points that may require additional decision and discussion by the full Council at a future time.



Council Agenda Summary

Title

Initiatives from Mayor and Councilmembers

Summary

During this portion of the meeting any Councilmember may bring before the Council any business that the member feels should be deliberated upon by the Council. These matters need not be specifically listed on the Agenda, but formal action on such matters shall be deferred until a subsequent Council meeting.

Initiatives will generally fall into three categories:

- 1) A policy item for Council deliberation and direction for a future Worksession, Committee meeting, or regular/special Council meeting;
- 2) A request to the City Manager for information or research;
- 3) A request involving administrative processes or procedures.

At the close of this portion of the meeting, the Mayor will confirm Council's consensus that the individual requests be pursued.

Attachments

Status Report of Council Initiatives and Related Information

| Greeley City Council | | | | | | | |
|--------------------------------------|---------------------------|---|--|--|---|---|---------------|
| Status Report of Council Initiatives | | | | | | | |
| Initiative No. | Council Member Initiating | Council Request | Council Meeting or Work Session Date Requested | Status or Disposition (After completion, item is shown one time as completed and then removed.) | Next Steps & Schedule | Anticipated Deliverable & Date (Report, Council Presentation, etc.) | Assigned to: |
| 15-2021 | Olson | Formation of a committee for implementation of a funding strategy for the 35th and 47th interchanges. | December 7, 2021 Council Meeting | Councilmember Olson will be following up with Manager Lee and Director Trombino on next steps Staff preparing a revised funding application for the next cycle of USDOT Grant Funding expected to be available in May 2023. | Pending outcome of federal grant application submitted | Next grant application expected May 2023 | Paul Trombino |
| 09-2022 | Butler | Review traffic and safety surrounding 15 acre open area between 71st Avenue and 8th Street | June 7, 2022 Council Meeting | Requested that Public Works review the traffic and to improve safety in this congested area. In late 2022, Public Works Staff installed additional signage to improve safety and line of sight issues caused by parked cars. Furthermore, GPD with the help of Public Works have identified key times to enforce both speeding and stop sign compliance. City staff along with School District 6 and Westridge Academy held a public meeting with the neighborhood on January 26th, 2023. During this meeting we heard feedback regarding traffic safety and development concerns. This feedback is being used to develop solutions to address identified traffic safety concerns. These potential solutions will be brought back to the neighborhood to garner feedback prior to moving forward with the installation of identified improvements. | Additional signage installed for traffic and parking. Staff worked with School District, builder and GPD to ensure road is passable for school buses. GPD will focus enforcement times to ensure compliance with posted speed limit. Staff developing neighborhood safety improvement options and working with School District on transportation issues to improve coordination and support related to safety and infrastructure around school | Anticipate providing council an update on the next neighborhood meeting and safety improvements by late summer 2023 | Paul Trombino |
| 10-2022 | Butler | Review costs and strategies to live stream Planning Commission and Water Board meetings for public and Councilmembers | June 7, 2022 Council Meeting | Asked staff to investigate the cost of live streaming Planning Commission and Water and Sewer Board meetings and return to Council with findings The PC and W&S Board meetings have been enabled with full hybrid technologies. This did require technology investments and, more importantly, additional staffing and training investments to create seamlessly facilitated meetings. PC and W&S can now operate in a fully hybrid environment with attendees and participants in-person and remotely. These meetings can now be conducted via the Zoom platform and broadcast LIVE on YouTube. Both groups and their staff liaisons are fine-tuning the facilitation of fully hybrid meetings. While the fully hybrid environment is being ironed out, at a minimum, these meetings have been and are being recorded and posted on YouTube under the respect playlists: Planning Commission and Water and Sewer Board Meetings. It's also noteworthy that the Historic Preservation Committee is also testing the hybrid configuration. *April 10, 2023 | Additional technology costs ~ \$15,000. Parts are backordered, eta approx. mid-January. Anticipate additional operation costs to include 1 add'l staff at each B&C meeting to accommodate hybrid meeting. Assessing costs related to staffing, overtime expenses or other flexible staff options. Some testing has occurred for broadcasting of meetings. Additional equipment testing will be done once equipment is received. Staff will identify long-term operational impacts at that time. | Anticipated report to Council 1st Qtr 2023 | Kelli Johnson |

Item No. 8.

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|-------------|----------|--|-----------------------------------|---|---|---|--|
| 12-2022 | Butler | Varying Boards & Commissions meeting times | September 6, 2022 Council Meeting | Asked staff to research the ability for alternative meeting times for Boards & Commissions to increase community engagement and recruitment | CCO survey to Boards due back 12/16. Gathering feedback and will work with CMO on how to deliver to Council. Request to share data of B&C survey with ELT prior to a Work Session. Could be coupled with 10-2022 at a single WS evening. | Report to Exec. Team and Council/1st Qtr 2023 | City Clerk's Office |
| 15-2022 | Hall | Concerns regarding aftermath of natural disasters | October 4, 2022 Council Meeting | Requested update from Greeley's emergency management team to lessen the aftermath effects from a natural disaster, i.e. water and sewer, electricity, phone services, etc. | OEM update to Council | Work Session report 1/10/2023 | Brian Kuznik |
| 16-2022 | Clark | Concerns over the increase in incidents and safety in the tunnel under Hwy 34 in the Hillside/Farr Park neighborhood | November 1, 2022 Council Meeting | Requested staff study implementing a closure of the tunnel entrance between the hours of 10:00 PM and 7:00 AM over safety concerns Post the neighborhood meeting and confirmation the neighborhood's desire to keep the underpass. Public Works Staff finalized a new design for the existing underpass. The final new underpass design concept was submitted for grant funding through the Colorado Department of Transportation – Transportation Alternatives Program | Neighborhood meeting scheduled for 1/25/23 5:30 - 7:00 pm at Jackson Elementary. PW finalizing new design for existing underpass. Submitted for grant funding through CDOT - Transportation Alternatives program | We plan to share the new design concept in a neighborhood meeting to be scheduled in late April/early May 2023. | Paul Trombino/Becky Safarik |
| 17-2022 | DeBoutez | Expressed concern about neighborhood issues, i.e. speeding and noise violations. | November 15, 2022 Council Meeting | Requested GPD and PW research technologies available for traffic calming, speed/red light cameras and decibel measuring devices to improve safety, wellbeing and quality of life in Greeley. GPD and PW staff have completed their research regarding the betterment of neighborhood safety, well-being and quality of life using technology. Staff developed a comprehensive list of technology and other tools available and will bring those forward at an upcoming work session. April 13, 2022 | CMO recommendation - Do we invest in additional technology tools and structure to combat neighborhood issues? PW/GPD provide report on technologies available, cost of such technology, and how different technologies are used in other communities and the results of implementing such technology. GPD completed research and provided to CMO. Waiting for direction on if this will be provided in CM report to | Work Session report/CMO recommendation on neighborhood issues and technological options Per Councilor DeBoutez's request, a work session regarding the technologies/options will be scheduled. | Adam Turk/Paul Trombino |
| 17-2022 (2) | DeBoutez | Expressed concern about growing number of Air BNB's in neighborhoods and additional nuisances from those rentals | February 21, 2023 Council Meeting | Requested staff research effects of Air BNB rentals on neighborhood nuisance problems. Add this research to current PW/GPD report on adding technology tools to combat neighborhood issues. Data and finding related to Air BNBs have been summarized by staff. April 13, 2022 | | A written report related to the AirBNB's will be provided in an upcoming weekly email to council. | Adam Turk/Paul Trombino |
| 01-2023 | Butler | Costs and feasibility study of translation services for agendas and meetings | January 3, 2023 Council Meeting | Request staff research the costs and feasibility of translating the agenda, agenda packet and live streamed meetings in other languages? Is Spanish the predominant language for translation or are other languages also appropriate? CCO is almost finished gathering the costs connected to having an in-person translator at council meetings, along with options for agenda translation services. C&E has supplied the information needed about the percentage of Spanish speaker in the community. Next Steps: Provide a written summary and | CCO to work with C&E to gather statistical information for report. | CCO to provide a written report or Work Session Report in June | City Clerk's Office/Communication & Engagement |

Item No. 8.

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|---------|----------------|--|---------------------------------------|---|---|--|----------|
| 02-2023 | Hall | Letter received from Governor Polis regarding proposed land use legislation | January 24, 2023 Council Work Session | Request Staycie Coons work with CAO to draft letter of response to Governor Polis on proposed legislation regarding housing matters in Colorado | CAO to work with Staycie Coons in CMO to draft letter | CMO report to Council | CMO/CAO |
| 03-2023 | Butler | Limits on individual campaign contributions | February 7, 2023 Council Meeting | Research and gather information from other municipalities to determine if they have implemented campaign contribution limits and provide update of what the process would be to set limits for individual campaign contributions | CCO/CAO to come back to Council at a work session regarding the process | CCO/CAO report to Council in May | CCO/CAO |
| 04-2023 | Hall | Bridge over creek along the Poudre River Trail in Pumpkin Ridge area | March 7, 2023 Council Meeting | Would like a written report to Council regarding the history of the project and possibility of putting a wooden foot bridge across the trail and the timeline going forward City staff will be setting up a neighborhood meeting with the Pumpkin Ridge Neighborhood regarding the proposed connection to the Sheep Draw Trail. We are planning the meeting for May/June 2023. | PW anticipated next neighborhood meeting for May/June 2023. | PW report provided to Council on March 24, 2023. Neighborhood meeting planned for May/June 2023. | PW |
| 05-2023 | Butler | History and status of food tax rebate program | March 7, 2023 Council Meeting | Requested staff provide information at a work session on the history of the Food Tax Rebate Program and the current status of the program | Finance | CMO/Finance report to Council | Finance |
| 06-2023 | Clark/DeBoutez | Asked staff to research zoning codes for artificial grass in housing developments | March 21, 2023 Council Meeting | Asked staff to research the zoning regulations and standards for putting artificial grass in residents' front yards and research the landscape code and provide updates on the alternatives for water conservation | Community Development/Water Conservation | CMO/Report to Council | CD/Water |
| 07-2023 | Butler | Asked staff to research a change to the code notification requirements for mobile home parks when changes in the code affect residents within a 500 feet radius of | May 2, 2023 Council Meeting | Request staff to research a change to the code requiring notification to affected owners of personal property (structures) in mobile home parks within 500 feet of new zoning changes | Community Development/Water Conservation | Report to Council | CD/Water |
| 08-2023 | DeBoutez | Asked City Attorney's Office to research the City's public nuisance ordinance | May 9, 2023 Council Work Session | Request staff to research ways to strengthen the City's public nuisance ordinances to address criminal behavior, including police assistance and code enforcement measures | City Attorney | Update in mid-June at Council work session | CAO |



Council Agenda Summary

Title:

Consideration of a motion to approve the Work Session Proceedings of May 9, 2023 and May 23, 2023; and the City Council Proceedings of May 16, 2023

Summary:

Work sessions of the City Council were held in the City Council's Chambers on May 9, 2023 and May 23, 2023. A meeting of the City Council was held in the City Council's Chambers on May 16, 2023. The draft proceedings of each meeting have been prepared and are being presented for the Council's review and approval.

Decision Options:

- 1) To approve the proceedings of the Council work session of May 9, 2023 as presented; and/or
- 2) To approve the proceedings of the Council meeting of May 16, 2023 as presented; and/or
- 3) To approve the proceedings of the Council work session of May 23, 2023 as presented; and/or
- 4) Amend the Council work session proceeding of May 9, 2023, if amendments or corrections are needed, and approve as amended; and/or
- 5) Amend the Council meeting proceedings of May 16, 2023, if amendments or corrections are needed, and approve as amended; and/or
- 6) Amend the Council work session proceeding of May 23, 2023, if amendments or corrections are needed, and approve as amended.

Council's Recommended Action:

A motion to approve the Work Session Proceedings and the City Council proceedings as presented (or amended).

Attachments:

- Draft Council work session proceedings of May 9, 2023
- Draft Council meeting proceedings of May 16, 2023
- Draft Council work session proceedings of May 23, 2023

City of Greeley, Colorado
CITY COUNCIL WORK SESSION REPORT
May 9, 2023

1. Call to Order

Mayor John Gates called the meeting to order at 6 p.m. in the City Council Chambers at 1001 11th Ave, Greeley, Colorado, with hybrid participation available via the City's Zoom platform.

2. Pledge of Allegiance

Mayor Gates led the Pledge of Allegiance.

3. Roll Call

City Clerk Heidi Leatherwood called the roll.
The following members of Council were present:
Councilmember Tommy Butler
Councilmember Deb DeBoutez
Councilmember Dale Hall
Mayor Pro Tem Brett Payton
Councilmember Ed Clark
Councilmember Johnny Olson
Mayor John Gates

4. Reports from Mayor and Council Members

Councilmember Olson reported that the National League of Cities Transportation and Infrastructure Services Committee is working on projects in Greeley. He requested feedback from Council on upcoming projects as needed. The consensus from Council was for Councilmember Olson to provide quarterly updates and other updates when needed.

Councilmember Butler reported that he is offering Council Office Hours from 5-7 p.m., Wednesday, May 10, 2023, at Midnight Oil Bookstore for residents with questions or concerns.

Councilmember DeBoutez asked to introduce a Council initiative to research stronger public nuisance ordinances addressing criminal activity, SWAT response and other problematic behavioral issues. She requested a draft ordinance to strengthen enforcement. Councilmember Clark agreed and added that more enforcement or Neighborhood Enforcement Officers may be needed. Council consensus was to have the City Attorney's Office report back in the middle of June with findings and a draft ordinance.

5. Sales and Use Tax Software Collection System

John Karner, Finance Director and Sales Tax Manager, Michael Kibbee introduced the item at 6:08 p.m.

The City of Greeley is a Home Rule jurisdiction that can establish its own tax base, requiring businesses to file and remit tax directly to the municipality. In 2019, the State of Colorado Department of Revenue (DOR) and the Governor's Office of Information Technology (OIT) collaborated to deliver a Sales & Use Tax System (SUTS) that could be a single web portal where businesses could both look up sales and use tax information and file and remit to all jurisdictions at once. Current sale tax collections are remitted directly to the City of Greeley (City).

Two important items to consider in potentially utilizing SUTS include:

- Participating in SUTS opens the possibility for remote sellers & marketplace facilitators to remit tax returns in one online location. City staff believe now is the appropriate time to participate in the SUTS system.
- Staff recommendation is to modify the City's municipal code to facilitate the ability for SUTS to collect sales and use tax for the City with an ordinance for consideration by Council. The City would also enter into an intergovernmental agreement (IGA) with the State of Colorado for the purposes of permitting access to the SUTS System.

Councilmember DeBoutez asked if the SUTS system had adequate fire walls and cybersecurity. In response to the question, Mr. Kibbee assured Council that it did.

Councilmember Olson asked about the cost for the City. In response, Mr. Kibbee replied that the cost is minimal with a fee of \$260 for municipalities to participate. This will go into a fund where fees (\$1.00 per day to receive the transaction bundle) will be extracted until empty. The fund will then be replenished again and so forth. The reason this is so inexpensive is to provide an incentive for businesses and municipalities to participate.

Councilmember Clark asked for an example of a transaction. In response to the question, Mr. Kibbee stated that pulling a report would allow him to see specific line items and individual amounts coming from a particular business as a result of an item sold.

Mayor Gates added that he feels the level of compliance regarding these internet transactions is improving overall.

Council consensus was to bring the ordinance to a regular meeting for consideration.

6. Scheduling of Meetings, Other Events

None.

7. Consideration of a motion to go into Executive Session to conference with the City Attorney for the purpose of receiving legal advice regarding collective bargaining for Greeley Police Sergeants and Commanders

Councilmember Olson moved to go into an Executive Session with the City Attorney for the purpose of receiving legal advice on specific legal questions under C.R.S.

§24-6-402(4)(b) and Greeley Municipal Code 2.04.020(2) for matters related to options available for Greeley police sergeants and commanders. Councilmember Butler seconded the motion. The motion passed 7-0 at 6:21 p.m.

8. Adjournment

With no further business before Council, Mayor Gates adjourned the meeting at 6:22 p.m.

7. Executive Session

The Executive Session was called to order at 6:26 p.m.

Present for participation in the Executive Session were all members of City Council, plus the following:

Doug Marek, City Attorney
Noel Mink, Human Resources Director
Raymond Lee, City Manager
Paul Fetherston, Deputy City Manager
Adam Turk, Police Chief

Mayor Gates cautioned each participant to confine discussion to the stated purpose and reminded that no formal action may occur in Executive Session. If at any point any participant believed that the discussion was going outside the proper scope of the Executive Session, participants were advised to interrupt the discussion and raise an objection.

The meeting concluded at 7:06 p.m. and the Executive Session was adjourned.

The recording will be retained as provided in the City's records retention policy and in conformity with the Colorado Open Meetings Law for a period of 90 days.

Approved:

John D. Gates, Mayor

Attest:

Heidi Leatherwood, City Clerk

City of Greeley, Colorado
CITY COUNCIL PROCEEDINGS
May 16, 2023

1. Call to Order

Mayor Gates called the meeting to order at 6:00 p.m. in the City Council Chambers at 1001 11th Ave, Greeley, Colorado, with hybrid participation available via the City's Zoom platform.

2. Pledge of Allegiance

Mayor Gates led the Pledge of Allegiance.

3. Roll Call

City Clerk Heidi Leatherwood, called the roll.

Present:

Mayor John Gates
Councilmember Tommy Butler
Councilmember Deb DeBoutez
Mayor Pro Tem Brett Payton
Councilmember Ed Clark
Councilmember Johnny Olson

Councilmember Dale Hall was absent (Excused).

4. Approval of the Agenda

City Manager Lee had no changes to the agenda.

5. Recognitions and Proclamations

Mayor Gates read the Mental Health Month Proclamation at 6:03 p.m. Kim Collins, CEO of North Range Behavior Health, and Brian Kuznik , Fire Chief and Board Member of North Range Behavior Health, were present in Council Chambers to accept the Proclamation.

Councilmember Olson presented *What's Great about Greeley?*

6. Citizen Input

1. Steve Teets spoke about bus safety, and the need for water conservation by citizens and the City.
2. David Meek spoke about the Bible and history.
3. Edwin Grant spoke about water conservation and the Patriot Act.

7. Reports from Mayor and Councilmembers

Mayor Gates attended the Colorado Municipal League Spring Outreach meeting on May 15, 2023, at the Greeley Recreation Center and brought back information to share with the Councilmembers.

Councilmember Butler attended the LINC Library grand opening and shared that it is a wonderful place for community and families to visit.

8. Initiatives from Mayor and Councilmembers

None.

Consent Agenda

9. Approval of the City Council Proceedings of April 18 and May 2, 2023, and City Council Work Session Proceedings of April 25, 2023

10. Introduction and first reading of an Ordinance amending Title 6, Chapter 2 of the Greeley Municipal Code relating to Vendor Responsible for Tax

11. Consideration of a Resolution to Amend the Intergovernmental Agreement with Weld County for Construction Improvements to O Street and 59th Avenue Intersection

12. Consideration of a Change Order for the “O” Street and 59th Avenue Intersection Improvement Design

Councilmember Olson moved to approve the Consent Agenda Items 9-12. Mayor Pro Tem Payton seconded the motion. The motion passed 6-0 at 6:20 p.m. with Councilmember Hall absent,

End of Consent Agenda

13. Pulled Consent Agenda Items

14. Public hearing and second reading of an Ordinance amending Title 2, Chapter 10 (Boards and Commissions) of the Greeley Municipal Code designating the City of Greeley website as the official posting site for meeting notices

Heidi Leatherwood, City Clerk, gave a presentation on the proposed amendment to the Greeley Municipal Code at 6:21 p.m.

The Colorado Open Meetings Act requires a designated public place for posting meeting notices. Greeley Municipal Code Section 2-553 designates both entrances to City Hall as the official posting sites for physical meeting notices for Council’s appointed Boards and Commissions. With the remodel of City Hall completed in 2020, there are no longer physical bulletin boards accessible to the public at the City Hall entrances.

All Boards and Commission meeting notices will be posted on the Greeley.gov website for official purposes. Meeting notices will also be available with a QR Code on the City Hall monitor and hard copies of the agendas will be available at the City Clerk’s counter in the City Hall lobby.

The public hearing opened at 6:22 p.m.

1. Steve Teets would like more marketing for Boards and Commissions information out to the community.

The public hearing closed at 6:24 p.m.

Mayor Pro Tem Payton moved to approve the ordinance. Councilmember DeBoutez seconded the motion. The motion passed 6-0 at 6:24 p.m. with Councilmember Hall absent.

15. Public hearing and second reading of an Ordinance amending the Greeley Municipal Code to create a new Article and Chapter under Title 6, Revenue & Finance, Chapter 16 – Grants

John Karner, Finance Director, introduced the item with a presentation on the proposed new section to the Greeley Municipal Code at 6:25 p.m.

Grant opportunities available to the City significantly increased in both dollar amount and frequency. To streamline the grant acceptance process, staff proposed a change to existing code on the appropriation requirements for grants valued under \$500,000.

This ordinance will allow a grant less than \$500,000 to be treated as custodial funds and allow the City Manager to accept such grants and expend these funds without a separate appropriation approval from City Council. This process will reduce the number of supplemental appropriations made during a fiscal year. The Finance Department will provide a quarterly report on grant funds received through this new process and post such reports on the City's website.

Grants greater than \$500,000 will be subject to City Council approval and will require appropriation. Grants that require a matching contribution by the city in the form of an expenditure for which a budget and appropriation has not previously been approved by City Council approval will continue to require a separate appropriation.

Mayor Pro Tem Payton asked for clarification on the code amendment and the current code. In response, Mr. Karner replied that the Finance Department will produce quarterly and annual reports detailing current applications and grants received, including where the grant money will be allocated.

Councilmember Butler asked how many grants the City receives annually. In response, Grant Specialist, Ashley Weesner noted that the city has over thirty grants from this last year.

Councilmember Butler suggested that this type of positive information should be shared quarterly during work sessions or other.

The public hearing opened at 6:34 p.m.

1. Steve Teets agreed with highlighting the grants.
2. Edwin Grant spoke about vocabulary relating to grants.

The public hearing closed at 6:38 p.m.

Councilmember Olson moved to adopt the ordinance and publish by title only. Councilmember Butler seconded the motion. The motion passed 6-0 at 6:39 p.m. with Councilmember Hall absent.

16. Appointment of applicants to the Commission on Disabilities, Construction Trades Advisory & Appeals Board, and the Youth Commission

City Clerk Leatherwood announced the appointments:

- Commission on Disabilities: Recruit for additional applications
- Construction Trades Advisory & Appeals Board – David Powell, Don Hobart and Jay Jenses appointed for 3-year terms
- Youth Commission – David Andersen, Diana Calhoun, Joshua Rascon appointed for 2-year terms

17. Scheduling of Meetings, Other Events

None.

18. Consideration of a motion authorizing the City Attorney to prepare any required resolutions, agreements, and ordinances to reflect action taken by the City Council at this meeting and any previous meetings, and authorizing the Mayor and City Clerk to sign all such resolutions, agreements, and ordinances

Mayor Pro Tem Payton moved to approve the motion. Councilmember Butler seconded the motion. The motion passed 6-0 with a voice vote at 6:40 p.m. with Councilmember Hall absent.

19. Adjournment

Mayor Gates adjourned the meeting at 6:40 p.m.

Approved:

John D. Gates, Mayor

Attest:

Heidi Leatherwood, City Clerk

City of Greeley, Colorado
CITY COUNCIL WORK SESSION REPORT
May 23, 2023

1. Call to Order

Mayor John Gates called the meeting to order at 6:00 p.m. in the City Council Chambers at 1001 11th Ave, Greeley, Colorado, with hybrid participation available via the City's Zoom platform.

2. Pledge of Allegiance

Mayor Gates led the Pledge of Allegiance.

3. Roll Call

City Clerk Heidi Leatherwood called the roll.

The following members of Council were present:

Councilmember Tommy Butler

Councilmember Deb DeBoutez

Councilmember Dale Hall – participated via Zoom

Mayor Pro Tem Brett Payton – Absent (Excused)

Councilmember Ed Clark

Councilmember Johnny Olson - Absent (Excused)

Mayor John Gates

4. Reports from Mayor and Council Members
None

5. Traffic Technology to Address Safety and Quality of Life in Greeley

Police Chief, Adam Turk, and Deputy Director of Public Works, Will Jones introduced the item at 6:01 p.m.

City Council requested that the Police Department (PD) and Public Works Department (PW) research technologies available for traffic calming, specifically to include speed/red light cameras and decibel measuring devices, to improve public safety, wellbeing, and quality of life in Greeley.

PW and PD have researched various technologies and contacted surrounding agencies who have or continue to utilize technology to address traffic and quality of life concerns. This includes red light cameras, mobile speed units and noise reduction/enforcement technology. Staff recommendation was to pursue photo radar at this time.

Councilmember DeBoutez thanked staff and asked if this would be a tool to assist the PD. In response to the question, Chief Turk noted that this will be a force multiplier but will not replace traffic safety officers and will be used in high priority areas.

CM Butler asked if there are benefits to new stop sign cameras? In response to the question, Commander Mike Heck said he has not done extensive research on stop sign cameras, but he will look into it.

Councilmember Hall participating via Zoom, mentioned he is not in favor of adding this technology and wondered how accurate the photo radar is in identifying the driver of the vehicle. He also noted that this action could be perceived as money generator by residents. In response to the question, Commander Heck felt confident that the technology would capture the driver's identity because the officer watching the equipment has to confirm the picture is clear and focused at the time the photo is taken.

Mayor Gates also noted that he is not a fan of cameras, but he does see the need for traffic safety and wants this to be a tool for the PD to use. Chief Turk added that revenue generation is not the goal, slowing traffic down is the motivating factor.

Councilmember Clark reminded Council to be responsive to citizens and suggested an aggressive education program with this new technology.

Council consensus was to pursue the photo radar option and come back to Council with more information and project details.

6. Hillside/Farr Park Neighborhoods -15th Avenue Ct Underpass of US 34 Bypass

Deputy Public Works Director Booshan Karnik introduced the item at 6:30 p.m.

On November 1, 2022, a City Council Initiative was created by Councilmember Clark to review safety issues of the 15th Avenue Court underpass of US 34 Bypass. Staff held a neighborhood meeting on January 25, 2023, to seek input on safety concerns and use of the underpass. The neighborhood residents strongly supported keeping the underpass for connectivity and requested staff review opportunities to improve the underpass for pedestrians, bicyclists, accessibility, and safety.

Staff requested feedback on a draft plan for replacement of the existing underpass. The efforts to widen, change slope and update the underpass will cost \$4 Million. Public Works will be seeking grant funding for the project. If funding and approval are met, construction would begin in 2025.

Councilmember DeBoutez asked about the timeline, as two years seems like a long time for residents to wait for improvements. Can there be lighting updates and landscaping made in the meantime? In response to the question, Mr. Karnik will look into it.

Councilmember Clark was surprised that the residents were supportive of the widening and renovations suggested and is pleased that these improvements will be made.

7. Scheduling of Meetings, Other Events

None.

8. Adjournment

With no further business, Mayor Gates adjourned the meeting at 6:38 p.m.

Approved:

John D. Gates, Mayor

Attest:

Heidi Leatherwood, City Clerk



Council Agenda Summary

June 6, 2023

Key Staff Contact: Doug May, Planner III

Title:

Consideration of a Resolution finding substantial compliance with State Annexation laws for the properties collectively known as Seeley Lake annexation

Summary:

A Resolution finding substantial compliance with State Annexation laws for the properties collectively known as Seeley Lake annexation. CB Keirnes Land Company LLC has submitted petitions to the City of Greeley for annexation of five (5) properties totaling 160.62 acres located in the East Half of Section 23, and the Northeast Quarter of Section 26, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, generally located north of AA Street and west of Seeley Lake. Staff finds the Petitions for Annexation are in substantial compliance with the requirements of C.R.S. § 31-12-107. Additionally, staff have reviewed the Petitions for compliance with annexation requirements contained in C.R.S. §§ 31-12-104 and 31-12-105 and finds that the Petitions meet the legal requirements of those sections. Please note that one resolution references the subject properties in all five of the Annexation Petitions, therefore adoption of the associated resolution constitutes a finding of compliance for all properties in Annexations 1 through 5.

Fiscal Impact:

| | |
|---|-----|
| Does this item create a fiscal impact on the City of Greeley? | No |
| Is there grant funding for this item? | N/A |

Legal Issues:

None.

Other Issues and Considerations:

None.

Strategic Focus Area:

N/A

Decision Options:

- 1) Adopt the resolution as presented; or
- 2) Amend the resolution and adopt as amended; or
- 3) Deny the resolution; or
- 4) Continue consideration of the resolution to a date certain.

Council's Recommended Action:

A motion to adopt the Resolution.

Attachments:

Resolution finding substantial compliance with State Annexation laws

Attachments A through E: Legal Descriptions of the associated properties

Attachments F through J: Official Annexation Maps of the associated properties

CITY OF GREELEY, COLORADO

RESOLUTION NO. 16, 2023

A RESOLUTION FINDING SUBSTANTIAL COMPLIANCE WITH STATE ANNEXATION LAWS FOR PROPERTIES KNOWN AS SEELEY LAKE LOCATED NORTH OF AA STREET AND WEST OF SEELEY LAKE INTO THE CITY OF GREELEY. THE SUBJECT SITE IS COMPRISED OF 160.62 ACRES.

WHEREAS, CB Keirnes Land Company LLC has submitted annexation petitions to the City of Greeley for annexation of five properties located at the East Half of Section 23, and the Northeast Quarter of Section 26, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, Colorado, more particularly described in the attached Exhibits A through E;

WHEREAS, the City of Greeley staff has found the annexation petitions to be in substantial compliance with C.R.S. §§ 31-12-101, *et seq.*; and

WHEREAS, City staff desires that the City Council establish a date, time, and place to hold a hearing to determine if the proposed annexations comply with C.R.S. § 31-12-106, or such parts thereof, to establish eligibility for annexation to the City of Greeley; and

WHEREAS, the City Clerk shall deliver notice and publish the date, time, and place for said hearing;

NOW THEREFORE, BE IT RESOLVED BY THE GREELEY CITY COUNCIL OF THE CITY OF GREELEY, COLORADO:

Section 1. The annexation petitions are found to substantially comply with C.R.S. § 31-12-106.

Section 2. The public hearing for consideration of the proposed annexation petitions is hereby set for August 1, 2023, at the City Council Chambers, City Center - South, 1001 11th Avenue, Greeley, Colorado, during a regular City Council meeting beginning at 6:30 p.m.

Section 3. The City Clerk is hereby authorized to publish and notify required parties pursuant to the procedures set forth in C.R.S. §31-12-108(2).

Section 4. This resolution shall become effective immediately upon its passage.

PASSED, AND ADOPTED, SIGNED AND APPROVED this ____ day of JUNE, 2023.

ATTEST:

**THE CITY OF GREELEY,
COLORADO**

By: _____
City Clerk

By: _____
Mayor

SEELEY LAKE ANNEXATION No. 1

A Parcel of land located in the East Half of Section 23, and the Northeast Quarter of Section 26, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the South Line of the West Half of said East Half of Section 23 as bearing South 89°45'07" East and with all bearings contained herein relative thereto:

BEGINNING at the South Quarter Corner of said Section 23 being also a point on the Corporate Boundary Line of the City of Greeley;
Thence contiguous to the City of Greeley along the West Line of the East Half of Section 23 North 00°07'07" East 30.00 feet to the North Right of Way Line for Weld County Road 66 / AA Street;
Thence departing said West Line and said Corporate Boundary South 78°08'11" East 149.00 feet to a point on the South Line of the West Half of the East Half of Section 23;
Thence South 78°36'22" West 148.66 feet to the South Right of Way Line said Weld County Road 66 / AA Street being also a point on said Corporate Boundary Line;
Thence contiguous to the City of Greeley along West Line of the East Half of Section 26 North 00°16'34" West 30.00 feet to the **TRUE POINT OF BEGINNING**.

Said parcel contains 4,376 square feet or 0.10 acres, more or less, and is subject to all existing easements and/or rights of way of record.

Steven John Stencil
Colorado LS 30462

For and on behalf of:
Intermill Land Surveying, Inc.
1301 North Cleveland Avenue
Loveland, CO 80537
970.669.0516

SEELEY LAKE ANNEXATION No. 2

A Parcel of land located in the East Half of Section 23, and the Northeast Quarter of Section 26, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the South Line of the West Half of said East Half of Section 23 as bearing South 89°45'07" East and with all bearings contained herein relative thereto:

COMMENCING at the South Quarter Corner of said Section 23; thence along the West Line of the East Half of Section 23 North 00°07'07" East 30.00 feet to the North Corner of Seeley Lake Annexation No. 1 ANX2022-0001 and the **TRUE POINT OF BEGINNING**;

Thence departing said West Line South 87°26'25" East 743.77 feet to a point on the South Line of the West Half of the East Half of said Section 23;
Thence South 87°56'08" West 743.43 feet to the South Corner of said Seeley Lake Annexation No. 1 ANX2022-0001 being also a point on the Corporate Boundary Line for the City of Greeley;

Thence along the South and North Lines of said Seeley Lake Annexation No. 1 being also along said Corporate Boundary Line for the City of Greeley the following two (2) courses and distances:

1. North 78°36'22" East 148.66 feet to the East Corner thereof;
2. North 78°08'11" West 149.00 feet to the **TRUE POINT OF BEGINNING**.

Said parcel contains 17,916 square feet or 0.41 acres, more or less, and is subject to all existing easements and/or rights of way of record.

Steven John Stencil
Colorado LS 30462

For and on behalf of:
Intermill Land Surveying, Inc.
1301 North Cleveland Avenue
Loveland, CO 80537
970.669.0516

SEELEY LAKE ANNEXATION No. 3

A Parcel of land located in the East Half of Section 23 and the Northeast Quarter of Section 26, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the South Line of the West Half of said East Half of Section 23 as bearing South 89°45'07" East and with all bearings contained herein relative thereto:

COMMENCING at the South Quarter Corner of said Section 23; thence along the West Line of the East Half of Section 23 North 00°07'07" East 30.00 feet to the North Corner of Seeley Lake Annexation No. 2 ANX2022-0002 and the **TRUE POINT OF BEGINNING**;

Thence continuing along said West Line North 00°07'07" East 10.00 feet;
 Thence departing said West Line South 89°45'07" East 1,336.46 feet to the East Line of Lot D, Recorded Exemption No. 0805-23-4 RECX15-0012 as depicted on the plat recorded March 25, 2016, under Reception No. 4190336 in the Records of the Weld County Clerk and Recorder's Office;
 Thence along said East Line of Lot D South 00°29'59" West 40.00 feet to the Southeast Corner of said Lot D;
 Thence along the South Line of Lot D North 89°45'07" West 118.44 feet to a point on the Northeast Right of Way Line for County Road 66 / AA Street as depicted on said Recorded Exemption No. 0805-23-1 RE-5061 as depicted on the plat recorded December 27, 2010, under Reception No. 3740825 in said Records of the Weld County Clerk and Recorder's Office being also a point on a non-tangent curve concave to the Southwest, having a central angle of 54°13'42" and a radius of 318.00 feet, the long chord of which bears South 37°33'00" East 289.87 feet;

Thence departing said South Line of Lot D and along said Northeast Right of Way Line for County Road 66 / AA Street the following ten (10) courses and distances:

1. Southeasterly along the arc of said curve 300.98 feet;
2. Tangent from said curve South 10°26'09" East 244.52 feet to a point on a curve concave to the Northeast, having a central angle of 17°40'57" and a radius of 890.00 feet, the long chord of which bears South 19°16'37" East 273.58 feet;
3. Southeasterly along the arc of said curve 274.67 feet;
4. Non-tangent from said curve South 28°07'07" East 91.07 feet to a point on a curve concave to the Northeast, having a central angle of 15°50'39" and a radius of 1,115.00 feet, the long chord of which bears South 36°02'26" East 307.35 feet;
5. Southeasterly along the arc of said curve 308.33 feet;
6. Non-tangent from said curve South 43°57'45" East 129.26 feet to a point on a curve concave to the Northeast, having a central angle of 21°58'05" and a radius of 920.00 feet, the long chord of which bears South 54°56'48" East 350.59 feet;
7. Southeasterly along the arc of said curve 352.74 feet;

8. Non-tangent from said curve South $65^{\circ}55'51''$ East 174.76 feet to a point on a curve concave to the Northeast, having a central angle of $16^{\circ}23'22''$ and a radius of 1,170.00 feet, the long chord of which bears South $74^{\circ}07'32''$ East 333.54 feet;
9. Easterly along the arc of said curve 334.68 feet;
10. Tangent from said curve South $82^{\circ}19'13''$ East 48.81 feet to the northerly prolongation of the West Right of Way Line for County Road 35 as depicted on said Recorded Exemption No. 0805-23-1 RE-5061;

Thence departing the Northeast Right of Way Line for County Road 66 / AA Street along said prolongation of the West Right of Way Line for County Road 35 South $00^{\circ}35'46''$ East 60.63 feet to the Southwesterly Right of Way Line for said County Road 66 / AA Street;

Thence departing said prolongation of the West Right of Way Line for County Road 35 along said Southwesterly Right of Way Line and the South Right of Way Line for County Road 66 / AA Street the following Nine (9) courses and distances:

1. North $82^{\circ}19'13''$ West 57.54 feet to a point on a curve concave to the Northeast, having a central angle of $16^{\circ}23'22''$ and a radius of 1,230.00 feet, the long chord of which bears North $74^{\circ}07'32''$ West 350.64 feet;
2. Westerly along the arc of said curve 351.84 feet;
3. Tangent from said curve North $65^{\circ}55'51''$ West 174.76 feet to a point on a non-tangent curve concave to the Northeast, having a central angle of $21^{\circ}58'05''$ and a radius of 980.00 feet, the long chord of which bears North $54^{\circ}56'48''$ West 373.45 feet;
4. Northwesterly along the arc of said curve 375.75 feet;
5. Tangent from said curve North $43^{\circ}57'45''$ West 129.26 feet to a point on a non-tangent curve concave to the Northeast, having a central angle of $15^{\circ}50'39''$ and a radius of 1,175.00 feet, the long chord of which bears North $36^{\circ}02'26''$ West 323.89 feet;
6. Northwesterly along the arc of said curve 324.93 feet;
7. Tangent from said curve North $28^{\circ}07'07''$ West 91.07 feet to a point on a non-tangent curve concave to the Northeast, having a central angle of $17^{\circ}40'57''$ and a radius of 950.00 feet, the long chord of which bears North $19^{\circ}16'37''$ West 292.02 feet;
8. Northwesterly along the arc of said curve 293.19 feet;
9. Tangent from said curve North $10^{\circ}26'09''$ West 229.40 feet to a point on the East Line of the Northeast Quarter of Section 26;

Thence continuing along said Southwesterly Right of Way Line and along said East Line of the Northeast Quarter of Section 26 South $00^{\circ}26'20''$ East 57.60 feet to a point on the Southerly Right of Way Line for County Road 66 / AA Street as depicted on Recorded Exemption No. 0805-26-01 1AMRECX18-14-0060 as depicted on plat recorded January 30, 2019, under Reception No. 4463459 in the Records of the Weld County Clerk and Recorder's Office;

Thence departing said East Line and continuing along said Southerly Right of Way Line the following five (5) courses and distances:

1. North $10^{\circ}26'09''$ West 71.85 feet to a point on a curve concave to the Southwest, having a central angle of $79^{\circ}18'58''$ and a radius of 248.00 feet, the long chord of which bears North $50^{\circ}05'38''$ West 316.55;
2. Northwesterly along the arc of said curve 343.31 feet;
3. Tangent from said curve North $89^{\circ}45'07''$ West 699.69 feet to the West Line of Lot A, 1AMRECX18-14-0060;
4. Thence along said West Line of Lot A North $00^{\circ}16'40''$ West 10.00 feet;
5. Thence North $89^{\circ}45'07''$ West 382.86 feet to the South Corner of Seeley Lake Annexation No. 2 ANX2022-0002 being also a point on the Corporate Boundary Line of the City of Greeley;

Thence departing the South Right of Way Line for County Road 66 / AA Street contiguous to the City of Greeley and along the South and North Lines of said Seeley Lake Annexation No. 2 ANX2022-0002 the following two (2) courses and distances:

1. North $87^{\circ}56'08''$ East 743.43 feet to the East Corner Seeley Lake Annexation No. 2 ANX2022-0002;
2. North $87^{\circ}26'25''$ West 743.77 feet to North Corner of said Seeley Lake Annexation No. 2 ANX2022-0002 and the **TRUE POINT OF BEGINNING**.

Said parcel contains 4.95 acres, more or less, and is subject to all existing easements and/or rights of way of record.

Steven John Stencil
Colorado LS 30462

For and on behalf of:
Intermill Land Surveying, Inc.
1301 North Cleveland Avenue
Loveland, CO 80537
970.669.0516

SEELEY LAKE ANNEXATION No. 4

A Parcel of land located in the East Half of Section 23, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the South Line of the West Half of said East Half of Section 23 as bearing South 89°45'07" East and with all bearings contained herein relative thereto:

COMMENCING at the South Quarter Corner of said Section 23; thence along the West Line of the East Half of Section 23 North 00°07'07" East 40.00 feet to the Northwest Corner of Seeley Lake Annexation No. 3 ANX2022-0003 and the **TRUE POINT OF BEGINNING**;

Thence continuing along said West Line of the East Half of Section 23 North 00°07'07" East 2601.74 feet to the Center Quarter Corner of Section 23;

Thence departing said West Line of the East Half of Section 23 and along the North Line of the Southeast Quarter of Section 23 South 89°37'36" East 1473.25 feet;

Thence departing said North Line of the Southeast Quarter of Section 23 South 00°29'56" West 2638.54 feet to a point on the South Line of said Southeast Quarter of Section 23;

Thence along said South Line of the Southeast Quarter of Section 23 North 89°45'07" West 119.52 feet to the East Line of the West Half of the Southeast Quarter of said Section 23 and a point on the Easterly Line of Seeley Lake Annexation No. 3 ANX2022-0003 being also a point on the Corporate Boundary of the City of Greeley;

Thence along the Easterly and the Northerly Lines of Seeley Lake Annexation No. 3 ANX2022-0003 and said Corporate Boundary Line the following two (2) courses and distances:

1. North 00°29'59" East 40.00 feet to the Easterly Prolongation of the North Right of Way Line for Weld County Road 66 / AA Street;
2. North 89°45'07" West 1336.46 feet to the **TRUE POINT OF BEGINNING**.

Said parcel contains 87.53 acres, more or less, and is subject to all existing easements and/or rights of way of record.

Steven John Stencil
Colorado LS 30462

For and on behalf of:
Intermill Land Surveying, Inc.
1301 North Cleveland Avenue
Loveland, CO 80537
970.669.0516

SEELEY LAKE ANNEXATION No. 5

A Parcel of land located in the East Half of Section 23, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the North Line of the West Half of said East Half of Section 23 as bearing South 89°39'04" East and with all bearings contained herein relative thereto:

COMMENCING at the North Quarter Corner of said Section 23; thence along the West Line of the East Half of said Section 23 South 00°07'09" East 1200.01 feet to Northwest Corner of that parcel known as Lot D, Recorded Exemption No. 0805-23-4 RECX15-0012 as depicted on the plat recorded March 25, 2016 under Reception No. 4190336 in the Records of the Weld County Clerk and Recorder's Office and the **TRUE POINT OF BEGINNING**;

Thence along the North and East Lines of said Parcel D the following five (5) courses and distances:

1. Departing said West Line South 46°59'23" East 273.05 feet;
2. South 89°39'09" East 367.68 feet;
3. North 67°59'54" East 576.73 feet to the Westerly Line of Ogilvey Ditch;
4. Also along said Westerly Line of Ogilvey Ditch South 21°59'49" East 666.26 feet to the East Line of the West Half of the East Half of said Section 23;
5. Also along said East Line of the West Half of the East Half South 00°03'36" West 207.10 feet to the Northwest Corner of Lot B, Recorded Exemption No. 0805-23-1 RE-5061 as depicted on the plat recorded December 27, 2010 under Reception No. 3740825 in said Records;

Thence along the North Line of said Lot B and the North Line Lot A, said Recorded Exemption No. 0805-23-1 RE-5061 South 89°37'58" East 1323.04 feet to the West Right of Way Line of Weld County Road 35;

Thence along said West Right of Way Line South 00°00'06" West 276.30 feet to an angle point thereon;

Thence continuing along said West Right of Way Line South 19°39'50" East 89.15 feet to the East Line of said Lot A;

Thence along said East Line, the South Line and West Line of said Lot A the following eight (8) courses and distances:

1. South 00°00'06" West 303.10 feet;
2. North 89°37'42" West 940.48 feet;
3. South 32°49'26" East 211.29 feet;
4. North 82°45'33" East 79.90 feet;
5. South 54°46'12" East 179.94 feet;
6. South 06°47'13" East 154.95 feet;

7. South 38°22'26" West 230.69 feet;
8. North 28°05'27" West 460.47 feet to a point on the Easterly Line of said Lot B, Recorded Exemption No. 0805-23-1 RE 5061;

Thence along said Easterly Line and the South Line of said Lot B the following three (3) courses and distances:

1. South 14°54'10" West 703.61 feet;
2. South 00°29'56" West 1757.39 feet to said South Line of Lot B being also the South Line of the Southeast Quarter of Section 23;
3. North 89°45'07" West 119.52 feet to the Southeast Corner of Seeley Lake Annexation No. 4 ANX2022-0004 and a point on the Corporate Boundary for the City of Greeley;

Thence along said Corporate Boundary Line and the East Line of said Seeley Lake Annexation No. 4 ANX2022-0004 North 00°29'56" East 2638.54 feet to the Northeast Corner of said Annexation;

Thence continuing along said Corporate Boundary Line and along the North Line of said Seeley Lake Annexation No. 4 ANX2022-0004 North 89°37'36" West 1473.25 feet to a point on the West Line of the Southeast Quarter of Section 23;

Thence along said West Line of the Southeast Quarter North 00°07'09" East 1451.51 feet to the **TRUE POINT OF BEGINNING**.

Said parcel contains 72.66 acres, more or less, and is subject to all existing easements and/or rights of way of record.

Steven John Stencil
Colorado LS 30462

For and on behalf of:
Intermill Land Surveying, Inc.
1301 North Cleveland Avenue
Loveland, CO 80537
970.669.0516

SEELEY LAKE ANNEXATION No. 1 SITE ANALYSIS

SITUATE IN THE EAST HALF OF SECTION 23, AND THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO
±0.10 ACRES
ANX2022-0001

LINE LEGEND:

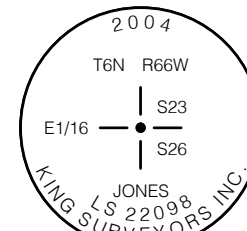
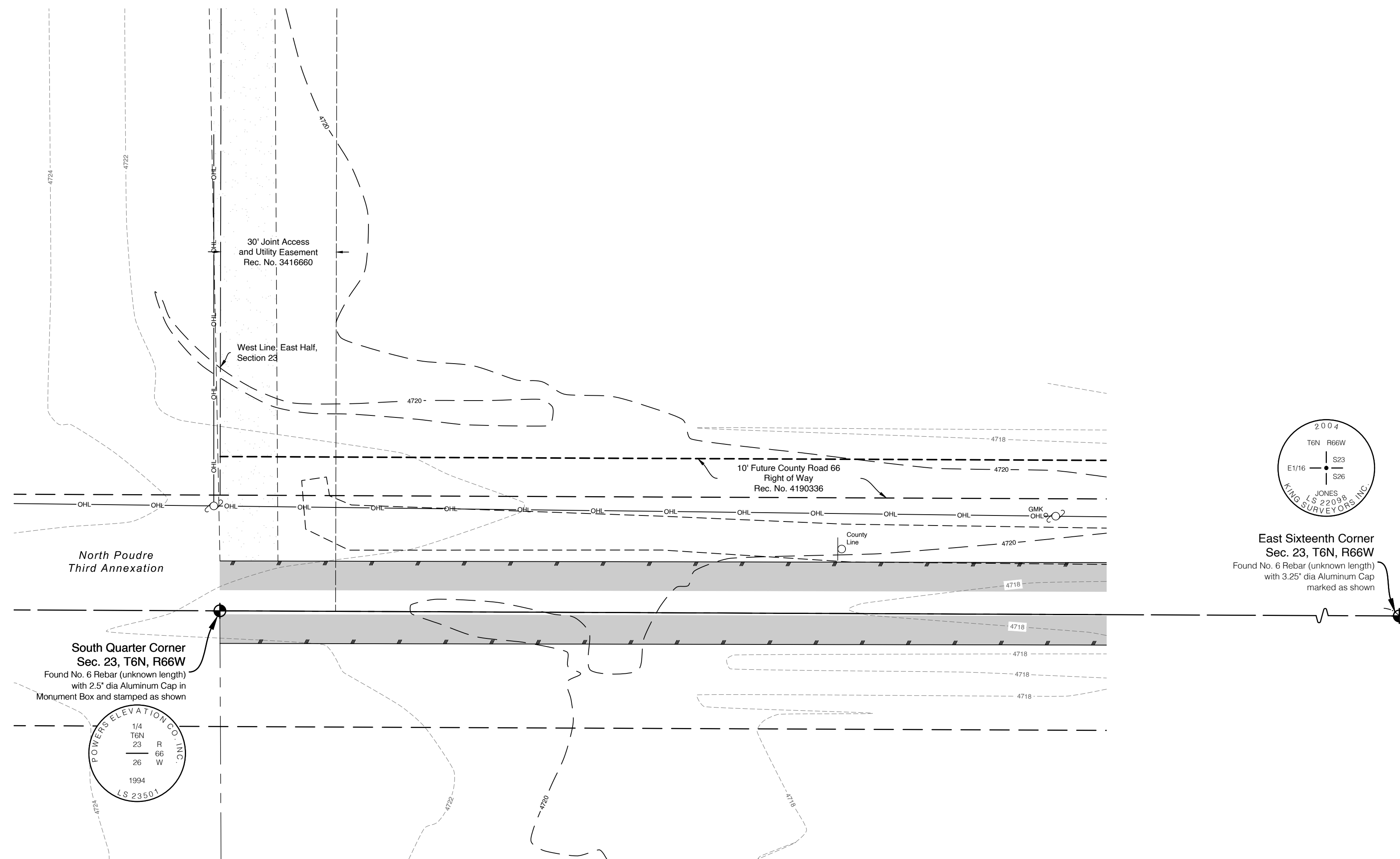
- = Boundary Line
- = Property Line
- = Section Line
- = Right of Way Line
- - - = Future Right of Way Line
- - - = Easement Line
- - - = Edge of Dirt Road
- - - = Edge of Asphalt Surface
- - - = Overhead Utility Line
- - - = Gas Line
- - - = Contour Line - Major
- - - = Contour Line - Minor

ABBREVIATION LEGEND:

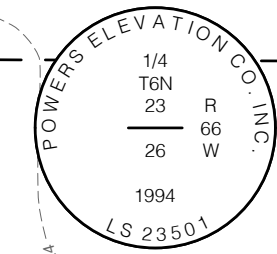
- N: North ±: Plus or Minus
- E: East No.: Number
- W: West Dia.: Diameter
- S: South LS: Land Surveyor
- Rec.: Reception
- GMK: Gas Warning Sign
- ROW: Right of Way
- Sec.: T_N_R_W:
- Section Township Range

SYMBOL LEGEND:

- = Sign
- = Utility Pole

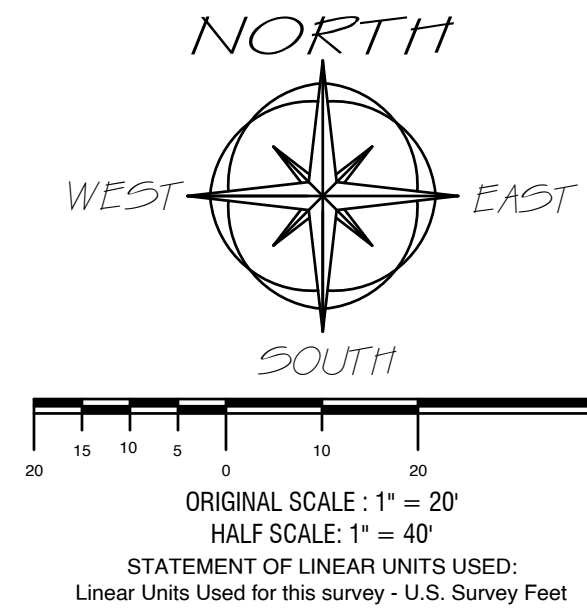
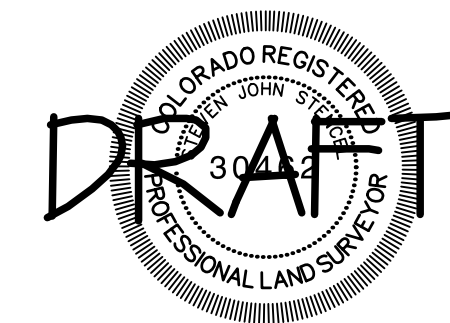


East Sixteenth Corner
Sec. 23, T6N, R66W
Found No. 6 Rebar (unknown length)
with 3.25" dia Aluminum Cap
marked as shown



South Quarter Corner
Sec. 23, T6N, R66W
Found No. 6 Rebar (unknown length)
with 2.5" dia Aluminum Cap in
Monument Box and stamped as shown

PREPARED BY AND ON BEHALF OF:
INTERMILL LAND SURVEYING, INC.
1301 North Cleveland Avenue
Loveland, Colorado 80537
P: (970) 669-0516
Steven John Stencel
Colorado PLS No. 30462



According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

| REVISIONS: | BY: | DATE: |
|--|-----|------------|
| Address Round 4 Comments and Final Internal Review | LHB | 2023.02.16 |
| Address Round 3 Comments | LHB | 2022.10.09 |
| Address Round 2 Comments from City of Greeley | LHB | 2022.10.25 |
| Address Round 1 Comments from City of Greeley | LHB | 2022.08.30 |
| Line Weight Changes per Request | LHB | 2022.07.07 |
| Resear Annexation Due to Project Boundary Changes | LHB | 2022.06.30 |

INTERMILL LAND SURVEYING, INC.
1301 NORTH CLEVELAND AVENUE LOVELAND, COLORADO 80537 BUS: (970) 669-0516

CLIENT:
Charles Keirnes
1813 61st Avenue, Suite 200
Greeley, CO 80634

TITLE: SEELEY LAKE ANNEXATION No. 1 ANX2022-0001
East Half Sec. 23, Northeast Qtr. Sec. 26, T6N, R66W, 6th P.M.
City of Greeley, County of Weld, Colorado

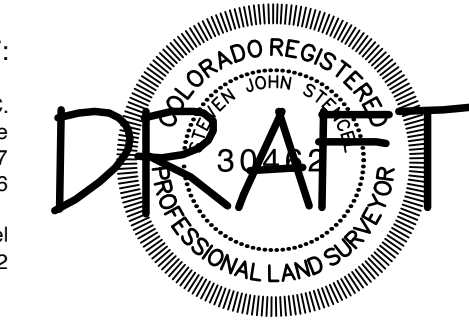
PROJECT NO.:
P-22-9219

| SHEET | OF |
|-------|----|
| 1 | 1 |

SEELEY LAKE ANNEXATION No. 2 SITE ANALYSIS

SITUATE IN THE EAST HALF OF SECTION 23, AND THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
 CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO
 ±0.41 Acres
 ANX2022-0002

PREPARED BY AND ON BEHALF OF:
 INTERMILL LAND SURVEYING, INC.
 1301 North Cleveland Avenue
 Loveland, Colorado 80537
 P: (970) 669-0516
 Steven John Stencel
 Colorado PLS No. 30462



| REVISIONS: | DATE: |
|--|------------|
| Address Round 4 Comments and Final Internal Review | 2023.02.16 |
| Address Round 3 Comments | LHB |
| Address Round 2 Comments | LHB |
| Address Round 1 Comments from City of Greeley | 2022.12.09 |
| Line Weight Changes per Request | LHB |
| Increased Annexation Due to Project Boundary Changes | 2022.07.07 |
| | LHB |
| | 2022.06.30 |

LINE LEGEND:

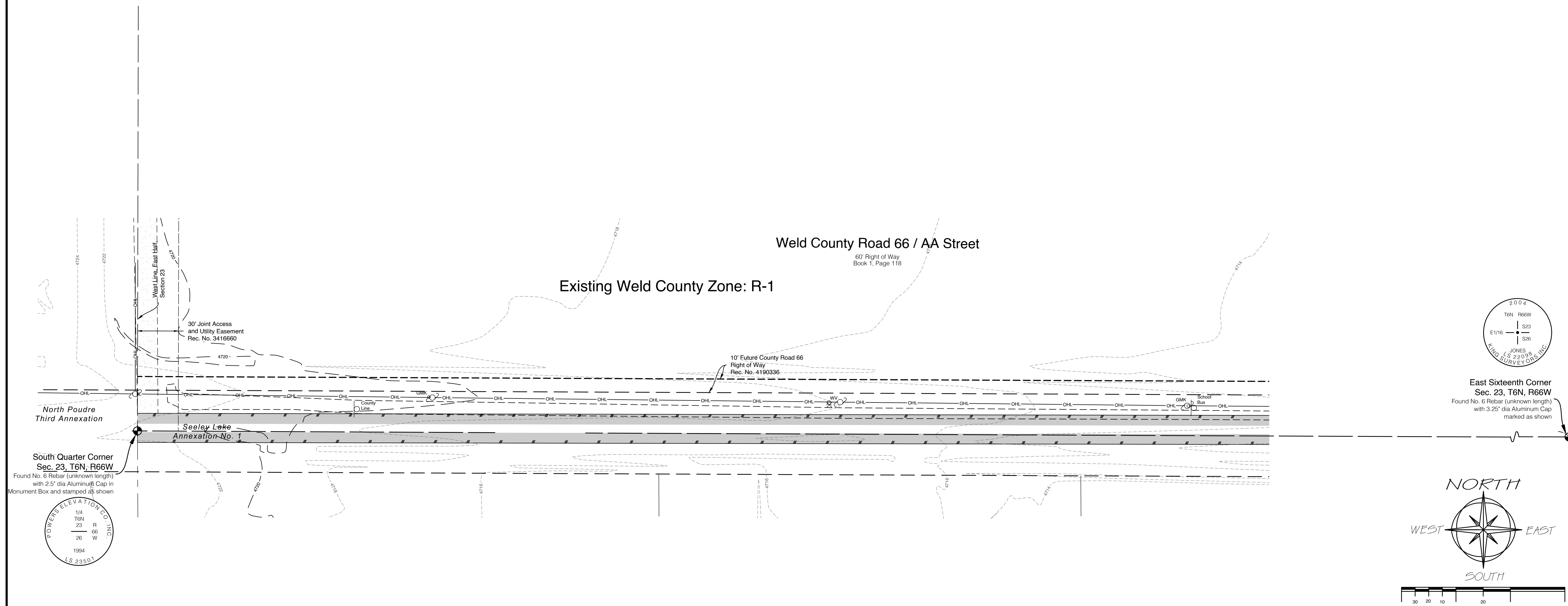
- = Boundary Line
- = Property Line
- = Section Line
- = Right of Way Line
- = Future Right of Way Line
- = Easement Line
- = Edge of Dirt Road
- = Edge of Asphalt Surface
- = Overhead Utility Line
- = Gas Line
- = Contour Line - Major
- = Contour Line - Minor

ABBREVIATION LEGEND:

- N: North ± Plus or Minus
- E: East No.: Number
- W: West Dia: Diameter
- S: South LS: Land Surveyor
- Rec.: Reception
- GMK: Gas Warning Sign
- ROW: Right of Way
- Sec. T N R W: Section Township Range

SYMBOL LEGEND:

- ⊕ = Sign
- ⊙ = Utility Pole



INTERMILL LAND SURVEYING, INC.
 1301 NORTH CLEVELAND AVENUE LOVELAND, COLORADO 80537
 BUS: (970) 669-0516

CLIENT:
Charles Keirnes
 1813 61st Avenue, Suite 200
 Greeley, CO 80634

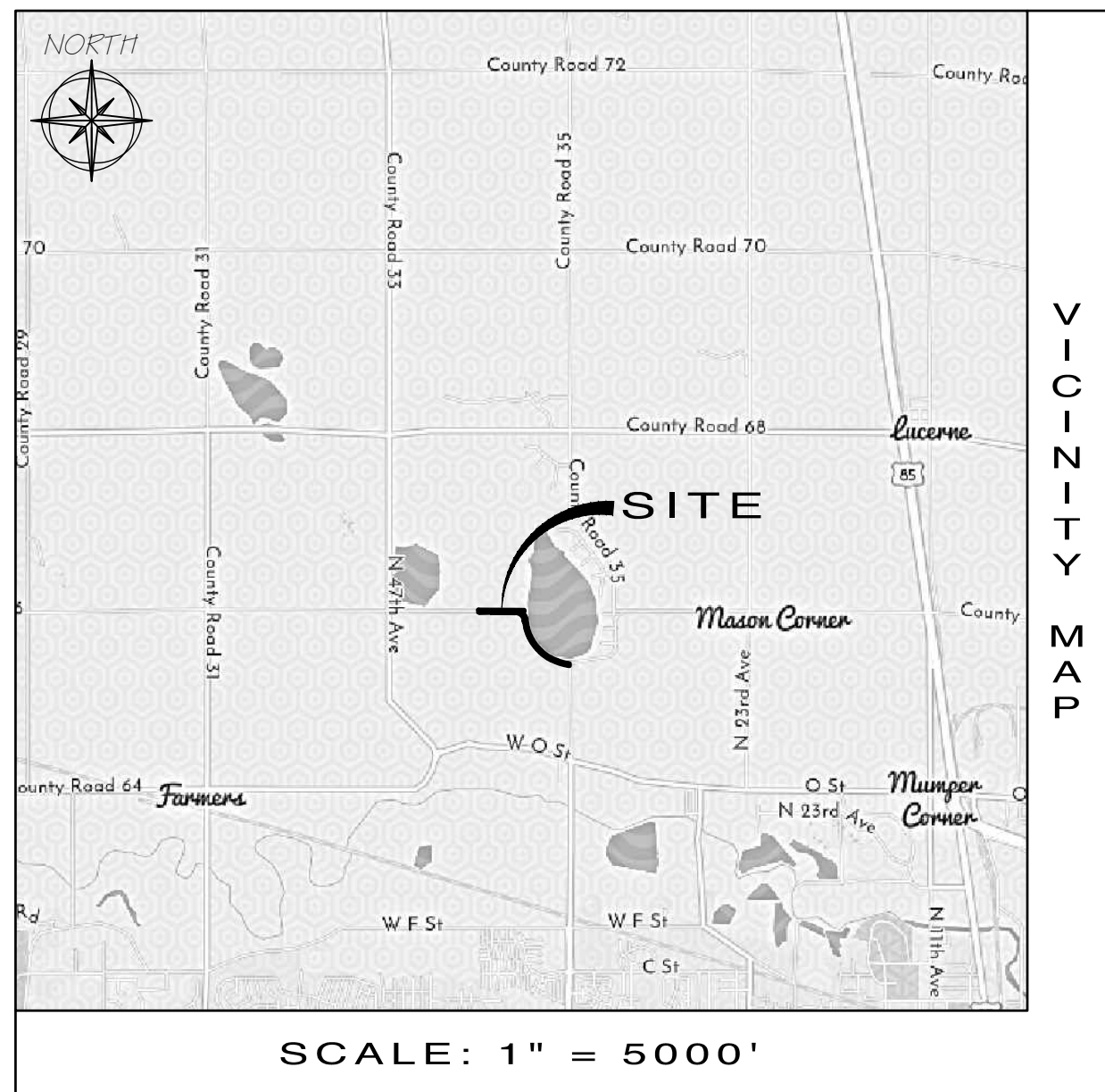
TITLE: SEELEY LAKE ANNEXATION No. 2 ANX2022-0002
 East Half Sec. 23, Northeast Qtr. Sec. 26, T6N, R66W, 6th P.M.
 City of Greeley, County of Weld, Colorado

| | |
|--------------|------------|
| DRAWN BY: | LHB |
| CHECKED BY: | SJS |
| APPROVED BY: | SJS |
| DATE: | 2022.10.26 |
| SCALE: | 1" = 40' |
| PROJECT NO.: | P-22-9219 |
| SHEET | OF |
| 1 | 1 |

According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

SEELEY LAKE ANNEXATION No. 3

SITUATE IN THE EAST HALF OF SECTION 23, AND THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO
±4.95 Acres
ANX2022-0003



ZONING INFORMATION:

Weld County Zone R-1:
Low Density Residential Zone

City of Greeley Zone H-A:
Holding Agricultural Zone

ANNEXATION TABLE:

| | |
|---|----------------------|
| Total Annexation Boundary Perimeter: | 8,905.59 linear feet |
| Contiguous Length to existing City of Greeley Boundary: | 1,487.20 linear feet |
| Total Allowable Perimeter (Contiguous x 6): | 8,923.20 linear feet |
| Minimum one-sixth (1/6) of total Annexation perimeter: | 1,484.27 linear feet |

ENGINEERING DEVELOPMENT REVIEW AND CIVIL INSPECTIONS MANAGER:

Construction must be in accordance with applicable City of Greeley construction standards. The City's acceptance shall not relieve the Design Engineer's responsibility for errors, omissions, or design deficiencies for which the City is held harmless.

EDR & Civil Inspections Manager _____ Date _____

SURVEYOR'S CERTIFICATE:

I, Steven John Stencel, a Registered Professional Land Surveyor in the State of Colorado, do hereby certify that not less than one-sixth (1/6) of the perimeter of the area proposed to be annexed to the City of Greeley, Colorado, is contiguous with the boundaries of the annexing municipality, and that this annexation plat substantially complies with the Colorado Revised Statutes and the City of Greeley, Colorado codes appertaining thereto.

FOR AND ON BEHALF OF:
INTERMILL LAND SURVEYING, INC.
1301 N. Cleveland Ave.
Loveland, CO 80537
970-669-0516

Steven John Stencel
Colo. LS 30462
Date: _____



NOTICE: Per the State of Colorado Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors Rule 6.2.2(D) the word "certify" as used hereon means an expression of professional opinion and does not constitute a warranty or guarantee, expressed or implied. The survey represented hereon has been performed by me or under my direct supervision in accordance with applicable standards of practice and is based upon my knowledge, information and belief.

PURPOSE STATEMENT:

This is the third in a series of five (5) annexations to incorporate Lots A and B of Recorded Exemption No. 0805-23-1 RE-5061 and Lot D of Recorded Exemption No. 0805-23-4 RECX15-0012 into the City of Greeley's municipal jurisdiction.

PLANNING COMMISSION RECOMMENDATION:

Recommended / not recommended by the City of Greeley Planning Commission, this _____ day of _____, 2023.

OWNER'S APPROVAL AND DEDICATION:

We, the undersigned, being sole owners for the land described herein, have caused said land to be laid out and annexed and rezoned under the name of SEELEY LAKE ANNEXATION No. 3 ANX2022-0001 and do hereby dedicate to the public forever all streets, alleys and utility easements as dedicated hereon. In compliance with the City of Greeley land use code and by contractual agreement, the landowners shall bear all expenses involved in improvements.

Owner: Keirnes Land Company LLC

Name and Title _____

NOTARY PUBLIC:

STATE OF COLORADO)
COUNTY OF _____) §

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by _____ as _____.

Witness my hand and official seal.

My commission expires: _____

Notary Public _____

COMMUNITY DEVELOPMENT DIRECTOR:

Community Development _____ Date _____

MAYOR'S CERTIFICATE:

Said Annexation Map has been accepted by the City of Greeley, Weld County, Colorado, and the territory designated herein is made a part of the City of Greeley and included within the limits and jurisdiction thereof this _____ day of _____, A.D. 2023.

Mayor _____

ATTEST: _____
City Clerk

PROPERTY DESCRIPTION:

A Parcel of land located in the East Half of Section 23 and the Northeast Quarter of Section 26, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the South Line of the West Half of said East Half of Section 23 as bearing South 89°45'07" East and with all bearings contained herein relative thereto:

COMMENCING at the South Quarter Corner of said Section 23; thence along the West Line of the East Half of Section 23 North 00°07'07" East 30.00 feet to the North Corner of Seeley Lake Annexation No. 2 ANX2022-0002 and the **TRUE POINT OF BEGINNING**;

Thence continuing along said West Line North 00°07'07" East 10.00 feet;
Thence departing said West Line South 89°45'07" East 1,336.46 feet to the East Line of Lot D, Recorded Exemption No. 0805-23-4 RECX15-0012 as depicted on the plat recorded March 25, 2016, under Reception No. 4190336 in the Records of the Weld County Clerk and Recorder's Office;
Thence along said East Line of Lot D South 00°29'59" West 40.00 feet to the Southeast Corner of said Lot D;

Thence along the South Line of Lot D North 89°45'07" West 118.44 feet to a point on the Northeast Right of Way Line for County Road 66 / AA Street as depicted on said Recorded Exemption No. 0805-23-1 RE-5061 as depicted on the plat recorded December 27, 2010, under Reception No. 3740825 in said Records of the Weld County Clerk and Recorder's Office being also a point on a non-tangent curve concave to the Southwest, having a central angle of 54°13'42" and a radius of 318.00 feet, the long chord of which bears South 37°33'00" East 289.87 feet;
Thence departing said South Line of Lot D and along said Northeast Right of Way Line for County Road 66 / AA Street the following ten (10) courses and distances:

1. Southeasterly along the arc of said curve 300.98 feet;
2. Tangent from said curve South 10°26'09" East 244.52 feet to a point on a curve concave to the Northeast, having a central angle of 17°40'57" and a radius of 890.00 feet, the long chord of which bears South 19°18'37" East 273.58 feet;
3. Southeasterly along the arc of said curve 274.67 feet;
4. Non-tangent from said curve South 28°07'07" East 91.07 feet to a point on a curve concave to the Northeast, having a central angle of 15°50'39" and a radius of 1,115.00 feet, the long chord of which bears South 36°02'26" East 307.35 feet;
5. Southeasterly along the arc of said curve 308.33 feet;
6. Non-tangent from said curve South 43°57'45" East 129.26 feet to a point on a curve concave to the Northeast, having a central angle of 21°58'05" and a radius of 920.00 feet, the long chord of which bears South 54°56'48" East 350.59 feet;
7. Southeasterly along the arc of said curve 352.74 feet;
8. Non-tangent from said curve South 65°55'51" East 174.76 feet to a point on a curve concave to the Northeast, having a central angle of 16°23'22" and a radius of 1,170.00 feet, the long chord of which bears South 74°07'32" East 333.54 feet;
9. Easterly along the arc of said curve 334.68 feet;
10. Tangent from said curve South 82°19'13" East 48.81 feet to the northerly prolongation of the West Right of Way Line for County Road 35 as depicted on said Recorded Exemption No. 0805-23-1 RE-5061;

Thence departing the Northeast Right of Way Line for County Road 66 / AA Street along said prolongation of the West Right of Way Line for County Road 35 South 00°35'46" East 60.63 feet to the Southwestly Right of Way Line for said County Road 66 / AA Street;

Thence departing said prolongation of the West Right of Way Line for County Road 35 along said Southwestly Right of Way Line and the South Right of Way Line for County Road 66 / AA Street the following Nine (9) courses and distances:

1. North 82°19'13" West 57.54 feet to a point on a curve concave to the Northeast, having a central angle of 16°23'22" and a radius of 1,230.00 feet, the long chord of which bears North 74°07'32" West 350.64 feet;
2. Westerly along the arc of said curve 351.84 feet;
3. Tangent from said curve North 65°55'51" West 174.76 feet to a point on a non-tangent curve concave to the Northeast, having a central angle of 21°58'05" and a radius of 980.00 feet, the long chord of which bears North 54°56'48" West 373.45 feet;
4. Northwesterly along the arc of said curve 375.75 feet;
5. Tangent from said curve North 43°57'45" West 129.26 feet to a point on a non-tangent curve concave to the Northeast, having a central angle of 15°50'39" and a radius of 1,175.00 feet, the long chord of which bears North 36°02'26" West 323.89 feet;
6. Northwesterly along the arc of said curve 324.93 feet;
7. Tangent from said curve North 28°07'07" West 91.07 feet to a point on a non-tangent curve concave to the Northeast, having a central angle of 17°40'57" and a radius of 950.00 feet, the long chord of which bears North 19°16'37" West 292.02 feet;
8. Northwesterly along the arc of said curve 293.19 feet;
9. Tangent from said curve North 10°26'09" West 229.40 feet to a point on the East Line of the Northeast Quarter of Section 26;

Thence continuing along said Southwestly Right of Way Line and along said East Line of the Northeast Quarter of Section 26 South 00°26'20" East 57.60 feet to a point on the Southerly Right of Way Line for County Road 66 / AA Street as depicted on Recorded Exemption No. 0805-26-01 1AMRECX18-14-0060 as depicted on plat recorded January 30, 2019, under Reception No. 4463459 in the Records of the Weld County Clerk and Recorder's Office;

Thence departing said East Line and continuing along said Southerly Right of Way Line the following five (5) courses and distances:

1. North 10°26'09" West 71.85 feet to a point on a curve concave to the Southwest, having a central angle of 79°18'58" and a radius of 248.00 feet, the long chord of which bears North 50°05'38" West 316.55;
2. Northwesterly along the arc of said curve 343.31 feet;
3. Tangent from said curve North 89°45'07" West 699.69 feet to the West Line of Lot A, 1AMRECX18-14-0060;
4. Thence along said West Line of Lot A North 00°16'40" West 10.00 feet;
5. Thence North 89°45'07" West 382.86 feet to the South Corner of Seeley Lake Annexation No. 2 ANX2022-0002 being also a point on the Corporate Boundary Line of the City of Greeley;

Thence departing the South Right of Way Line for County Road 66 / AA Street contiguous to the City of Greeley and along the South and North Lines of said Seeley Lake Annexation No. 2 ANX2022-0002 the following two (2) courses and distances:

1. North 87°56'09" East 743.43 feet to the East Corner Seeley Lake Annexation No. 2 ANX2022-0002;
2. North 87°26'25" West 743.77 feet to North Corner of said Seeley Lake Annexation No. 2 ANX2022-0002 and the **TRUE POINT OF BEGINNING**.

Said parcel contains 4.95 acres, more or less, and is subject to all existing easements and/or rights of way of record.

BASIS OF BEARINGS STATEMENT: Bearings are based upon the South Line of the West Half of the East Half of Section 23, Township 6 North, Range 66 West of the Sixth Principal Meridian being monumented at the South Quarter Corner with a No. 6 Rebar of unknown length and a 2 1/2" diameter Aluminum Cap marked LS 23501 1994 in a Monument Box; at the East Sixteenth Corner with a No. 6 Rebar of unknown length and a 2 1/2" diameter Aluminum Cap marked KING SURVEYORS INC. JONES LS 22098 2004; and having an assumed bearing of South 89°45'07" East 1336.19 feet with all bearings contained herein relative thereto.

According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

| | |
|--|------------|
| DATE: | 2023.02.28 |
| BY: | LHB |
| REVISIONS: | |
| Address Round 1 Comments | LHB |
| Address Round 2 Comments and Final Internal Review | LHB |
| Address Round 3 Comments | LHB |
| Address Round 4 Comments - Add WOR 66 / AA Street | LHB |
| Address Round 1 Comments from City of Greeley | LHB |
| Lineweight Changes per Request | LHB |
| Increased Annotation Due to Project Boundary Changes | LHB |

INTERMILL LAND SURVEYING, INC.
1301 NORTH CLEVELAND AVENUE LOVELAND, COLORADO 80537 BUS: (970)669-0516

CLIENT:
Charles Keirnes
1813 91st Avenue, Suite 200
Greeley, CO 80634

TITLE: SEELEY LAKE ANNEXATION No. 3 ANX2022-0003
East Half Sec. 23, Northeast Qtr. Sec. 26, T6N, R66W, 6th P.M.
City of Greeley, County of Weld, Colorado

DRAWN BY: LHB
CHECKED BY: SJS
APPROVED BY: SJS
DATE: 2023.02.17
SCALE: 1" = 200'

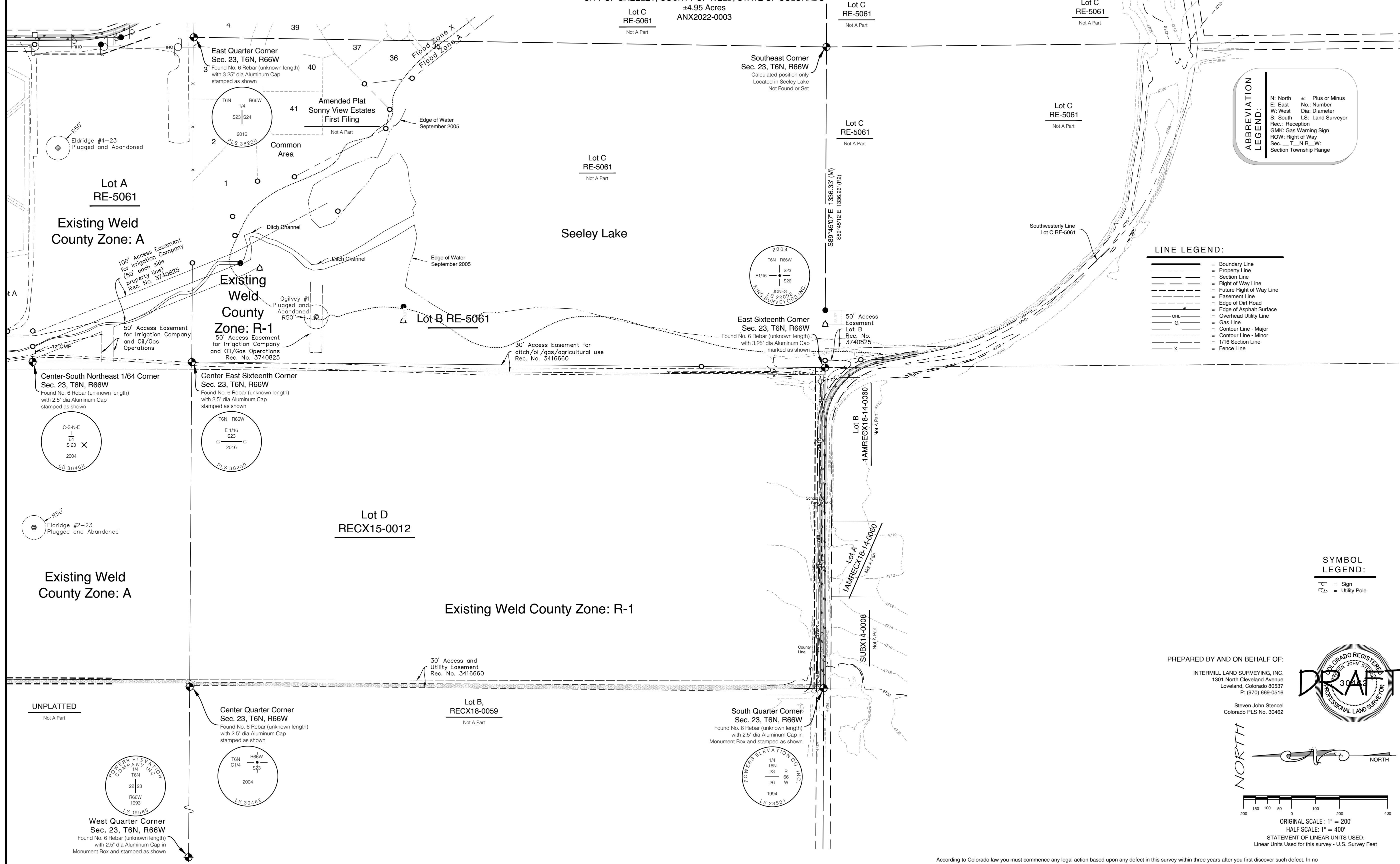
PROJECT NO.: P-22-9219

| | |
|-------|----|
| SHEET | OF |
| 1 | 2 |

SEELEY LAKE ANNEXATION No. 3 SITE ANALYSIS

SITUATE IN THE EAST HALF OF SECTION 23, AND THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO

±4.95 Acres
ANX2022-0003



ABBREVIATION LEGEND:

N: North ±: Plus or Minus
 E: East No: Number
 W: West Dia: Diameter
 S: South LS: Land Surveyor
 Rec: Reception
 GMK: Gas Warning Sign
 ROW: Right of Way
 Sec: Section
 T, N, R, W: Section Township Range

LINE LEGEND:

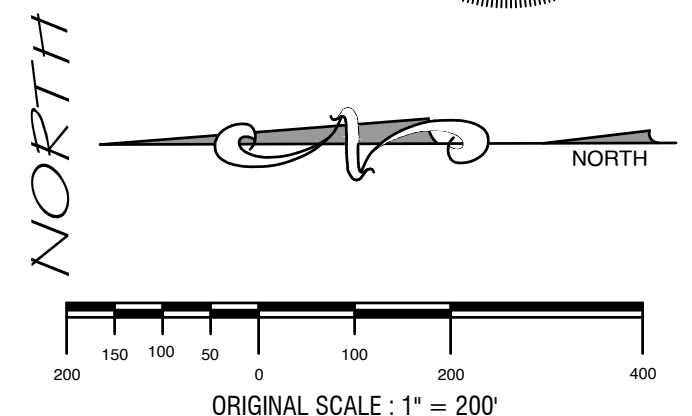
- Boundary Line
- - - Property Line
- - - Section Line
- - - Right of Way Line
- - - Future Right of Way Line
- - - Easement Line
- - - Edge of Dirt Road
- - - Edge of Asphalt Surface
- - - Overhead Utility Line
- - - Gas Line
- - - Contour Line - Major
- - - Contour Line - Minor
- - - 1/16 Section Line
- - - Fence Line

SYMBOL LEGEND:

- = Sign
- = Utility Pole



PREPARED BY AND ON BEHALF OF:
 INTERMILL LAND SURVEYING, INC.
 1301 North Cleveland Avenue
 Loveland, Colorado 80537
 P: (970) 669-0516
 Steven John Stencel
 Colorado PLS No. 30482



According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

DATE: 2022.02.15

| REVISIONS: | BY: | DATE: |
|--|-----|------------|
| Address Round 4 Comments and Final Internal Review | LHB | 2022.02.15 |
| Address Round 3 Comments | LHB | 2022.10.09 |
| Address Round 2 Comments - Add WCR 66 / AA Street | LHB | 2022.10.26 |
| Address Round 1 Comments from City of Greeley | LHB | 2022.08.30 |
| Line Weight Changes per Request | LHB | 2022.07.07 |
| Revised Annexation Due to Project Boundary Changes | LHB | 2022.06.21 |

INTERMILL LAND SURVEYING, INC.
 1301 NORTH CLEVELAND AVENUE LOVELAND, COLORADO 80537 BUS: (970) 669-0516

TITLE: SEELEY LAKE ANNEXATION No. 3 ANX2022-0003
 East Half Sec. 23, Northeast Qtr. Sec. 26, T6N, R66W, 6th P.M.
 City of Greeley, County of Weld, Colorado

CLIENT:
 Charles Keirnes
 1813 91st Avenue, Suite 200
 Greeley, CO 80634

| | |
|--------------|------------|
| DRAWN BY: | LHB |
| CHECKED BY: | SJS |
| APPROVED BY: | SJS |
| DATE: | 2022.06.21 |
| SCALE: | 1" = 200' |
| PROJECT NO.: | P-22-9219 |
| SHEET | OF |
| 1 | 1 |

N:\2022\ANX2022-0003\Survey\15 to 15.mxd\2022\Annexation No. 3 ANX2022-0003 REC 3.mxd

SEELEY LAKE ANNEXATION No. 4

SITUATE IN THE EAST HALF OF SECTION 23, AND THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO
±87.53 Acres
ANX2022-0004



PROPERTY DESCRIPTION:

A Parcel of land located in the East Half of Section 23, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the South Line of the West Half of said East Half of Section 23 as bearing South 89°45'07" East and with all bearings contained herein relative thereto:

COMMENCING at the South Quarter Corner of said Section 23; thence along the West Line of the East Half of Section 23 North 00°07'07" East 40.00 feet to the Northwest Corner of Seeley Lake Annexation No. 3 ANX2022-0003 and the **TRUE POINT OF BEGINNING**;

Thence continuing along said West Line of the East Half of Section 23 North 00°07'07" East 2601.74 feet to the Center Quarter Corner of Section 23;

Thence departing said West Line of the East Half of Section 23 and along the North Line of the Southeast Quarter of Section 23 South 89°37'36" East 1473.25 feet;

Thence departing said North Line of the Southeast Quarter of Section 23 South 00°29'56" West 2638.54 feet to a point on the South Line of said Southeast Quarter of Section 23;

Thence along said South Line of the Southeast Quarter of Section 23 North 89°46'07" West 119.52 feet to the East Line of the West Half of the Southeast Quarter of said Section 23 and a point on the Easterly Line of Seeley Lake Annexation No. 3 ANX2022-0003 being also a point on the Corporate Boundary of the City of Greeley;

Thence along the Easterly and the Northerly Lines of Seeley Lake Annexation No. 3 ANX2022-0003 and said Corporate Boundary Line the following two (2) courses and distances:

1. North 00°29'59" East 40.00 feet to the Easterly Prolongation of the North Right of Way Line for Weld County Road 66 / AA Street;
2. North 89°45'07" West 1336.46 feet to the **TRUE POINT OF BEGINNING**.

Said parcel contains 87.53 acres, more or less, and is subject to all existing easements and/or rights of way of record.

OWNER'S APPROVAL AND DEDICATION:

We, the undersigned, being sole owners to the land described herein, have caused said land to be laid out and annexed and rezoned under the name of SEELEY LAKE ANNEXATION No. 4 ANX2022-0001 and do hereby dedicate to the public forever all streets, alleys and utility easements as dedicated hereon. In compliance with the City of Greeley land use code and by contractual agreement, the landowners shall bear all expenses involved in improvements.

Owner: Keirnes Land Company LLC

Name and Title _____

NOTARY PUBLIC:

STATE OF COLORADO)
) §
COUNTY OF _____)

The forgoing instrument was acknowledged before me this _____ day of _____, 2023, by _____ as _____.

Witness my hand and official seal.

My commission expires: _____

Notary Public _____

ZONING INFORMATION:

Existing Weld County Zone R-1: Low Density Residential Zone

Proposed City of Greeley Zone H-A: Holding Agricultural Zone

ANNEXATION TABLE:

| | |
|---|----------------------|
| Total Annexation Boundary Perimeter: | 8,209.51 linear feet |
| Contiguous Length to existing City of Greeley Boundary: | 1,376.46 linear feet |
| Total Allowable Perimeter (Contiguous x 6): | 8,258.76 linear feet |
| Minimum one-sixth (1/6) of total Annexation perimeter: | 1,368.25 linear feet |

PLANNING COMMISSION RECOMMENDATION:

Recommended / not recommended by the City of Greeley Planning Commission, this _____ day of _____, 2023.

PURPOSE STATEMENT:

This is the fourth in a series of five (5) annexations to incorporate Lots A and B of Recorded Exemption No. 0805-23-1 RE-5061 and Lot D of Recorded Exemption No. 0805-23-4 RECX15-0012 into the City of Greeley's municipal jurisdiction.

RECORD DOCUMENT NOTE:

(R2) Record Bearings and Distances shown per Recorded Exemption No. 0805-23-1 RE-5061 recorded December 27, 2010, under Reception No. 3740825 in the records of the Weld County Clerk and Recorder's Office.

(R3) Record Bearings and Distances shown per Recorded Exemption No. 0805-23-4 RECX15-0012 recorded March 25, 2016, under Reception No. 4190336 in the records of the Weld County Clerk and Recorder's Office.

MAYOR'S CERTIFICATE:

Said Annexation Map has been accepted by the City of Greeley, Weld County, Colorado, and the territory designated hereon is made a part of the City of Greeley and included within the limits and jurisdiction thereof this _____ day of _____, A.D. 2023.

ATTEST: City Clerk _____ Mayor _____

COMMUNITY DEVELOPMENT DIRECTOR APPROVAL:

Approved this _____ day of _____, A.D. 2023.

Community Development Director _____

ENGINEERING DEVELOPMENT REVIEW MANAGER APPROVAL:

Approved this _____ day of _____, A.D. 2023.

Engineering Development Review Manager _____

SURVEYOR'S CERTIFICATE:

I, Steven John Stencel, a Registered Professional Land Surveyor in the State of Colorado, do hereby certify that not less than one-sixth (1/6) of the perimeter of the area proposed to be annexed to the City of Greeley, Colorado, is contiguous with the boundaries of the annexing municipality, and that this annexation plat substantially complies with the Colorado Revised Statutes and the City of Greeley, Colorado codes appertaining thereto.

FOR AND ON BEHALF OF:
INTERMILL LAND SURVEYING, INC.
1301 N. Cleveland Ave.
Loveland, CO 80537
970-669-0516

Steven John Stencel
Colo. LS 30462
Date: _____



NOTICE: Per the State of Colorado Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors Rule 6.2.2(D) the word "certify" as used hereon means an expression of professional opinion and does not constitute a warranty or guarantee, expressed or implied. The survey represented hereon has been performed by me or under my direct supervision in accordance with applicable standards of practice and is based upon my knowledge, information and belief.

BASIS OF BEARINGS STATEMENT: Bearings are based upon the North Line of the East Half of Section 23, Township 6 North, Range 66 West of the Sixth Principal Meridian being monumented at the North Quarter Corner with a No. 6 Rebar of unknown length and a 2.5" diameter Aluminum Cap marked 2016 in a Monument Box; at the Northeast Corner with a No. 6 Rebar of unknown length and a 2.5" diameter Aluminum Cap marked LS 38175 2014 in a Monument Box; and having an assumed bearing of South 89°39'04" East 2702.03 feet with all bearings contained herein relative thereto.

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| | |
|--|-------|
| REVISIONS: | DATE: |
| Addressed Round 5 Comments | LHB |
| Addressed Round 4 Comments and Final Internal Review | LHB |
| Addressed Round 3 Comments | LHB |
| Addressed Round 2 Comments | LHB |
| Unrevised Changes per Request | LHB |
| Revised Annexation Due to Project Boundary Changes | LHB |

INTERMILL LAND SURVEYING, INC.

1301 NORTH CLEVELAND AVENUE LOVELAND, COLORADO 80537 BUS: (970) 669-0516

CLIENT: Charles Keirnes
1813 61st Avenue, Suite 200
Greeley, CO 80634

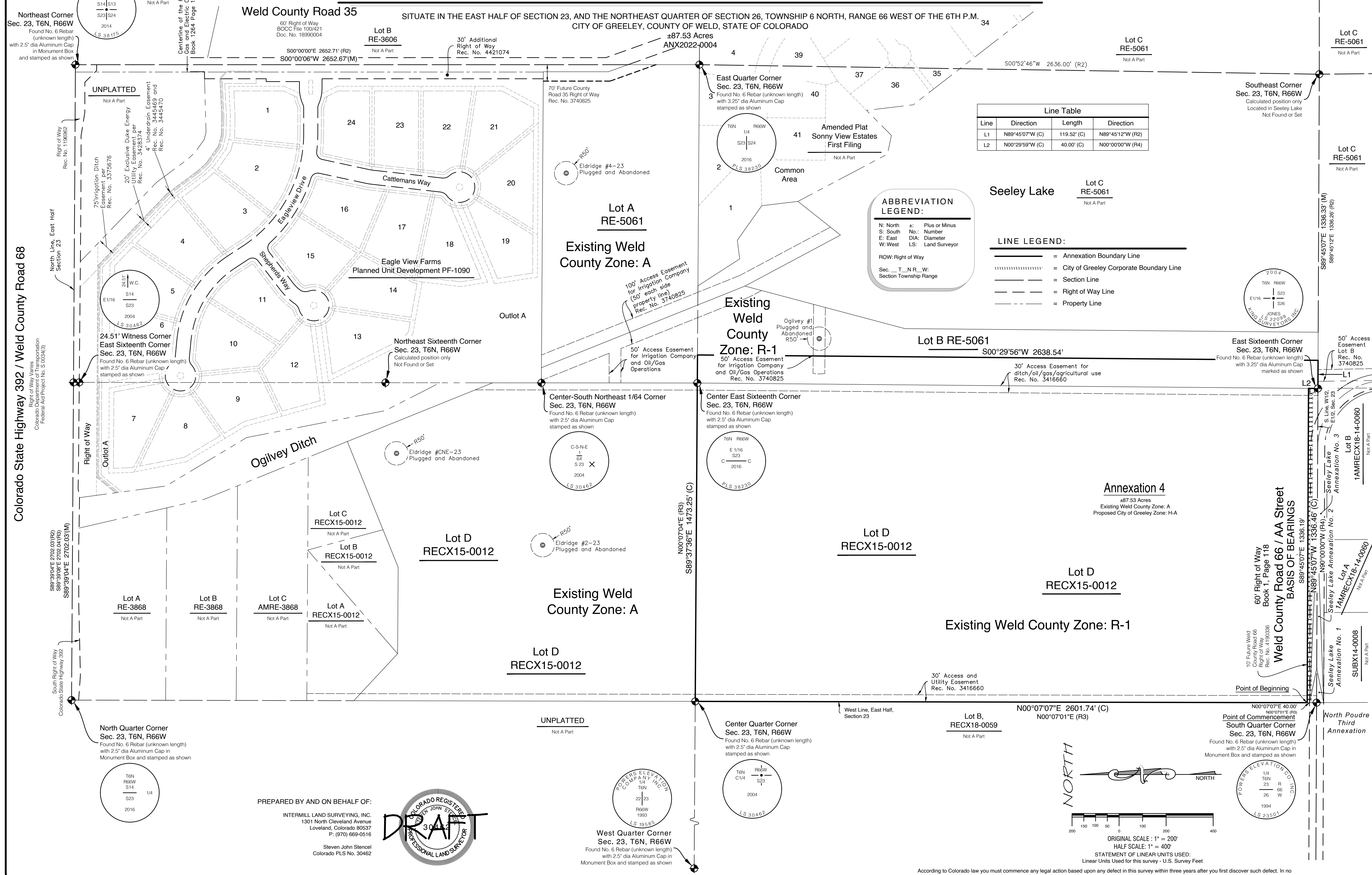
TITLE: SEELEY LAKE ANNEXATION No. 4 ANX2022-0004
East Half Sec. 23, Northeast Qtr. Sec. 26, T6N, R66W, 6th P.M.
City of Greeley, County of Weld, Colorado

DRAWN BY: LHB
 CHECKED BY: SJS
 APPROVED BY: SJS
 DATE: 2023.02.17
 SCALE: N/A

PROJECT NO.: P-22-9219

| | |
|-------|----|
| SHEET | OF |
| 1 | 2 |

SEELEY LAKE ANNEXATION No. 4



| Line Table | | | |
|------------|-----------------|-------------|------------------|
| Line | Direction | Length | Direction |
| L1 | N89°45'07"W (C) | 119.52' (C) | N89°45'12"W (R2) |
| L2 | N00°29'59"W (C) | 40.00' (C) | N00°00'00"W (R4) |

ABBREVIATION LEGEND:
 N: North a: Plus or Minus
 S: South No.: Number
 E: East Dia: Diameter
 W: West LS: Land Surveyor

ROW: Right of Way
 Sec. T N R W:
 Section Township Range

LINE LEGEND:

- = Annexation Boundary Line
- = City of Greeley Corporate Boundary Line
- - - - - = Section Line
- - - - - = Right of Way Line
- - - - - = Property Line

DATE: _____

BY: _____

REVISIONS:

| Addressed Round 5 Comments | Addressed Round 4 Comments and Final Internal Review | Addressed Round 3 Comments | Addressed Round 2 Comments | Addressed Comments Round 1 from City of Greeley | Line Weight Changes per Request | Revised Annotations Due to Project Boundary Changes |
|----------------------------|--|----------------------------|----------------------------|---|---------------------------------|---|
| LHB | LHB | LHB | LHB | LHB | LHB | LHB |
| 2023.03.28 | 2023.02.15 | 2022.10.26 | 2022.10.26 | 2022.08.30 | 2022.07.07 | 2022.06.21 |

INTERMILL LAND SURVEYING, INC.
 1301 NORTH CLEVELAND AVENUE LOVELAND, COLORADO 80537 BUS: (970) 669-0516

CLIENT: **Charles Keirnes**
 1813 G 1st Avenue, Suite 200
 Greeley, CO 80634

TITLE: SEELEY LAKE ANNEXATION No. 4 ANX2022-0004
 East Half Sec. 23, T6N, R66W, 6th P.M.
 City of Greeley, County of Weld, Colorado

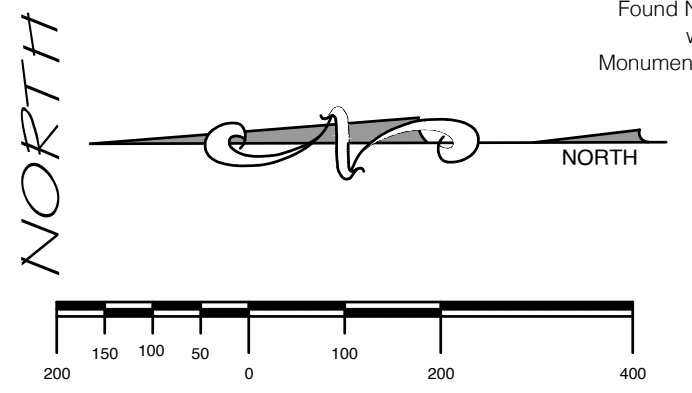
DRAWN BY: LHB
 CHECKED BY: SJS
 APPROVED BY: SJS

DATE: 2023.02.17
 SCALE: 1" = 200'

PROJECT NO.: P-22-9219

| SHEET | OF |
|-------|----|
| 2 | 2 |

PREPARED BY AND ON BEHALF OF:
 INTERMILL LAND SURVEYING, INC.
 1301 North Cleveland Avenue
 Loveland, Colorado 80537
 P: (970) 669-0516
 Steven John Stencel
 Colorado PLS No. 30482



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SEELEY LAKE ANNEXATION No. 4 SITE ANALYSIS

SITUATE IN THE EAST HALF OF SECTION 23, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO

SYMBOL LEGEND:

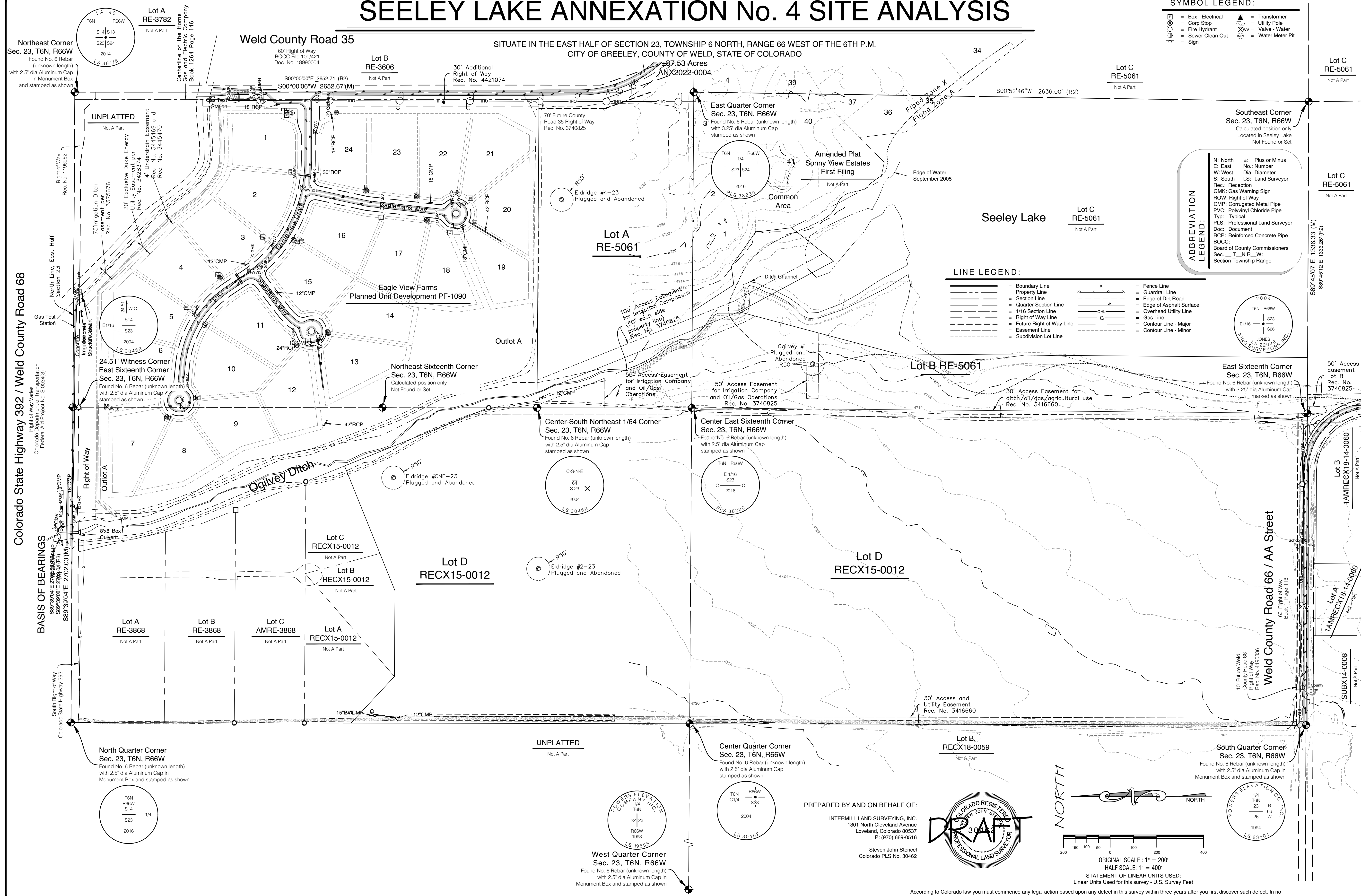
- ☐ = Box - Electrical
- ⊙ = Corp Stop
- ⊕ = Fire Hydrant
- ⊖ = Sewer Clean Out
- ⊘ = Sign
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ABBREVIATION LEGEND:

- N: North
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- W: West
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- GMK: Gas Warning Sign
- ROW: Right of Way
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- PVC: Polyvinyl Chloride Pipe
- Type: Typical
- PLS: Professional Land Surveyor
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- = Property Line
- = Section Line
- = Quarter Section Line
- = 1/16 Section Line
- = Right of Way Line
- = Future Right of Way Line
- = Easement Line
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- - - = Edge of Dirt Road
- - - = Edge of Asphalt Surface
- - - = Overhead Utility Line
- - - = Gas Line
- - - = Contour Line - Major
- - - = Contour Line - Minor



Colorado State Highway 392 / Weld County Road 68

Colorado State Highway 392 / Weld County Road 68

Weld County Road 66 / AA Street

Weld County Road 35

Seeley Lake

Lot A RE-3868

Lot B RE-3868

Lot C AMRE-3868

Lot A RECX15-0012

Lot B RECX15-0012

Lot C RECX15-0012

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-3606

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-5061

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-5061

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-5061

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-5061

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-3782

Lot B RE-3606

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-3606

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-3606

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-3606

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-3606

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-3606

Lot C RE-5061

Lot D RECX15-0012

Lot A RE-5061

Lot B RE-3606

Lot C RE-5061

INTERMILL LAND SURVEYING, INC.

Charles Keirnes

1813 61st Avenue, Suite 200
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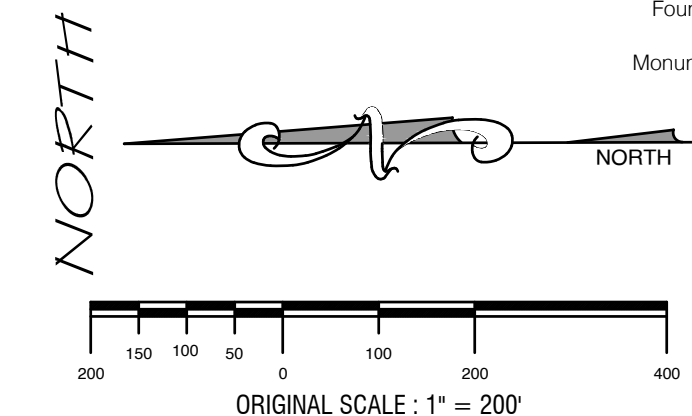
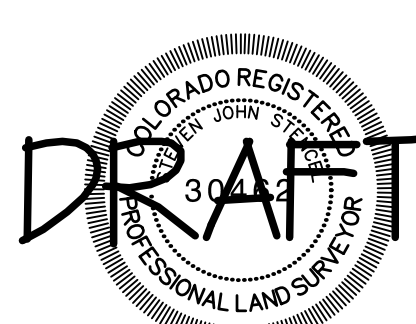
TITLE: SEELEY LAKE ANNEXATION No. 4 ANX2022-0004
East Half Sec. 23, Northeast Qtr. Sec. 26, T6N, R66W, 6th P.M.
City of Greeley, County of Weld, Colorado

DRAWN BY: LHB
CHECKED BY: SJS
APPROVED BY: SJS

DATE: 2022.10.26
SCALE: 1" = 200'

PROJECT NO.: P-22-9219
SHEET 2 OF 2

PREPARED BY AND ON BEHALF OF:
INTERMILL LAND SURVEYING, INC.
1301 North Cleveland Avenue
Loveland, Colorado 80537
P: (970) 669-0516
Steven John Stencel
Colorado PLS No. 30462

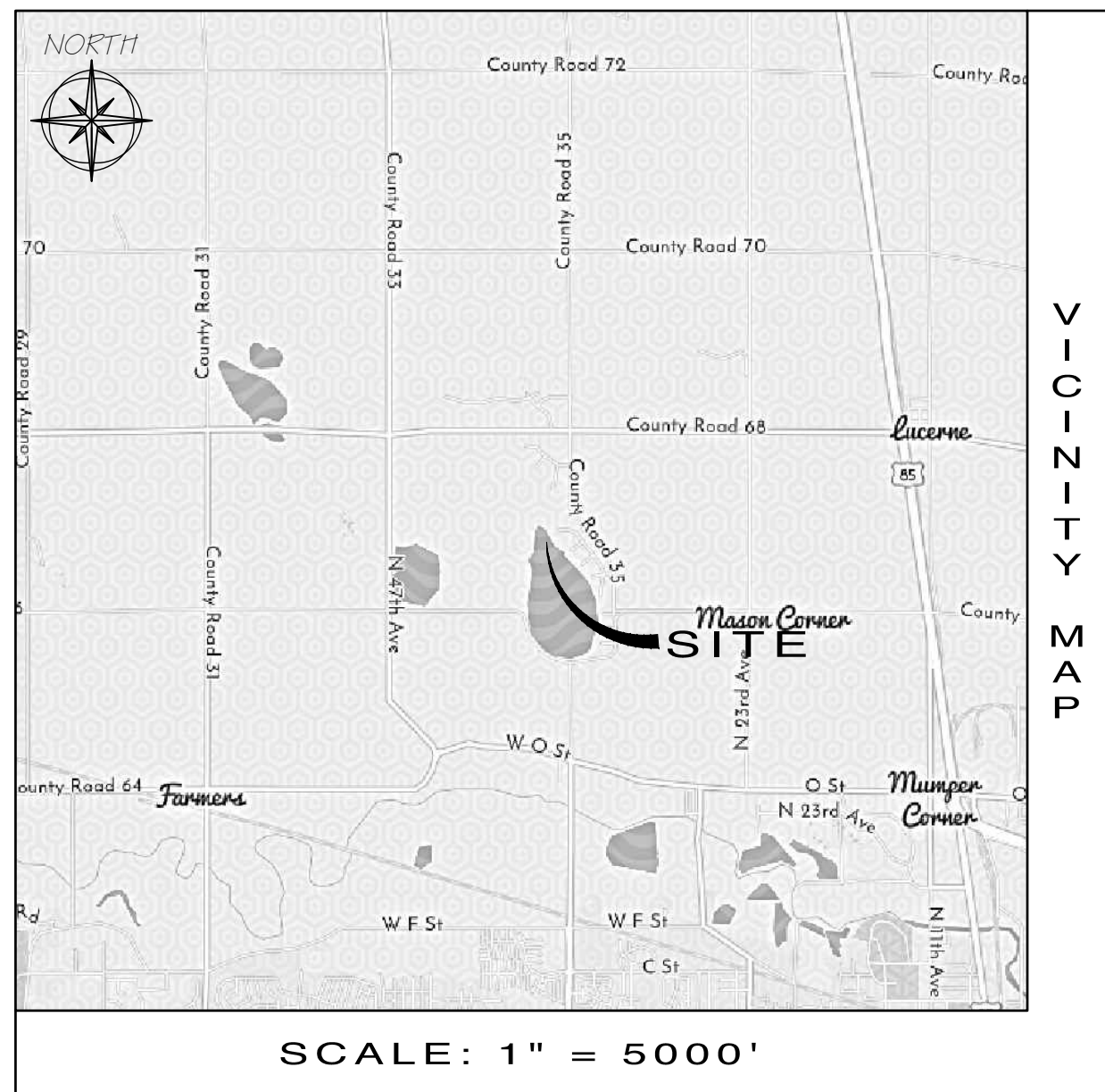


ORIGINAL SCALE: 1" = 200'
HALF SCALE: 1" = 400'
STATEMENT OF LINEAR UNITS USED:
Linear Units Used for this survey - U.S. Survey Feet

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SEELEY LAKE ANNEXATION No. 5

SITUATE IN THE EAST HALF OF SECTION 23, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO
±72.66 Acres
ANX2022-0005



PROPERTY DESCRIPTION:

A Parcel of land located in the East Half of Section 23, Township 6 North, Range 66 West of the Sixth Principal Meridian, County of Weld, State of Colorado, being more particularly described as follows:

Considering the North Line of the West Half of said East Half of Section 23 as bearing South 89°39'04" East and with all bearings contained herein relative thereto:

COMMENCING at the North Quarter Corner of said Section 23; thence along the West Line of the East Half of said Section 23 South 00°07'09" East 1200.01 feet to Northwest Corner of that parcel known as Lot D, Recorded Exemption No. 0805-23-4 RECX15-0012 as depicted on the plat recorded March 25, 2016 under Reception No. 4190336 in the Records of the Weld County Clerk and Recorder's Office and the **TRUE POINT OF BEGINNING**;

- Thence along the North and East Lines of said Parcel D the following five (5) courses and distances:
1. Departing said West Line South 46°59'23" East 273.05 feet;
 2. South 89°39'09" East 367.68 feet;
 3. North 67°59'54" East 576.73 feet to the Westerly Line of Ogilvey Ditch;
 4. Also along said Westerly Line of Ogilvey Ditch South 21°59'49" East 666.26 feet to the East Line of the West Half of the East Half of said Section 23;
 5. Also along said East Line of the West Half of the East Half South 00°03'36" West 207.10 feet to the Northwest Corner of Lot B, Recorded Exemption No. 0805-23-1 RE-5061 as depicted on the plat recorded December 27, 2010 under Reception No. 3740825 in said Records;

Thence along the North Line of said Lot B and the North Line Lot A, said Recorded Exemption No. 0805-23-1 RE-5061 South 89°37'58" East 1323.04 feet to the West Right of Way Line of Weld County Road 35;
Thence along said West Right of Way Line South 00°00'06" West 276.30 feet to an angle point thereon;
Thence continuing along said West Right of Way Line South 19°39'50" East 89.15 feet to the East Line of said Lot A;

- Thence along said East Line, the South Line and West Line of said Lot A the following eight (8) courses and distances:
1. South 00°00'06" West 303.10 feet;
 2. North 89°37'42" West 940.48 feet;
 3. South 32°49'26" East 211.29 feet;
 4. North 82°45'33" East 79.90 feet;
 5. South 54°46'12" East 179.94 feet;
 6. South 06°47'13" East 154.95 feet;
 7. South 38°22'26" West 230.69 feet;
 8. North 28°05'27" West 460.47 feet to a point on the Easterly Line of said Lot B, Recorded Exemption No. 0805-23-1 RE-5061;

- Thence along said Easterly Line and the South Line of said Lot B the following three (3) courses and distances:
1. South 14°54'10" West 703.61 feet;
 2. South 00°29'56" West 1757.39 feet to said South Line of Lot B being also the South Line of the Southeast Quarter of Section 23;
 3. North 89°45'07" West 119.52 feet to the Southeast Corner of Seeley Lake Annexation No. 4 ANX2022-0004 and a point on the Corporate Boundary for the City of Greeley;

Thence along said Corporate Boundary Line and the East Line of said Seeley Lake Annexation No. 4 ANX2022-0004 North 00°29'56" East 2638.64 feet to the Northeast Corner of said Annexation;
Thence continuing along said Corporate Boundary Line and along the North Line of said Seeley Lake Annexation No. 4 ANX2022-0004 North 89°37'36" West 1473.25 feet to a point on the West Line of the Southeast Quarter of Section 23;
Thence along said West Line of the Southeast Quarter North 00°07'09" East 1451.51 feet to the **TRUE POINT OF BEGINNING**.

Said parcel contains 72.66 acres, more or less, and is subject to all existing easements and/or rights of way of record.

PLANNING COMMISSION RECOMMENDATION:

Recommended / not recommended by the City of Greeley Planning Commission, this _____ day of _____, 2023.

PURPOSE STATEMENT:

This is the fifth in a series of five (5) annexations to incorporate Lots A and B of Recorded Exemption No. 0805-23-1 RE-5061 and Lot D of Recorded Exemption No. 0805-23-4 RECX15-0012 into the City of Greeley's municipal jurisdiction.

RECORD DOCUMENT NOTE:

- (R2) Record Bearings and Distances shown per Recorded Exemption No. 0805-23-1 RE-5061 recorded December 27, 2010, under Reception No. 3740825 in the records of the Weld County Clerk and Recorder's Office.
- (R3) Record Bearings and Distances shown per Recorded Exemption No. 0805-23-4 RECX15-0012 recorded March 25, 2016, under Reception No. 4190336 in the records of the Weld County Clerk and Recorder's Office.

OWNER'S APPROVAL AND DEDICATION:

We, the undersigned, being sole owners to the land described herein, have caused said land to be laid out and annexed and rezoned under the name of SEELEY LAKE ANNEXATION No. 5 ANX2022-0001 and do hereby dedicate to the public forever all streets, alleys and utility easements as dedicated hereon. In compliance with the City of Greeley land use code and by contractual agreement, the landowners shall bear all expenses involved in improvements.

Owner: Keirnes Land Company LLC

Name and Title _____

NOTARY PUBLIC:

STATE OF COLORADO)
COUNTY OF _____)§

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by _____ as _____.

Witness my hand and official seal.

My commission expires: _____

Notary Public _____

ZONING INFORMATION:

Weld County Zone R-1: Low Density Residential Zone
City of Greeley Zone H-A: Holding - Agricultural Zone
Weld County Zone A: Agricultural Zone
City of Greeley Zone H-A: Holding - Agricultural Zone

ANNEXATION TABLE:

| | |
|---|-----------------------|
| Total Annexation Boundary Perimeter: | 14,483.97 linear feet |
| Contiguous Length to existing City of Greeley Boundary: | 4,111.79 linear feet |
| Total Allowable Perimeter (Contiguous x 6): | 24,670.74 linear feet |
| Minimum one-sixth (1/6) of total Annexation perimeter: | 2,414.00 linear feet |

MAYOR'S CERTIFICATE:

Said Annexation Map has been accepted by the City of Greeley, Weld County, Colorado, and the territory designated hereon is made a part of the City of Greeley and included within the limits and jurisdiction thereof this _____ day of _____, A.D. 2023.

Mayor _____

ATTEST: _____
City Clerk

COMMUNITY DEVELOPMENT DIRECTOR:

Community Development _____ Date _____

ENGINEERING DEVELOPMENT REVIEW AND CIVIL INSPECTIONS MANAGER:

Construction must be in accordance with applicable City of Greeley construction standards. The City's acceptance shall not relieve the Design Engineer's responsibility for errors, omissions, or design deficiencies for which the City is held harmless.

EDR & Civil Inspections Manager _____ Date _____

SURVEYOR'S CERTIFICATE:

I, Steven John Stencel, a Registered Professional Land Surveyor in the State of Colorado, do hereby certify that not less than one-sixth (1/6) of the perimeter of the area proposed to be annexed to the City of Greeley, Colorado, is contiguous with the boundaries of the annexing municipality, and that this annexation plat substantially complies with the Colorado Revised Statutes and the City of Greeley, Colorado codes appertaining thereto.

FOR AND ON BEHALF OF:
INTERMILL LAND SURVEYING, INC.
1301 N. Cleveland Ave.
Loveland, CO 80537
970-669-0516

Steven John Stencel
Colo. LS 30462
Date: _____



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| | |
|--|------------|
| DATE: | 2023.03.28 |
| BY: | LHB |
| REVISIONS: | 2023.02.15 |
| Addressed Round 5 Comments | LHB |
| Addressed Round 4 Comments and Final Internal Review | LHB |
| Addressed Round 3 Comments | LHB |
| Addressed Round 2 Comments | LHB |
| Addressed Comments Round 1 from City of Greeley | LHB |
| Line Weight Changes per Request | LHB |
| Increased Annotation Due to Project Boundary Changes | LHB |
| | 2022.12.07 |
| | 2022.10.26 |
| | 2022.08.30 |
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| | 2022.06.21 |

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CLIENT:
Charles Keirnes
1813 G1st Avenue, Suite 200
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East Half of Section 23, Township 6 North, Range 66 West, 6th P.M.
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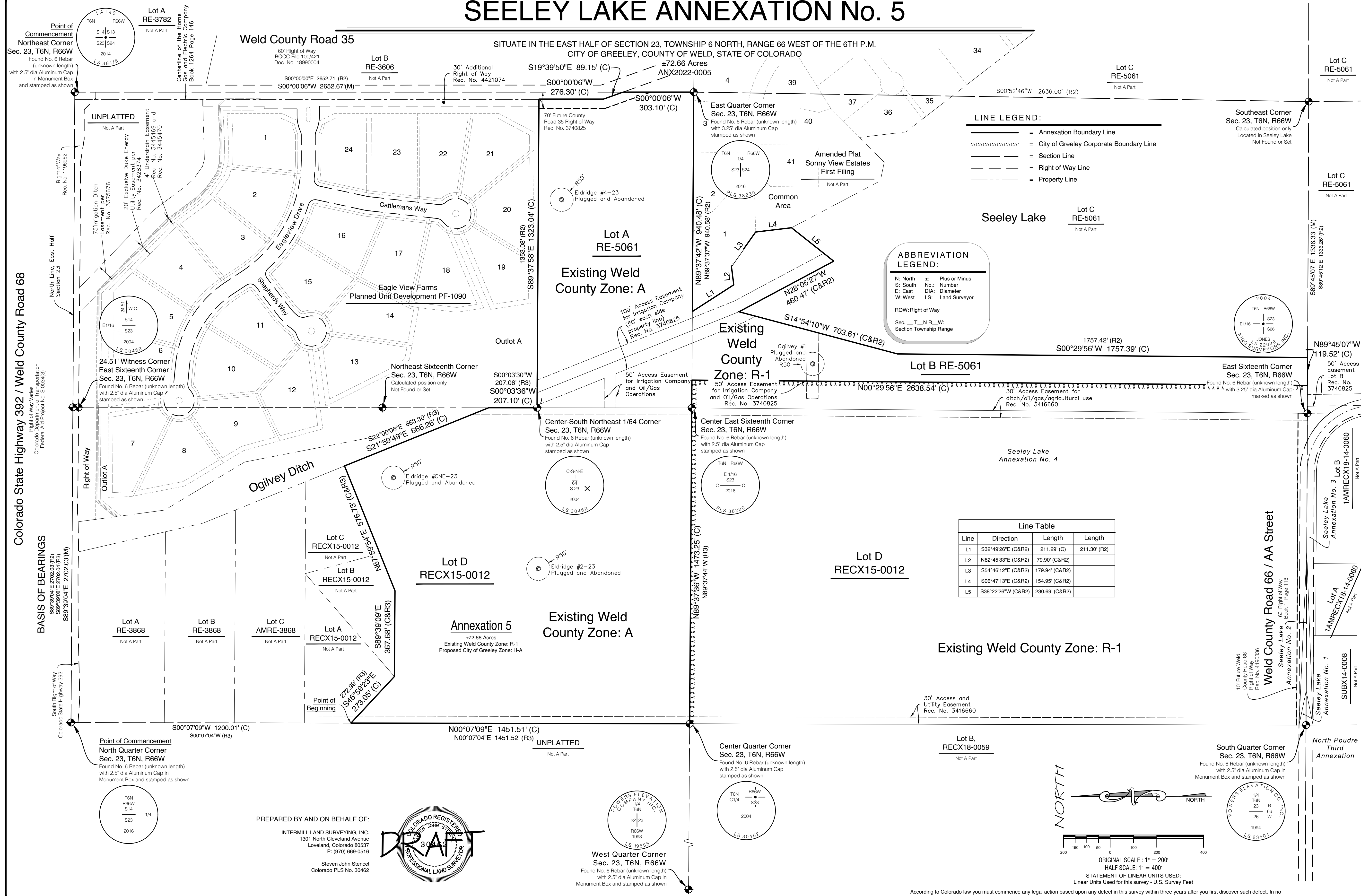
| | |
|--------------|------------|
| DRAWN BY: | LHB |
| CHECKED BY: | SJS |
| APPROVED BY: | SJS |
| DATE: | 2023.02.17 |
| SCALE: | N/A |

PROJECT NO.:
P-22-9219

| | |
|-------|----|
| SHEET | OF |
| 1 | 2 |

SEELEY LAKE ANNEXATION No. 5

SITUATE IN THE EAST HALF OF SECTION 23, TOWNSHIP 6 NORTH, RANGE 66 WEST OF THE 6TH P.M.
CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO



LINE LEGEND:

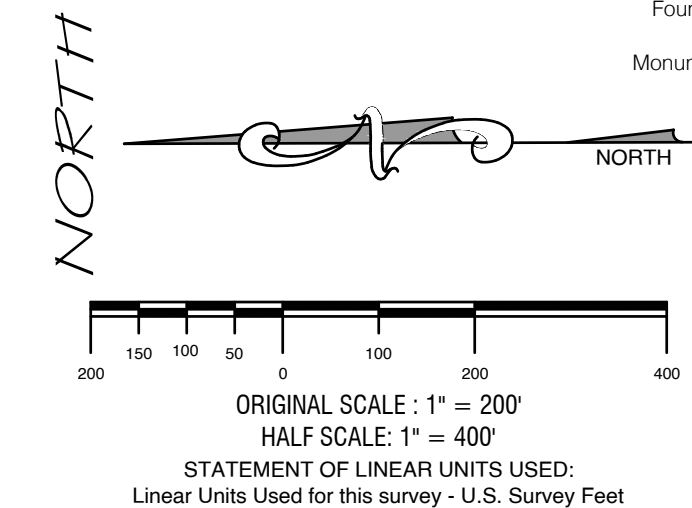
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ABBREVIATION LEGEND:

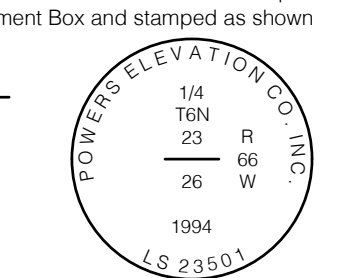
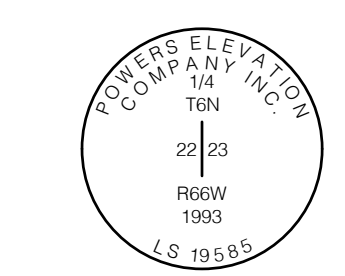
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- S: South #: Number
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- Sec. ___ T__N__R__W: Section Township Range

Line Table

| Line | Direction | Length | Length |
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| L2 | N82°45'33"E (C&R2) | 79.90' (C&R2) | |
| L3 | S54°46'12"E (C&R2) | 179.94' (C&R2) | |
| L4 | S06°47'13"E (C&R2) | 154.95' (C&R2) | |
| L5 | S38°22'26"W (C&R2) | 230.69' (C&R2) | |



PREPARED BY AND ON BEHALF OF:
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P: (970) 669-0516
Steven John Stencel
Colorado PLS No. 30462



REVISIONS:

| DATE | BY | REVISIONS |
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| 2023.03.28 | LHB | Addressed Round 5 Comments |
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CLIENT: Charles Keirnes
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East Half of Section 23, Township 6 North, Range 66 West, 6th P.M.
City of Greeley, County of Weld, Colorado

DRAWN BY: LHB
CHECKED BY: SJS
APPROVED BY: _____
DATE: 2023.02.17
SCALE: 1" = 200'

PROJECT NO.: P-22-9219

| SHEET | OF |
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CITY OF GREELEY, COUNTY OF WELD, STATE OF COLORADO

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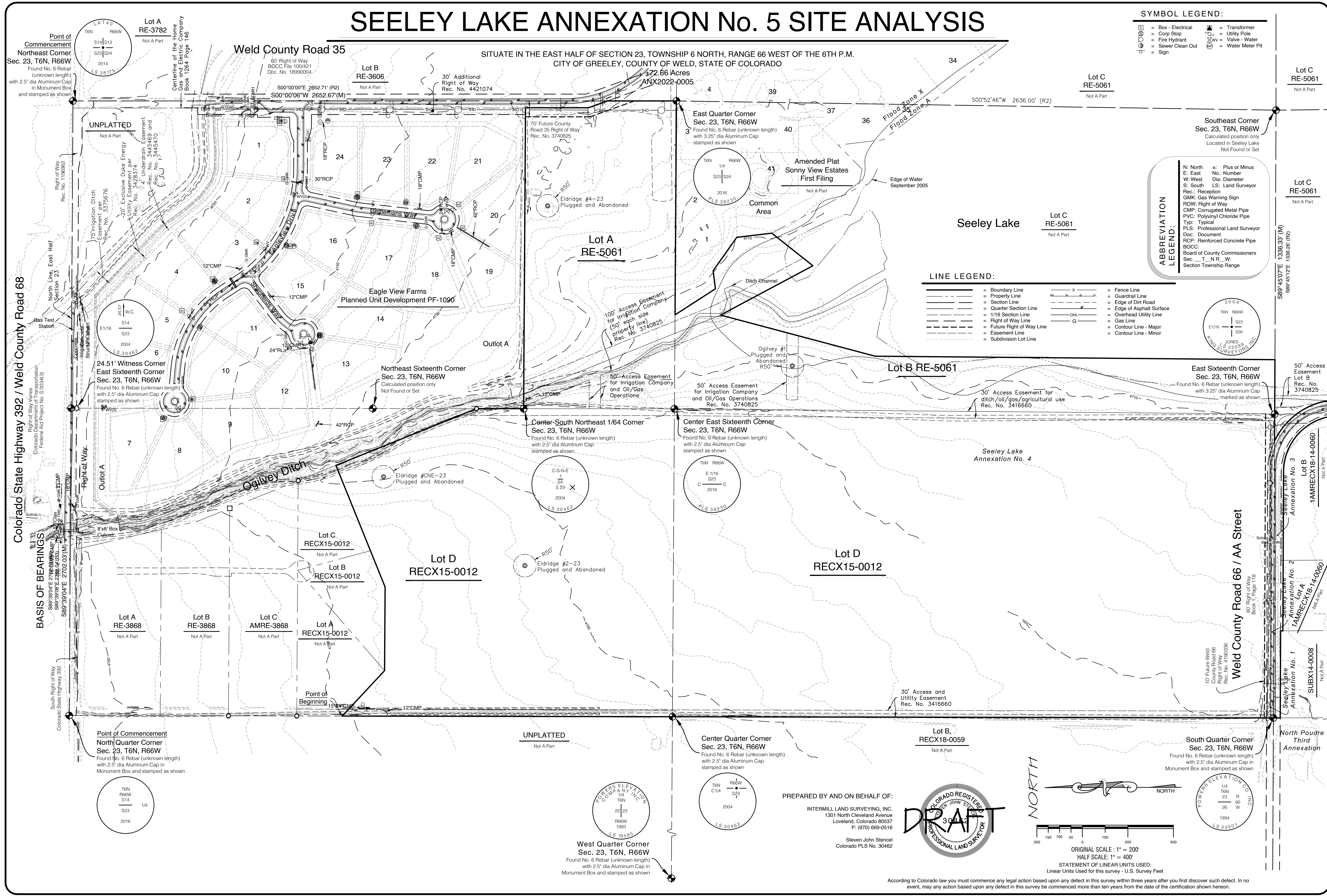
- Box - Electrical
- Circle with cross - Corp Stop
- Circle with dot - Fire Hydrant
- Circle with horizontal lines - Sewer Clean Out
- Circle with vertical lines - Sign
- Triangle with dot - Transformer
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- Fence Line
- Guardrail Line
- Edge of Dirt Road
- Edge of Asphalt Surface
- Overhead Utility Line
- Gas Line
- Contour Line - Major
- Contour Line - Minor



DATE: _____

BY: _____

REVISIONS:

| Address Round 4 Comments and Final Internal Review | 2023.02.15 |
|--|------------|
| Address Round 3 Comments | 2022.12.09 |
| Address Round 2 Comments | 2022.10.26 |
| Address Round 1 Comments | 2022.08.30 |
| Address Round 0 Comments | 2022.07.07 |
| Address Round -1 Comments | 2022.06.21 |

INTERMILL LAND SURVEYING, INC.
 1301 NORTH CLEVELAND AVENUE
 LOVELAND, COLORADO 80537
 BUS: (970) 669-0516

CLIENT:
Charles Keirnes
 1813 G St Avenue, Suite 200
 Greeley, CO 80634

TITLE: SEELEY LAKE ANNEXATION No. 5 ANX2022-0005
 East Half of Section 23, Township 6 North, Range 66 West, 6th P.M.
 City of Greeley, County of Weld, Colorado

DRAWN BY: LHB

CHECKED BY: SJS

APPROVED BY: SJS

DATE: 2022.10.26

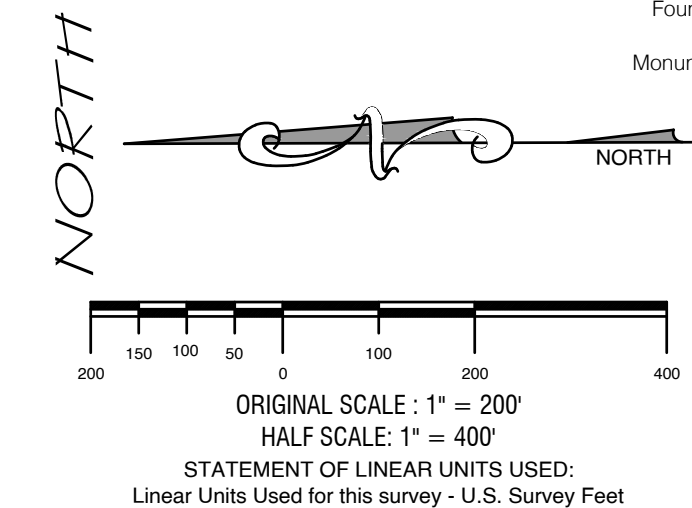
SCALE: 1" = 200'

PROJECT NO.: P-22-9219

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PREPARED BY AND ON BEHALF OF:
 INTERMILL LAND SURVEYING, INC.
 1301 North Cleveland Avenue
 Loveland, Colorado 80537
 P: (970) 669-0516

Steven John Stancel
 Colorado PLS No. 30462



According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown herein.



Council Agenda Summary

June 6, 2023

Key Staff Contact: Sean Chambers, Water & Sewer Director

Title:

Consideration of a Resolution to adopt the 2023 Water & Sewer Department Integrated Water Resource Plan

Summary:

The City of Greeley aims to become the city of choice for people to work, play and live their best life in Northern Colorado. That vision requires robust and resilient city services, and well-planned infrastructure and water resources. Since 2019, the Water & Sewer Dept. has undertaken several master plans for the water distribution system, non-potable irrigation systems, wastewater treatment facilities, the wastewater collections system, and the water conservation program. Over the past 20 months, the utility’s water resource and engineering staff have been working with a team of expert consulting engineers and hydrologist on a data driven, industry best practice, scenario-based planning effort know as an Integrated Water Resource Master Plan or IWRP. In the practice of professional Water Resource Engineering, an IWRP is a holistic, long-range evaluation of a water system that integrates the various sources of supply, water rights, storage assets, connecting infrastructure, operational limits/ conditions, and water demands. The City of Greeley’s 2023 IWRP plan is a comprehensive update to the city’s 2003 Water Resource Master Plan and provides an objective modern framework of planning for a range of variable future conditions and different supply and demand characteristics that help to define those possible futures.

Fiscal Impact:

| | |
|---|----|
| Does this item create a fiscal impact on the City of Greeley? | No |
| Is there grant funding for this item? | No |

Legal Issues:

Section 17-7 of the City Charter obligates the Water and Sewer Board to develop and submit long range plans for water improvements to City Council for approval.

Other Issues and Considerations:

The Greeley Water & Sewer Board unanimously approved and recommended to City Council the 2023 Integrated Water Resource Plan (IWRP).

Strategic Focus Area:



Infrastructure and Mobility



High Performance Government

Decision Options:

- 1) Approve the Integrated Water Resources Plan by Resolution as provided in the packet
- 2) Amend and approve if there are changes that Council recommends
- 3) Denial of the adoption for the IWRP with guidance to Manager and Staff

Council's Recommended Action:

A motion to approve the Resolution to adopt the 2023 Integrated Water Resource Plan.

Attachments:

Resolution to Adopt the 2023 IWRP
IWRP Report – Executive Summary
IWRP Report
Presentation

**CITY OF GREELEY, COLORADO
RESOLUTION NO 17, 2023**

**A RESOLUTION TO ACCEPT AND ADOPT THE 2023 INTEGRATED WATER
RESOURCE PLAN AS THE WATER AND SEWER BOARD'S LONG-RANGE PLAN
FOR THE CITY OF GREELEY'S WATER SYSTEM**

WHEREAS, the City of Greeley ("City") is a Colorado home rule municipality empowered pursuant to Sections 1 and 6 of Article XX of the Colorado Constitution to, *inter alia*, construct, purchase, acquire, lease, add to, maintain, conduct, and operate water works and everything required therefor, within or without its territorial limits, for use of the City; and

WHEREAS, Section 17-4 of the City Charter and Section 14.04.110 of the Greeley Municipal Code authorize and require the Water and Sewer Board ("Board") to, *inter alia*, acquire water and sewer assets for the City; and

WHEREAS, Section 17-7 of the City Charter obligates the Board to develop and submit long range plans to the City Council for water improvements; and

WHEREAS, staff in coordination and collaboration with the Board has developed a long-range strategic water resource master plan that is consistent with the goals and objectives of The City of Greeley Comprehensive Plan (the "2018 Comprehensive Plan") and will ensure sustainable and affordable water supplies for the City's customers now and into the future ("2023 Integrated Water Resource Plan"); and

WHEREAS, on May 17, 2023, the Board adopted the 2023 Integrated Water Resource Plan, attached as Exhibit A, and intends to use the plan to respond to future water supply and demand changes by managing its water rights acquisition program and identifying and recommending to City Council appropriate short-term and long-term capital improvement projects; and

WHEREAS, the Board also recommends that City Council accept and adopt the 2023 Integrated Water Resource Plan as the Board's long-range plans for the water system.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GREELEY,
COLORADO:**

Section 1. That the 2023 Integrated Water Resource Plan, as a supporting plan, is in alignment with the community's vision, as expressed through the goals and objectives of the 2018 Comprehensive Plan.

Section 2. That the City Council hereby accepts and adopts the 2023 Integrated Water Resource Plan, attached as Exhibit A, as the Board's long-range plans for the water system.

Section 3. This Resolution shall take effect immediately upon its passage.

PASSED AND ADOPTED, SIGNED AND APPROVED THIS ____ DAY OF JUNE 2023.

ATTEST

CITY OF GREELEY, COLORADO

By: _____
City Clerk

By: _____
Mayor

INTEGRATED WATER RESOURCE PLAN

Executive Summary



EXECUTIVE SUMMARY

The Integrated Water Resources Plan (IWRP) for the City of Greeley Water and Sewer Department (Greeley) is a long-term strategic water resources master plan that ensures sustainable and affordable water supplies for their customers now and into the future. This comprehensive plan integrates Greeley’s water supply system and projected demands with possible future conditions around hydrology, climate change, and risks to Greeley’s water supply system. The IWRP establishes a plan for triggering the Terry Ranch Project (a new aquifer storage and recovery project), a process for evaluating and strategically acquiring water rights, a 10-year Capital Improvement Plan (CIP), and an Adaptive Plan for Greeley to follow.

INTRODUCTION AND PROCESS

Historically, many water resource planning efforts focused on developing a firm yield based on a single set of historical conditions. Projects were selected and prioritized based solely on their ability to improve firm yield under this one set of conditions. Recent events have shown that future conditions are highly uncertain and planning for a single future increases the risk of water supply failure. Greeley, building off a history of effective and prudent planning efforts, elected to complete an integrated planning process for this IWRP to better plan for an increasingly uncertain future.

In implementing an integrated planning process, the IWRP developed “Planning Scenarios” that capture a range of possible future conditions for Greeley’s water supply system. These were applied at key points in time (e.g., “Planning Horizons”) for Greeley’s water supply system. **Figure ES-1** shows the three IWRP Planning Horizons – the first defined what water resources projects are required in the next 10 years, the second identifies when to integrate the Terry Ranch Project, and the third established how to best use the Terry Ranch Project once fully integrated and if that use is sustainable.

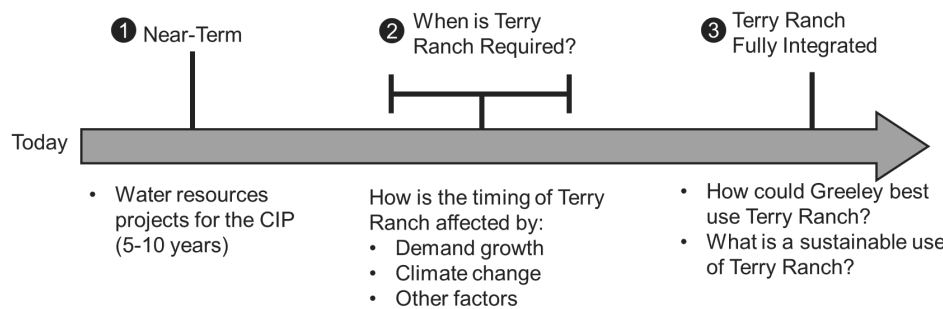


Figure ES-1. Planning Horizons Used in the IWRP

Due to the significant uncertainty around what the future could look like, the IWRP did not predict what future condition is most likely to occur. Instead, a Planning Scenario methodology was applied that captures a range of possible future conditions for Greeley’s water supply system. The Planning Scenarios and their associated conditions are shown graphically in **Figure ES-2**. The *Unbearable* Planning Scenario



INTEGRATED WATER RESOURCE PLAN

Executive Summary



was the reasonable high-bookend for Greeley’s water supply system and combines the hottest climate, the highest demand projections, and significant risk impacts. The *Stressed* Planning Scenario assumes the hottest climate, a lower demand projection, and moderate risk impacts. The *Continued Trends* Planning Scenario assumes a warmer climate, continued decreases in per capita water use, and moderate risk impacts. The *Optimistic* scenario assumes a warmer climate, the lowest demand projections, and least risk impacts. Finally, the *No Climate Change* planning scenario includes no climate change, a higher demand projection than *Optimistic* as the lack of climate change would likely encourage higher Greeley growth, and low risk impacts.

Figure ES-2. Planning Scenarios used in the IWRP

| Planning Scenario Name | Climate Warming | CO River Basin Risk Impacts | Water Supply System Yields | Demands |
|------------------------|-----------------|-----------------------------|----------------------------|---------|
| Unbearable | | High | | |
| Stressed | | Moderate | | |
| Continued Trends | | Moderate | | |
| Optimistic | | Low | | |
| No Climate Change | | Low | | |

An important element in the IWRP was defining when future water supply system performance was acceptable, which the IWRP set using ‘planning performance criteria’. **Figure ES-3** presents the planning performance criteria and their acceptability definitions.

Figure ES-3. Planning Performance Criteria Used in the IWRP

| Performance Criteria | Acceptable Performance |
|---|---|
| Are Greeley customers being significantly impacted? | Drought Restrictions used at any level no more than 20% of years and no more than 10% of years in Level 3 |
| Greeley maintains sufficient emergency reserve. | April 1 storage volume has at least 6 months of indoor demands in 100% of years |
| Greeley meets critical water needs for public health. | Indoor demands are met 100% of the time. |



INTEGRATED WATER RESOURCE PLAN

Executive Summary



FUTURE CONDITIONS ASSESSMENT

The IWRP completed a risk assessment that identified, prioritized, and evaluated a comprehensive list of events that could impact Greeley’s water supply system. This assessment identified four risk “drivers”, defined as major events or conditions that are outside Greeley’s control that could impact their ability to provide sustainable water supply to their customers. The drivers identified for the IWRP were:

- The **Climate Change Impacts on Hydrology** driver captures risks that could change what Greeley’s existing water rights yield and the timing of that yield compared to what has been experienced historically. This is due to a combination of droughts of increased intensity, duration, and/or frequency compared to the historical record, runoff impacts, and the overall hydrograph from a warmer climate.
- The **Future Demand Uncertainty** driver captures risks that affect how much water demand Greeley’s system would need to meet in the future and how water is used compared to historical usage. This includes population growth, outdoor water use variability, and climate change impacts to demands.
- The **Water Rights Administration Complexity and Uncertainty** driver captures risks that affect Greeley’s ability to change currently owned water rights, acquire new water rights, and yields from existing and future water rights. This includes increased competition for new water rights, the legal complexity of changing water rights, and uncertainty related to how water rights administration may change under a different hydrograph than historical.
- The **Colorado River Basin Issues** driver captures risks to Greeley’s yields from the Colorado River Basin which could result in a variety of short- and long-term supply reductions or curtailments.

The *Climate Change Impacts on Hydrology* driver was further evaluated by developing new climate change hydrology that captures the potential impacts of long-term climate change and droughts of increasing intensity, duration, and frequency. An advanced modeling process was completed that quantified the impacts of long-term changes in temperature and precipitation to Greeley’s entitlements (e.g., water legally and physically available to Greeley). **Figure ES-4** summarizes the conclusions from this analysis and the confidence of those conclusions.

Figure ES-4. Conclusions from the Climate Change Hydrology Analysis

| Conclusion Statement | Confidence | Comment |
|--|------------|--|
| Droughts of greater duration, frequency, and severity than observed droughts are possible under current climate. | High | <i>Results show these conclusions are consistent with other studies and make logical sense.</i> |
| Climates with less precipitation and or warmer climates will decrease Greeley’s water supply system yields. | High | |
| Yields from Greeley’s junior water rights and certain water supply systems could be vulnerable to changing agricultural demands. | Moderate | <i>It is likely that agricultural demand changes will impact Greeley’s entitlements. It is unknown how agricultural demands will change.</i> |
| Climates with increased precipitation could increase Greeley’s water supply system yields. | Low | <i>Impacts from hydrograph changes cannot be confidently modeled with existing tools.</i> |



INTEGRATED WATER RESOURCE PLAN

Executive Summary



The *Future Demand Uncertainty* driver was further evaluated by developing new total demand projections (potable and non-potable) for Greeley at 2030, 2050, and 2070 under four demand scenarios. These four scenarios varied population growth, the extent to which irrigation increases in response to hotter and drier future climate conditions, the extent of future conservation, and the proportion of new housing units that are multifamily apartments and condominiums. **Figure ES-5** shows the new demand projections.

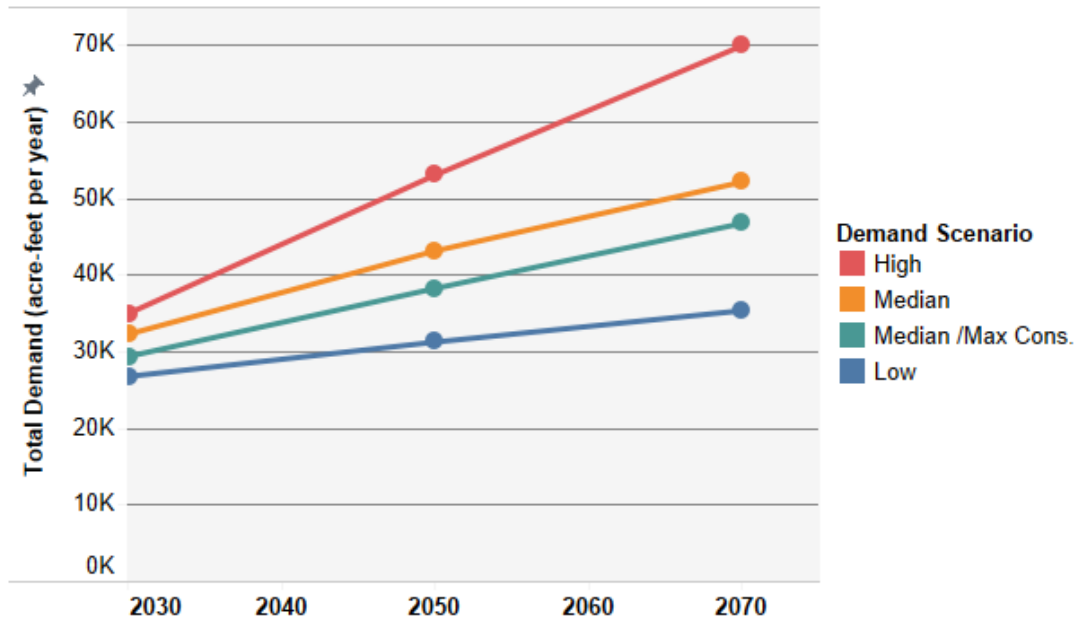


Figure ES-5. Greeley's Projected Future Water Demands

These demand projections are highly variable between the scenarios, with the difference between the high and low scenario increasing from 8,200 acre-feet per year at 2030 (33% of current demands) to 34,600 acre-feet per year at 2070 (137% of current demands). These demand projections assumed demand growth occurs immediately. However, Greeley's total demands have not grown significantly over the last 10 years.



INTEGRATED WATER RESOURCE PLAN

Executive Summary



TERRY RANCH TIMING AND INTEGRATION EVALUATION

The *Terry Ranch Timing* analysis determined that Greeley's water supply system without Terry Ranch can meet near-term Planning Scenario conditions. For example, in the *Continued Trends* Planning Scenario, Greeley's system without the Terry Ranch Project can accommodate an additional 10,000 acre-feet per year of demand growth – approximately 40% more demand than current. The IWRP could not confidently time the Terry Ranch Project implementation due to the lack of recent demand growth and the significant variability of future demand projections. In-lieu of assigning a timetable to Terry Ranch Project implementation, Greeley will monitor demands and water supplies as part of the Adaptive Plan.

The *Terry Ranch Integration* analysis determined if Terry Ranch operations would be sustainable long-term under the different Planning Scenarios. The IWRP defined Terry Ranch operations as sustainable if it can deliver sufficient supplies during drought to minimize drought restrictions while maintaining at least 80% of the 1.2 million acre-foot initial aquifer storage volume long-term. **Figure ES-7** shows the results of the Terry Ranch Integration Analysis by Planning Scenario. This table indicates what (if any) additional water resources were included, the percent of years Greeley drought response actions were used, the average annual Terry Ranch "Delta" (average injection minus average extraction), and the percent of the native aquifer remaining at the end of an 86-year simulation period.

Results from the *Terry Ranch Integration* analysis show that the Terry Ranch Project can be operated sustainably in the *Continued Trends*, *Optimistic*, and *No Climate Change* Planning Scenarios. Sustainable operation in these Planning Scenarios will require some additional water supplies and retiming storage. Results from the *Unbearable* and *Stressed* Planning Scenarios show that under the hottest climate change projections and significant demand growth conditions, Terry Ranch Operations are not sustainable. Greeley can monitor climate and demand growth conditions as part of the Adaptive Plan and, if the most impactful future conditions emerge, can adjust the long-term water supply strategy.

Figure ES-6. Tabular Summary of Terry Ranch Integration Results

| Planning Scenario | Additional Water Resources | % Years with Drought Response | Annual Terry Ranch Delta (acre-feet per year) | Ending Aquifer Volume (% of 1.2 million acre-foot Volume) |
|--------------------------|--|-------------------------------|---|---|
| Unbearable | Retiming Storage + Moderate Water Acquisitions | 100% | -10,700 | 23% |
| Stressed | Retiming Storage + Moderate Water Acquisitions | 64% | -6,500 | 53% |
| Continued Trends | Retiming Storage + Moderate Water Rights | 35% | -1,200 | 91% |
| Optimistic | None | 12% | +1,900 | 113% |
| No Climate Change | Retiming Storage + Low Water Acquisitions | 36% | -1,900 | 86% |

Color Key Indicates Terry Ranch Sustainability Criteria: **Blue** has sufficient remaining aquifer storage percentage, **Orange** has insufficient remaining aquifer storage percentage



INTEGRATED WATER RESOURCE PLAN

Executive Summary



IWRP OUTCOMES AND RECOMMENDATIONS

The IWRP showed that Greeley is well-positioned to provide sustainable and affordable water supplies through an uncertain future. The IWRP’s important outcomes and conclusions regarding Greeley’s current, near-term, and long-term water supply system are summarized below. **Figure ES-8** shows the recommendations for Greeley to take upon IWRP completion.

- Greeley’s current water supply system is resilient against the most likely near-term conditions, but additional water supplies are required to meet projected demands and to mitigate impacts from warmer climate conditions under current Terry Ranch sustainability criteria.
- With the Terry Ranch Project fully integrated, Greeley’s water supply system is likely resilient against many possible future conditions including warmer climates, higher demands, and reduced yields. Greeley can sustainably utilize the Terry Ranch Project as a water supply source during droughts long-term when the Terry Ranch Project is coupled with some additional water resources.
- Balance implementation of the Terry Ranch Project with other water resources and non-water resources CIP needs to minimize financial risk and maintain affordable water supplies.
- If impacts from climate change are severe and tracking with the hottest projections, Greeley may need to consider additional long-term solutions (i.e., in addition to Terry Ranch).
- The most impactful drivers to Greeley’s water supply system – demand growth and climate change impacts – will have long lead times that Greeley can monitor and adapt to.
- Terry Ranch cannot be confidently timed until Greeley sees sustained, significant demand growth.

Figure ES-7. Summary of IWRP Recommendations Used to Develop 10-year CIP and Adaptive Plan

| Recommendation | Action |
|---|---|
| Change Water Rights | Greeley should continue changing existing water rights to municipal use as these will improve the reliability of the existing water supply system before the Terry Ranch Project is integrated. |
| Continue Strategic Acquisitions | Greeley should acquire water supplies that can be integrated into the current system and the Terry Ranch Project. These water supplies are required to meet projected demands, mitigate climate, and risk impacts to the current water supply system, and improve Terry Ranch operations. |
| Develop Priority Terry Ranch Infrastructure | The Terry Ranch Project needs to be efficiently integrated into Greeley’s water supply system once it is required. Greeley should continue incrementally implementing project components (pipelines, right of way, water rights) to ensure this project is readily available to Greeley. |
| Study Potential Conceptual Retiming Storage Options | The IWRP identified a retiming storage project as a potentially beneficial project to improve the sustainability of Terry Ranch operations. As the IWRP only included a conceptual definition of the project, Greeley should further define this project and align the concept with real facilities. |
| Implement Adaptive Planning to Monitor Drivers and Trigger Terry Ranch | While the IWRP showed Greeley’s water supply system is resilient against warmer futures and increased demands, it is still vulnerable to significantly stressful future conditions. Additionally, the IWRP could not confidently define when Terry Ranch is required due to uncertainty in demand growth. Greeley should implement an Adaptive Planning process that regularly updates IWRP outcomes and re-evaluates the Terry Ranch timing. |



INTEGRATED WATER RESOURCE PLAN



Integrated Water Resource Plan

Final

May 10, 2023

Prepared for:

City of Greeley Water and Sewer
Department

Prepared by:

Stantec Consulting Services, with LRE
Water and Martin and Wood Water
Consultants, Inc.



EXECUTIVE SUMMARY 1

ABBREVIATIONS VII

GLOSSARY VIII

1.0 INTRODUCTION AND SUMMARY OF FINDINGS 1

1.1 OBJECTIVES 1

1.2 SUMMARY OF FINDINGS 2

2.0 PLANNING PROCESS2.1

2.1 INTEGRATED PLANNING OVERVIEW2.1

2.2 PLANNING SCENARIOS AND HORIZONS2.1

2.3 GREELEY SYSTEM MODEL OVERVIEW2.5

2.4 WATER SUPPLY SYSTEM PERFORMANCE METRICS.....2.6

2.5 INTERNAL AND EXTERNAL COORDINATION2.8

3.0 EXISTING WATER SUPPLY SYSTEM 1

4.0 CURRENT AND PROJECTED WATER DEMANDS4.1

4.1 CURRENT SERVICE AREA.....4.1

4.2 IWRP PROJECTED DEMANDS.....4.3

4.2.1 Population Projections.....4.3

4.2.2 Demand Projections.....4.5

5.0 RISK IDENTIFICATION AND ASSESSMENT5.1

5.1 METHODOLOGY5.1

5.2 IDENTIFIED WATER SUPPLY SYSTEM RISKS.....5.2

5.3 WATER SUPPLY SYSTEM RISK ANALYSIS5.11

5.3.1 Comparative Analysis of Risks and Uncertainties.....5.11

5.3.2 Prioritized Risks for IWRP Inclusion5.14

5.4 RISK INCLUSION IN IWRP5.16

6.0 FUTURE HYDROLOGY ANALYSIS6.1

6.1 METHODOLOGY6.1

6.2 DROUGHT CONDITIONS VARIABILITY RESULTS6.4

6.3 LONG-TERM CLIMATE CHANGE RESULTS6.8

6.3.1 Poudre River System Results.....6.10

6.3.2 Colorado-Big Thompson Project System Results6.14

6.3.3 Big Thompson River System Results6.15

6.4 CONCLUSION6.17

7.0 TERRY RANCH PROJECT EVALUATION.....7.1

7.1 OVERVIEW OF TERRY RANCH PROJECT7.1



INTEGRATED WATER RESOURCE PLAN



7.2 SIMULATION IN GSM7.3

7.3 SUSTAINABLE USE7.4

7.4 ADDITIONAL WATER RESOURCES OPPORTUNITIES INCLUDED7.5

8.0 NEAR-TERM 10-YEAR ANALYSIS RESULTS.....8.1

9.0 TERRY RANCH TIMING AND INTEGRATION RESULTS.....9.1

9.1 METHODOLOGY9.1

9.2 TERRY RANCH TIMING RESULTS9.2

9.3 TERRY RANCH INTEGRATION RESULTS9.4

9.4 CONCLUSIONS9.9

10.0 WATER RIGHTS EVALUATION.....10.1

10.1 WATER ACQUISITION DECISION TOOL.....10.1

10.2 WATER ACQUISITION STRATEGY10.3

10.3 WATER ACQUISITION SUMMARY10.5

11.0 10-YEAR CAPITAL IMPROVEMENT PLAN.....11.1

12.0 RECOMENDATIONS AND ADAPTIVE PLAN.....12.1

12.1 IWRP OUTCOMES AND RECOMMENDATIONS12.1

12.2 ADAPTIVE PLAN12.3

 12.2.1 Purpose and Implementation.....12.3

 12.2.2 Adaptive Plan Actions12.3

13.0 REFERENCES AND SUPPORTING DOCUMENTATION.....13.1

13.1 SUPPORTING DOCUMENTATION13.1

13.2 REFERENCES.....13.1

LIST OF TABLES

Table 2-1. Planning Scenarios Defined for the IWRP2.2

Table 2-2. Drivers Used to Define Planning Scenario Conditions2.3

Table 2-3. Planning Scenarios and Conditions Used in the IWRP for Simulations2.4

Table 2-4. Graphical Representation of IWRP Planning Scenarios2.4

Table 2-5. Planning Performance Criteria Used in the IWRP2.7

Table 4-1. Buildout Population and Timing Projections4.4

Table 4-2. IWRP Demand Scenario Settings4.5

Table 4-3. Non-Potable Demand Forecast Assumptions.....4.5

Table 4-4. Greeley’s Demand Projects at 2030, 2050, and 20704.6

Table 5-1. Impact and Likelihood Scores and Definitions Used by Scoring Participants.....5.1

Table 5-2. Identified Climate Change and Hydrology Risks with Corresponding Impact and Likelihood Scores5.3

Table 5-3. Identified Colorado River Basin Issues Risks with Corresponding Impact and Likelihood Scores5.4

Table 5-4. Identified Demand Risks with Corresponding Impact and Likelihood Scores.....5.5



INTEGRATED WATER RESOURCE PLAN



Table 5-5. Identified Infrastructure and Operational Risks with Corresponding Impact and Likelihood Scores5.7

Table 5-6. Identified Water Rights Risks with Corresponding Impact and Likelihood Scores5.9

Table 5-7. List of Prioritized Water Supply Risks for IWRP.....5.15

Table 5-8. Risk Driver Settings for Planning Scenarios5.16

Table 5-9. Methodology for Implementing Prioritized Risks in the IWRP5.17

Table 6-1. Drought Timeseries Selected for the IWRP6.5

Table 6-2. Conclusion Statements of Total System Climate Change Impacts6.9

Table 6-3. Conclusion Statements of Upper Poudre System Climate Change Impacts6.13

Table 6-4. Conclusion Statements of Colorado-Big Thompson System Climate Change Impacts.....6.14

Table 6-5. Conclusion Statements of Big Thompson System Climate Change Impacts6.16

Table 7-1. Summary of Terry Ranch Facility Assumptions used in the GSM.....7.3

Table 8-1. Near-Term Planning Scenario Conditions8.1

Table 8-2. Near-Term Analysis Performance Results.....8.2

Table 9-1. Planning Scenario Settings for Terry Ranch Timing Analysis9.1

Table 9-2. Planning Scenario Settings for Terry Ranch Integration Analysis9.2

Table 9-3. Maximum Demand the Baseline System Meets while Maintaining Planning Performance Criteria for each Planning Scenario9.3

Table 9-4. Tabular Summary of Terry Ranch Integration Results.....9.5

Table 7-1. Water Right Classification Strategies and Criteria in Water Acquisition Decision Tool.....10.2

Table 7-2. Evaluation Criteria and Categories in Water Acquisition Decision Tool10.3

Table 11-1. List of Water Resources CIP Project Costs and Details.....11.4

Table 12-1. Summary of IWRP Recommendations Used to Develop 10-year CIP and Adaptive Plan12.2

Table 12-2. Examples of Qualitative and Quantitative Indicators to Establish System Health12.7

LIST OF FIGURES

Figure 1-1. IWRP Objectives aligned with Greeley’s City Council Priorities..... 1

Figure 2-1. Planning Horizons Used in the IWRP2.2

Figure 2-2. Configuration of Greeley’s IWRP Modeling System.....2.6

Figure 2-3. Implementation of Greeley’s Drought Response Policy in the GSM2.7

Figure 3-1. Map of Greeley’s Current Water Supply System 3

Figure 4-1. The City of Greeley’s City Limits and Long-Range Expected Growth Area.....4.2

Figure 4-2. Observed Greeley Potable and Non-Potable Demands with Historical Population. The left axis corresponds to the bars and the right axis to the line.4.3

Figure 4-3. Greeley’s 2020 and Projected Populations at 2050 and 20704.4

Figure 4-4. Greeley’s Demand Projects at 2030, 2050, and 20704.6

Figure 4-5. Comparison of Greeley’s Demand Growth Between 2030 and 2070.....4.7

Figure 5-1. Overall Likelihood and Impact Criteria used to Prioritize Risks.....5.11

Figure 5-2. Average Impact and Likelihood Scores for Water Supply Risks5.12

Figure 5-3. Variability in individual impact and likelihood scores for Climate Change Hydrology, Colorado River Basin Issues, and Demand Risks5.13



INTEGRATED WATER RESOURCE PLAN



Figure 5-4. Variability in individual impact and likelihood scores for Infrastructure and Operations and Water Rights Risks5.14

Figure 6-1. Summary of Climate Change Hydrology Dataset Development6.2

Figure 6-2. Projected Changes in Temperature and Precipitation Means in the Upper Poudre Watershed between 2050 and 20746.3

Figure 6-3. Conceptual Visual of Why Agricultural Demands Were Shifted for the IWRP6.4

Figure 6-4. Annual Entitlements Timeseries of Historical and Synthetic Sequence 636.5

Figure 6-5. Distribution of Annual Entitlements for Historical and Synthetic Hydrology.....6.6

Figure 6-6. Distribution of 5-year and 10-year Mean Annual Entitlements for Historical and Synthetic Hydrology6.7

Figure 6-7. Example of Temperature and Precipitation Offset Results Presentation Grid.....6.8

Figure 6-8. Average Annual Total Water System Entitlements Incorporating Climate Change Impacts6.9

Figure 6-9. Distribution of Greeley's Typical Entitlements by Major System6.10

Figure 6-10. Average Annual Upper Poudre System Entitlements Incorporating Climate Change Impacts6.11

Figure 6-11. Average Annual Upper Poudre Subsystems' Entitlements Incorporating Climate Change Impacts.....6.11

Figure 6-12. Average Annual Upper Poudre Subsystems' Entitlements Incorporating Climate Change Impacts (Continued)6.12

Figure 6-13. Average Annual Lower Poudre System Entitlements Incorporating Climate Change Impacts6.13

Figure 6-14. Average Annual Colorado-Big Thompson System Entitlements Incorporating Climate Change Impacts6.14

Figure 6-15. Average Annual Big Thompson System Entitlements Incorporating Climate Change Impacts6.15

Figure 6-16. Average Annual Big Thompson Subsystems' Entitlements Incorporating Climate Change Impacts.....6.16

Figure 7-1. Terry Ranch Project Map. North is oriented on the right side of the map.....7.2

Figure 8-1. April 1 Storage Under No Climate Change Planning Scenario with Current Water Rights.....8.2

Figure 8-2. April 1 Total System Storage Under Continued Trends Planning Scenario Comparing Current and Baseline Water Rights8.3

Figure 9-1. Conceptual example of timing the Terry Ranch Project showing how demands (green shaded area/dashed line) could grow while the water the supply system provides could decrease (grey and yellow line)9.4

Figure 9-2. Met Demand Source Under Continued Trends Planning Scenario for Timeseries 63. Dashed line is annual demand under Level 2 watering restrictions.9.7

Figure 9-3. Terry Ranch Injection/Extraction Timeseries Under Continued Trends Planning Scenario for Timeseries 63. Left axis corresponds to bar chart and right axis corresponds to line plot.....9.7

Figure 9-4. Use of Native Terry Ranch Aquifer by Retiming Storage and Additional Water Rights Combinations Under Continued Trends Planning Scenario for Timeseries 639.8

Figure 11-1. Water Resources 10-Year CIP Costs by Project Category11.3



INTEGRATED WATER RESOURCE PLAN



Figure 12-1. Conceptual example of timing the Terry Ranch Project showing how demands (green shaded area/dashed line) could grow while the water the supply system provides could decrease (grey and yellow line)12.5

Figure 12-2. Historical Annual Total Demands and Year-to-Year Change.....12.6

Figure 12-3. Example of how the Health of Greeley’s Water Supply Systems will be Described12.7

Figure 12-4. Example of 5-year Terry Ranch Implementation Plan12.8

Figure 12-5. Example of How Greeley’s Current Water Rights Portfolio is Characterized.....12.9

LIST OF APPENDICES

APPENDIX A WATER RESOURCES 10-YEAR CAPITAL IMPROVEMENT PLAN A.1

APPENDIX B DEMAND FORECAST TECHNICAL MEMORANDUM..... B.1

APPENDIX C IWRP GREELEY SYSTEM MODEL DOCUMENTATION TECHNICAL MEMORANDUM..... C.1



INTEGRATED WATER RESOURCE PLAN

Executive Summary



EXECUTIVE SUMMARY

The Integrated Water Resources Plan (IWRP) for the City of Greeley Water and Sewer Department (Greeley) is a long-term strategic water resources master plan that ensures sustainable and affordable water supplies for their customers now and into the future. This comprehensive plan integrates Greeley’s water supply system and projected demands with possible future conditions around hydrology, climate change, and risks to Greeley’s water supply system. The IWRP establishes a plan for triggering the Terry Ranch Project (a new aquifer storage and recovery project), a process for evaluating and strategically acquiring water rights, a 10-year Capital Improvement Plan (CIP), and an Adaptive Plan for Greeley to follow.

INTRODUCTION AND PROCESS

Historically, many water resource planning efforts focused on developing a firm yield based on a single set of historical conditions. Projects were selected and prioritized based solely on their ability to improve firm yield under this one set of conditions. Recent events have shown that future conditions are highly uncertain and planning for a single future increases the risk of water supply failure. Greeley, building off a history of effective and prudent planning efforts, elected to complete an integrated planning process for this IWRP to better plan for an increasingly uncertain future.

In implementing an integrated planning process, the IWRP developed “Planning Scenarios” that capture a range of possible future conditions for Greeley’s water supply system. These were applied at key points in time (e.g., “Planning Horizons”) for Greeley’s water supply system. **Figure ES-1** shows the three IWRP Planning Horizons – the first defined what water resources projects are required in the next 10 years, the second identifies when to integrate the Terry Ranch Project, and the third established how to best use the Terry Ranch Project once fully integrated and if that use is sustainable.

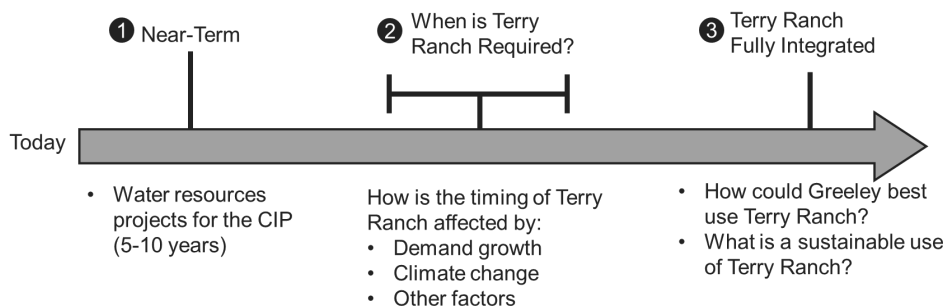


Figure ES-1. Planning Horizons Used in the IWRP

Due to the significant uncertainty around what the future could look like, the IWRP did not predict what future condition is most likely to occur. Instead, a Planning Scenario methodology was applied that captures a range of possible future conditions for Greeley’s water supply system. The Planning Scenarios and their associated conditions are shown graphically in **Figure ES-2**. The *Unbearable* Planning Scenario



INTEGRATED WATER RESOURCE PLAN

Executive Summary



was the reasonable high-bookend for Greeley’s water supply system and combines the hottest climate, the highest demand projections, and significant risk impacts. The *Stressed* Planning Scenario assumes the hottest climate, a lower demand projection, and moderate risk impacts. The *Continued Trends* Planning Scenario assumes a warmer climate, continued decreases in per capita water use, and moderate risk impacts. The *Optimistic* scenario assumes a warmer climate, the lowest demand projections, and least risk impacts. Finally, the *No Climate Change* planning scenario includes no climate change, a higher demand projection than *Optimistic* as the lack of climate change would likely encourage higher Greeley growth, and low risk impacts.

Figure ES-2. Planning Scenarios used in the IWRP

| Planning Scenario Name | Climate Warming | CO River Basin Risk Impacts | Water Supply System Yields | Demands |
|------------------------|-----------------|-----------------------------|----------------------------|---------|
| Unbearable | | High | | |
| Stressed | | Moderate | | |
| Continued Trends | | Moderate | | |
| Optimistic | | Low | | |
| No Climate Change | | Low | | |

An important element in the IWRP was defining when future water supply system performance was acceptable, which the IWRP set using ‘planning performance criteria’. **Figure ES-3** presents the planning performance criteria and their acceptability definitions.

Figure ES-3. Planning Performance Criteria Used in the IWRP

| Performance Criteria | Acceptable Performance |
|---|---|
| Are Greeley customers being significantly impacted? | Drought Restrictions used at any level no more than 20% of years and no more than 10% of years in Level 3 |
| Greeley maintains sufficient emergency reserve. | April 1 storage volume has at least 6 months of indoor demands in 100% of years |
| Greeley meets critical water needs for public health. | Indoor demands are met 100% of the time. |



INTEGRATED WATER RESOURCE PLAN

Executive Summary



FUTURE CONDITIONS ASSESSMENT

The IWRP completed a risk assessment that identified, prioritized, and evaluated a comprehensive list of events that could impact Greeley’s water supply system. This assessment identified four risk “drivers”, defined as major events or conditions that are outside Greeley’s control that could impact their ability to provide sustainable water supply to their customers. The drivers identified for the IWRP were:

- The **Climate Change Impacts on Hydrology** driver captures risks that could change what Greeley’s existing water rights yield and the timing of that yield compared to what has been experienced historically. This is due to a combination of droughts of increased intensity, duration, and/or frequency compared to the historical record, runoff impacts, and the overall hydrograph from a warmer climate.
- The **Future Demand Uncertainty** driver captures risks that affect how much water demand Greeley’s system would need to meet in the future and how water is used compared to historical usage. This includes population growth, outdoor water use variability, and climate change impacts to demands.
- The **Water Rights Administration Complexity and Uncertainty** driver captures risks that affect Greeley’s ability to change currently owned water rights, acquire new water rights, and yields from existing and future water rights. This includes increased competition for new water rights, the legal complexity of changing water rights, and uncertainty related to how water rights administration may change under a different hydrograph than historical.
- The **Colorado River Basin Issues** driver captures risks to Greeley’s yields from the Colorado River Basin which could result in a variety of short- and long-term supply reductions or curtailments.

The *Climate Change Impacts on Hydrology* driver was further evaluated by developing new climate change hydrology that captures the potential impacts of long-term climate change and droughts of increasing intensity, duration, and frequency. An advanced modeling process was completed that quantified the impacts of long-term changes in temperature and precipitation to Greeley’s entitlements (e.g., water legally and physically available to Greeley). **Figure ES-4** summarizes the conclusions from this analysis and the confidence of those conclusions.

Figure ES-4. Conclusions from the Climate Change Hydrology Analysis

| Conclusion Statement | Confidence | Comment |
|--|------------|--|
| Droughts of greater duration, frequency, and severity than observed droughts are possible under current climate. | High | <i>Results show these conclusions are consistent with other studies and make logical sense.</i> |
| Climates with less precipitation and or warmer climates will decrease Greeley’s water supply system yields. | High | |
| Yields from Greeley’s junior water rights and certain water supply systems could be vulnerable to changing agricultural demands. | Moderate | <i>It is likely that agricultural demand changes will impact Greeley’s entitlements. It is unknown how agricultural demands will change.</i> |
| Climates with increased precipitation could increase Greeley’s water supply system yields. | Low | <i>Impacts from hydrograph changes cannot be confidently modeled with existing tools.</i> |



INTEGRATED WATER RESOURCE PLAN

Executive Summary



The *Future Demand Uncertainty* driver was further evaluated by developing new total demand projections (potable and non-potable) for Greeley at 2030, 2050, and 2070 under four demand scenarios. These four scenarios varied population growth, the extent to which irrigation increases in response to hotter and drier future climate conditions, the extent of future conservation, and the proportion of new housing units that are multifamily apartments and condominiums. **Figure ES-5** shows the new demand projections.

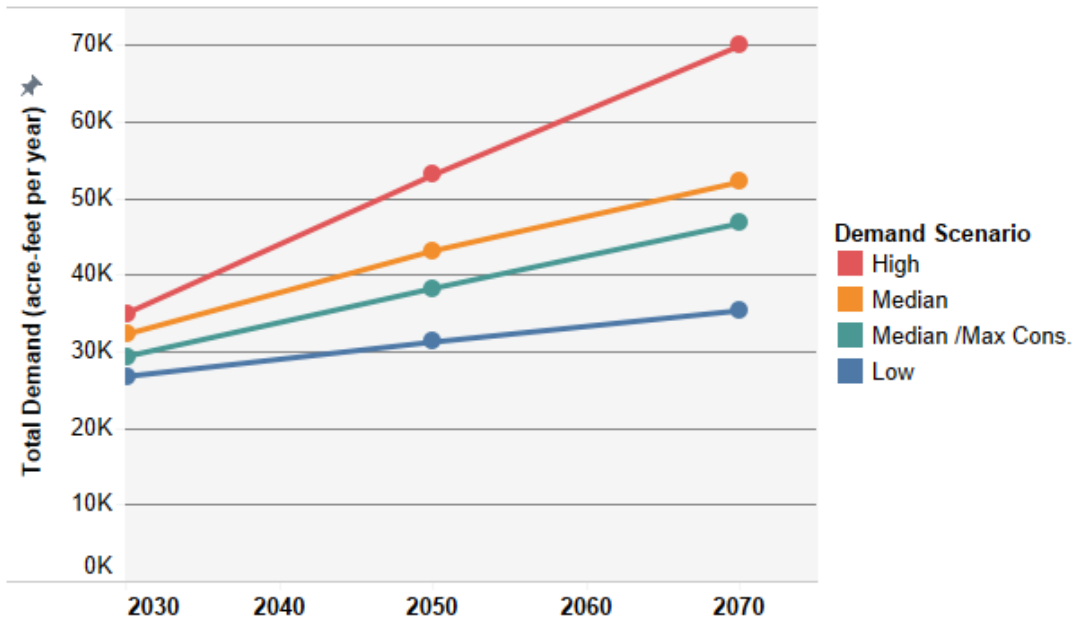


Figure ES-5. Greeley’s Projected Future Water Demands

These demand projections are highly variable between the scenarios, with the difference between the high and low scenario increasing from 8,200 acre-feet per year at 2030 (33% of current demands) to 34,600 acre-feet per year at 2070 (137% of current demands). These demand projections assumed demand growth occurs immediately. However, Greeley’s total demands have not grown significantly over the last 10 years.



INTEGRATED WATER RESOURCE PLAN

Executive Summary



TERRY RANCH TIMING AND INTEGRATION EVALUATION

The *Terry Ranch Timing* analysis determined that Greeley’s water supply system without Terry Ranch can meet near-term Planning Scenario conditions. For example, in the *Continued Trends* Planning Scenario, Greeley’s system without the Terry Ranch Project can accommodate an additional 10,000 acre-feet per year of demand growth – approximately 40% more demand than current. The IWRP could not confidently time the Terry Ranch Project implementation due to the lack of recent demand growth and the significant variability of future demand projections. In-lieu of assigning a timetable to Terry Ranch Project implementation, Greeley will monitor demands and water supplies as part of the Adaptive Plan.

The *Terry Ranch Integration* analysis determined if Terry Ranch operations would be sustainable long-term under the different Planning Scenarios. The IWRP defined Terry Ranch operations as sustainable if it can deliver sufficient supplies during drought to minimize drought restrictions while maintaining at least 80% of the 1.2 million acre-foot initial aquifer storage volume long-term. **Figure ES-7** shows the results of the Terry Ranch Integration Analysis by Planning Scenario. This table indicates what (if any) additional water resources were included, the percent of years Greeley drought response actions were used, the average annual Terry Ranch “Delta” (average injection minus average extraction), and the percent of the native aquifer remaining at the end of an 86-year simulation period.

Results from the *Terry Ranch Integration* analysis show that the Terry Ranch Project can be operated sustainably in the *Continued Trends*, *Optimistic*, and *No Climate Change* Planning Scenarios. Sustainable operation in these Planning Scenarios will require some additional water supplies and retiming storage. Results from the *Unbearable* and *Stressed* Planning Scenarios show that under the hottest climate change projections and significant demand growth conditions, Terry Ranch Operations are not sustainable. Greeley can monitor climate and demand growth conditions as part of the Adaptive Plan and, if the most impactful future conditions emerge, can adjust the long-term water supply strategy.

Figure ES-6. Tabular Summary of Terry Ranch Integration Results

| Planning Scenario | Additional Water Resources | % Years with Drought Response | Annual Terry Ranch Delta (acre-feet per year) | Ending Aquifer Volume (% of 1.2 million acre-foot Volume) |
|--------------------------|--|-------------------------------|---|---|
| Unbearable | Retiming Storage + Moderate Water Acquisitions | 100% | -10,700 | 23% |
| Stressed | Retiming Storage + Moderate Water Acquisitions | 64% | -6,500 | 53% |
| Continued Trends | Retiming Storage + Moderate Water Rights | 35% | -1,200 | 91% |
| Optimistic | None | 12% | +1,900 | 113% |
| No Climate Change | Retiming Storage + Low Water Acquisitions | 36% | -1,900 | 86% |

Color Key Indicates Terry Ranch Sustainability Criteria: **Blue** has sufficient remaining aquifer storage percentage, **Orange** has insufficient remaining aquifer storage percentage



INTEGRATED WATER RESOURCE PLAN

Executive Summary



IWRP OUTCOMES AND RECOMMENDATIONS

The IWRP showed that Greeley is well-positioned to provide sustainable and affordable water supplies through an uncertain future. The IWRP’s important outcomes and conclusions regarding Greeley’s current, near-term, and long-term water supply system are summarized below. **Figure ES-8** shows the recommendations for Greeley to take upon IWRP completion.

- Greeley’s current water supply system is resilient against the most likely near-term conditions, but additional water supplies are required to meet projected demands and to mitigate impacts from warmer climate conditions under current Terry Ranch sustainability criteria.
- With the Terry Ranch Project fully integrated, Greeley’s water supply system is likely resilient against many possible future conditions including warmer climates, higher demands, and reduced yields. Greeley can sustainably utilize the Terry Ranch Project as a water supply source during droughts long-term when the Terry Ranch Project is coupled with some additional water resources.
- Balance implementation of the Terry Ranch Project with other water resources and non-water resources CIP needs to minimize financial risk and maintain affordable water supplies.
- If impacts from climate change are severe and tracking with the hottest projections, Greeley may need to consider additional long-term solutions (i.e., in addition to Terry Ranch).
- The most impactful drivers to Greeley’s water supply system – demand growth and climate change impacts – will have long lead times that Greeley can monitor and adapt to.
- Terry Ranch cannot be confidently timed until Greeley sees sustained, significant demand growth.

Figure ES-7. Summary of IWRP Recommendations Used to Develop 10-year CIP and Adaptive Plan

| Recommendation | Action |
|---|---|
| Change Water Rights | Greeley should continue changing existing water rights to municipal use as these will improve the reliability of the existing water supply system before the Terry Ranch Project is integrated. |
| Continue Strategic Acquisitions | Greeley should acquire water supplies that can be integrated into the current system and the Terry Ranch Project. These water supplies are required to meet projected demands, mitigate climate, and risk impacts to the current water supply system, and improve Terry Ranch operations. |
| Develop Priority Terry Ranch Infrastructure | The Terry Ranch Project needs to be efficiently integrated into Greeley’s water supply system once it is required. Greeley should continue incrementally implementing project components (pipelines, right of way, water rights) to ensure this project is readily available to Greeley. |
| Study Potential Conceptual Retiming Storage Options | The IWRP identified a retiming storage project as a potentially beneficial project to improve the sustainability of Terry Ranch operations. As the IWRP only included a conceptual definition of the project, Greeley should further define this project and align the concept with real facilities. |
| Implement Adaptive Planning to Monitor Drivers and Trigger Terry Ranch | While the IWRP showed Greeley’s water supply system is resilient against warmer futures and increased demands, it is still vulnerable to significantly stressful future conditions. Additionally, the IWRP could not confidently define when Terry Ranch is required due to uncertainty in demand growth. Greeley should implement an Adaptive Planning process that regularly updates IWRP outcomes and re-evaluates the Terry Ranch timing. |





ABBREVIATIONS

| | |
|----------------|--|
| Bellvue WTP | Bellvue Water Treatment Plant |
| Boyd WTP | Boyd Lake Water Treatment Plant |
| BTBN | Big Thompson Basin Network |
| CBT | Colorado-Big Thompson Project |
| CIP | Capital Improvement Plan |
| City | City of Greeley |
| DMS | Data Management System |
| Ft. Collins | City of Fort Collins Utilities |
| GCMs | Global Climate Models |
| GLIC | Greeley-Loveland Irrigation Company |
| Greeley | City of Greeley Water and Sewer Department |
| GSM | Greeley System Model |
| HMRs | High Mountain Reservoirs |
| IWRP | Integrated Water Resources Plan |
| Loveland | City of Loveland |
| LREGA | Long Range Expected Growth Area |
| NA | Not Applicable |
| Northern Water | Northern Water Conservancy District |
| PBN | Poudre Basin Network |
| Poudre | Cache la Poudre |
| PVP | Pleasant Valley Pipeline |
| SMEs | Subject Matter Experts |
| T&P | Temperature and Precipitation |
| TBD | To be determined |
| Terry Ranch | Terry Ranch Aquifer and Storage Recovery Project |
| TM | Technical Memorandum |
| W&S Board | Greeley's Water and Sewer Board |
| WADT | Water Acquisition Decision Tool |
| WSSC | Water Supply & Storage Company |
| WSVS | Water Supply Vulnerability Study |
| YOD | Years of Demand |



GLOSSARY

| | |
|-------------------------------------|--|
| Baseline | Greeley's water supply conditions that are expected to exist in the near-term regardless of IWRP outcome |
| Box plot distribution | A standardized way of displaying the distribution of data where the solid line is the median value with the boxes extending to the 25 th and 75 th percentiles and the whiskers extending to the 5 th and 95 th percentile |
| Direct flow rights | A water right that diverts water directly from a surface stream for direct application to beneficial use |
| Entitlements | Water legally and physically available to Greeley |
| Interruptible Supply Use | A water right that can be used for its original decreed purpose and then can be intermittently used for a changed purpose |
| Native storage | The volume of water in the Terry Ranch Aquifer prior to injection or extraction |
| Non-potable water | Water that is not of a quality suitable for drinking, but can be used for other purposes such as irrigation |
| Planning Horizon | Represents key points in time for Greeley's water supply system |
| Planning Performance Criteria | Define when future water supply system performance was acceptable |
| Planning Scenario | Captures a range of possible future conditions for Greeley's water supply system summarized into a single narrative future |
| Potable water | Water that is of a quality suitable for drinking |
| Risk | Event or condition that could negatively effect Greeley's water supply system |
| Single-use water | A water right that can only be diverted and used for beneficial purposes once. The water cannot be re-diverted or re-used after the initial use |
| Spill | Water entitled to Greeley that cannot be captured or put to use in the surface water system |
| Storage shortage | If Greeley's surface water storage on April 1 st of the next year would be less than the acceptable threshold |
| T&P Offset/Change | Change in long-term temperature and precipitation mean in a future climate compared to the historical climate. |
| Wholly consumable transbasin rights | A water right that is diverted in one river basin and used in another river basin for beneficial use. Transbasin water rights are 100% consumptive and can be re-used to extinction |



INTEGRATED WATER RESOURCE PLAN

Introduction and Summary of Findings



1.0 INTRODUCTION AND SUMMARY OF FINDINGS

The Integrated Water Resources Plan (IWRP) for the City of Greeley Water and Sewer Department (Greeley) is a long-term strategic water resources master plan for Greeley that ensures sustainable and affordable water supplies for their customers. This comprehensive plan integrates Greeley’s water supply system and projected demands with possible future conditions around hydrology, climate change, and risks to Greeley’s water supply system. The IWRP establishes a plan for triggering the Terry Ranch Aquifer and Storage Recovery Project (Terry Ranch Project or Terry Ranch), a process for evaluating and strategically acquiring water rights, a 10-year Capital Improvement Plan (CIP), and an Adaptive Plan for Greeley to follow.

This Report documents the process, assumptions, outcomes and recommendations of Greeley’s IWRP.

1.1 OBJECTIVES

The IWRP objectives were developed to align with priorities established by Greeley’s City Council, shown in **Figure 1-1**. The IWRP is n actionable and adaptive master plan for Greeley’s water resources that uses modern, defensible methods to develop a roadmap ensuring a sustainable water supply for the community through an uncertain future.

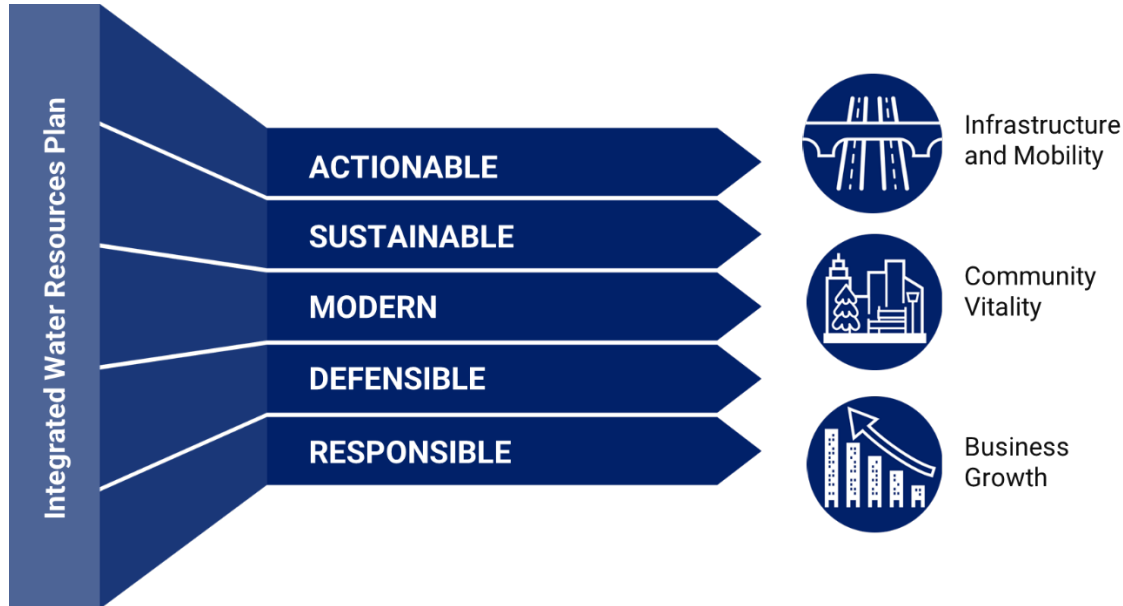


Figure 1-1. IWRP Objectives aligned with Greeley’s City Council Priorities



INTEGRATED WATER RESOURCE PLAN

Introduction and Summary of Findings



In addition to the overall future water resources strategy, the IWRP was tasked with developing the following new tools and plans for Greeley to utilize in future planning efforts:

- Updated Demand Projections
- Climate Change-Influenced Hydrology Dataset
- Risk Assessment
- Water Acquisition Decision Tool
- Water Acquisition Strategy
- 10-year Capital Improvement Plan
- Adaptive Plan
- Updated Greeley System Model with new Terry Ranch Project operations and Planning Scenarios

1.2 SUMMARY OF FINDINGS

At the outset of the IWRP, the following key questions were presented. The resulting analysis documented in this Report supports the answer for each question.

Can Greeley's current water supply system reliably deliver water supplies to customers?

- The near-term, 10-year, analysis presented in Section 8 shows that Greeley's water supply system can meet current water demands across a range of projected warmer climates and even when considering current Colorado River Basin risks. The robustness of Greeley's water supply system is further improved as water rights that Greeley already owns are changed for municipal use.

What is Greeley's future water rights strategy?

- The Terry Ranch Timing results presented in Section 9.2 show that Greeley needs additional water rights to meet projected demands and mitigate impacts to the current water supply system. The Terry Ranch Integration results presented in Section 9.3 show that additional water rights that can be integrated into the Terry Ranch Project will improve the sustainability of that project in warmer climates with higher demands. Greeley will prioritize water rights that provide immediate water supply to the city and can be integrated into the Terry Ranch Project in the future. Due to the increasing cost and competition of water acquisitions, Greeley will continue to actively acquire new water rights as part of the 10-year CIP.

Will the Terry Ranch Project be a sustainable water supply source in the future?

- The Terry Ranch Integration results presented in Section 9.3 show that the Terry Ranch Project can provide a sustainable drought-resistant supply source for Greeley. This includes future conditions with warmer climates, higher demands, and impacts from water supply system risks.

When is Terry Ranch Required?

- The Terry Ranch Timing results presented in Section 9.2 show that the Terry Ranch Project is not imminently required due to the robust nature of Greeley's current water supply system and the effectiveness of conservation strategies. As time progresses, Greeley will closely monitor demand



INTEGRATED WATER RESOURCE PLAN

Introduction and Summary of Findings



and supply conditions to ensure the Terry Ranch Project is online before it is required. However Greeley will complete high-priority Terry Ranch Project infrastructure as part of the 10-year CIP to make use of funding and land availability.

How can Greeley ensure their water supply system continues to provide sustainable and affordable water to their customers?

- The IWRP developed a variety of tools and plans for Greeley to use in future planning efforts. A key one is the Adaptive Plan presented in Section 12.2, which defines five actions Greeley will take each year to re-evaluate IWRP outcomes and recommendations and adjust accordingly.



INTEGRATED WATER RESOURCE PLAN

Planning Process



2.0 PLANNING PROCESS

2.1 INTEGRATED PLANNING OVERVIEW

Historically, many water resource planning efforts focused on developing a firm yield based on a single set of historical conditions. Projects were selected and prioritized based solely on their ability to improve firm yield under this one set of conditions. This process was effective for many years, due to the relative stationarity of climate and limitations in computing and data processing. Recent history and availability of new climate modeling data has shown that future conditions are highly uncertain and planning for a single future increases the risk of water supply failure. During this time, new approaches were developed that utilized improved computing to integrate many possible future conditions into water supply planning. This new approach creates a long-term plan that is more robust and adaptive against future uncertainty and helps to ensure that communities have sustainable and affordable water supplies.

Greeley has a history of effective and prudent planning efforts, resulting in a water supply system that has been more resilient during droughts than most other communities in Colorado. Greeley has invested in tools, such as the Greeley System Model (GSM), and projects, such as the Terry Ranch Project, that built a solid foundation for future planning efforts. Leveraging those decisions, Greeley elected to complete an integrated planning process for this IWRP. This integrated plan used modern, data-driven methods to develop a robust roadmap to help guide Greeley through an uncertain future.

2.2 PLANNING SCENARIOS AND HORIZONS

To implement an integrated planning process while focusing the IWRP analysis around its objectives, a set of 'Planning Horizons' were defined that represent key points in time for Greeley's water supply system. In combination with these Planning Horizons, a set of 'Planning Scenarios' were developed to capture a range of possible future conditions for Greeley's water supply system.

Figure 2-1 shows the three IWRP Planning Horizons. The first planning horizon represents near-term conditions and established what water resources projects are required in the next 10 years. The second planning horizon represents conditions just before the Terry Ranch Project would be required and informed what those conditions would be. The third and final planning horizon is when the Terry Ranch Project is fully integrated with Greeley's water supply system and established how the project could be used and if that use is sustainable. Section 8 presents the results of the near-term planning horizon and Section 9 presents the results of the Terry Ranch timing and integration planning horizons.



INTEGRATED WATER RESOURCE PLAN

Planning Process

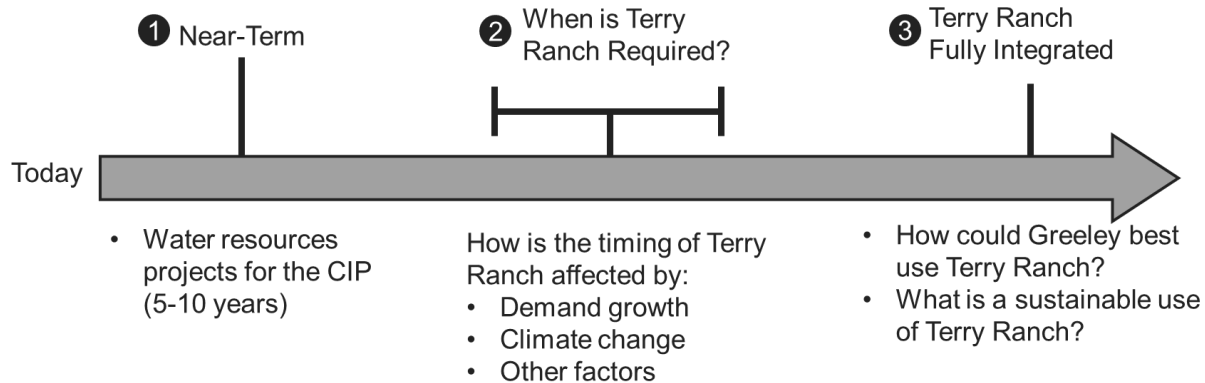


Figure 2-1. Planning Horizons Used in the IWRP

Due to the significant uncertainty around what the future could look like, the IWRP did not predict what future condition is likely to occur. Instead, a Planning Scenario methodology was applied that captures a range of possible future conditions for Greeley’s water supply system. The GSM is simulated under these various possible future conditions, and results are holistically evaluated to inform the IWRP outcomes and recommendations. **Table 2-1** presents the five Planning Scenarios defined for the IWRP. A *No Climate Change* Planning Scenario was included to both serve as a low bookend of stressful future conditions and to establish the impact of climate change to Greeley by defining what could be required if climate change impacts are properly mitigated in the future.

Table 2-1. Planning Scenarios Defined for the IWRP

| Planning Scenario | Description |
|--------------------------|--|
| Unbearable | Greeley’s future demands have tracked with the most impactful future conditions: population has grown according to the highest forecast, climate has warmed rapidly, and impacts to Greeley’s East Slope water rights and Colorado River supplies are the most severe. |
| Stressed | A rapidly warming climate and faster-than-expected population growth within established water providers such as Greeley exacerbates water availability issues. Greeley’s water supply system must meet this increased demand amongst significant yield impacts. |
| Continued Trends | Recent trends in per capita water use, climate change, Colorado River basin issues, and competition for water rights continue. |
| Optimistic | Greeley’s water supply system is less stressed than anticipated due to a combination of improved water conservation savings, diminished climate change impacts, and advantageous water rights yields. |
| No Climate Change | Without climate change, Greeley’s water supply system would be less stressed and require less additional water resources. |



INTEGRATED WATER RESOURCE PLAN

Planning Process



The narrative Planning Scenarios were translated to future conditions Greeley’s water supply system could experience for simulation in the GSM. These future conditions were the key drivers of future uncertainty identified during the Risk Identification and Assessment process described in Section 5. Each driver had specific possible future conditions that could then be varied in each Planning Scenario. **Table 2-2** presents the drivers and associated conditions available for the Planning Scenarios.

Table 2-2. Drivers Used to Define Planning Scenario Conditions

| Driver | Description | Planning Scenario Settings |
|--|--|---|
| Future Climate Change | Captures the impacts to hydrology from the assumed future climate change. | <ul style="list-style-type: none"> Hot (+8°F or +5°F) Warm (+5°F or +2°F) No Change |
| Colorado River Basin Risk Impacts | Combination of short- and long-term Colorado River Basin yield reductions and curtailments due to Colorado River Basin administration and Compact compliance. | <p><u>High Impacts to Yields</u></p> <ul style="list-style-type: none"> 5-year 25% Reduction in CBT/Windy Gap 1-year 100% Curtailment of CBT/Windy Gap Chronic 10% Reduction in CBT/Windy Gap <p><u>Moderate Impacts to Yields</u></p> <ul style="list-style-type: none"> 5-year 25% Reduction in CBT/Windy Gap 1-year 100% Curtailment of CBT/Windy Gap <p><u>Low Impacts to Yields</u></p> <ul style="list-style-type: none"> 2-year 25% Reduction in CBT/Windy Gap |
| Water Rights Administration Uncertainty and Increased Competition | Reductions in modeled water rights yield due to combination of inability to change water rights as assumed, ability to acquire new water rights, and/or reductions in yield due to administration changes. | <ul style="list-style-type: none"> 10% Entitlement Reduction No Entitlement Reduction |
| Water Demands | The future demand projection from Section 4.2.2 is assumed to occur. | <ul style="list-style-type: none"> High Bookend Median Median with Maximum Conservation Low Bookend |

CBT is Colorado-Big Thompson Project

The Planning Scenarios with their conditions identified and used in the IWRP are shown in detail in **Table 2-3** and shown graphically in **Table 2-4**. The *Unbearable* Planning Scenario was the reasonable high bookend for Greeley’s water supply system and combines the hottest climate, with the highest demand projections and significant impacts. The *Stressed* Planning Scenario assumes the hottest climate but with a lower demand projection and moderate risk impacts to water supplies. The *Continued Trends* Planning Scenario assumes a warmer climate, continued decreases in per capita water use, and moderate risk impacts to water supplies. The *Optimistic* scenario assumes a warmer climate, the lowest demand projections, and less entitlement impacts. Finally, the *No Climate Change* planning scenario includes a higher demand projection than *Optimistic* as the lack of climate change would likely encourage higher Greeley growth.



INTEGRATED WATER RESOURCE PLAN

Planning Process



Table 2-3. Planning Scenarios and Conditions Used in the IWRP for Simulations

| Planning Scenario Name | Climate | CO River Basin Risks | Water Rights Administration Impacts | Demands |
|--------------------------|-----------|--|-------------------------------------|------------------------------------|
| Unbearable | Hot | <u>High Impacts:</u> 5-Year 25% Reduction 1-year Outage Chronic 10% Reduction | 10% Reduced Entitlements | High Bookend |
| Stressed | Hot | <u>Moderate Impacts:</u> 5-Year 25% Reduction 1-year Outage | 10% Reduced Entitlements | Median |
| Continued Trends | Warm | <u>Moderate Impacts:</u> 5-Year 25% Reduction 1-year Outage | 10% Reduced Entitlements | Median w/ Decreased Per Capita Use |
| Optimistic | Warm | <u>Low Impacts:</u> 2-year 25% Reduction | Expected Entitlements | Low Bookend |
| No Climate Change | No Change | <u>Low Impacts:</u> 2-year 25% Reduction | Expected Entitlements | Median w/ Decreased Per Capita Use |

Table 2-4. Graphical Representation of IWRP Planning Scenarios

| Planning Scenario Name | Climate Warming | CO River Basin Risk Impacts | Water Supply System Yields | Demands |
|------------------------|-----------------|-----------------------------|----------------------------|---------|
| Unbearable | | High | | |
| Stressed | | Moderate | | |
| Continued Trends | | Moderate | | |
| Optimistic | | Low | | |
| No Climate Change | | Low | | |



INTEGRATED WATER RESOURCE PLAN

Planning Process



2.3 GREELEY SYSTEM MODEL OVERVIEW

An important objective to the IWRP and a key component of an integrated planning process is using data-driven methods that transparently and clearly connect to outcomes and recommendations. For the IWRP, Greeley utilized their existing GSM to complete numerical water supply system simulations. This section summarizes the GSM and its application for the IWRP, which is described in detail in the IWRP Greeley System Model Technical Memorandum (TM), included as Appendix C.

The GSM is a MODSIM-based mass-balance model originally developed in 1992 that has been continuously upgraded and updated (Greeley, 2021). The MODSIM simulation software platform has been applied to water supply planning efforts by water providers in Colorado (e.g., Colorado Springs Utilities, City of Fort Collins Utilities). The GSM has served as Greeley’s water supply planning simulation model since its inception and, as such, its development and current configuration includes extensive institutional knowledge and expertise. The model was most recently upgraded to the newest version of MODSIM and paired with a Data Management System (DMS) in 2020, prior to the IWRP in 2020, further increasing its value to the IWRP.

The GSM simulates Greeley’s water supply system on a monthly timestep for a period of 86 years. The scope of the GSM includes “inflows” of Greeley’s legally and physically available water supplies (referred to as “entitlements”), raw water conveyance facilities (in-river, ditches, pipelines), raw water storage facilities (wholly owned reservoirs, storage accounts, gravel pits), raw water treatment plants (physical capacities), and “demands” (potable, non-potable demands, and large industrial). The GSM simulates transit losses, evaporation losses, and treatment process losses. The GSM does not simulate the conveyance of water supplies owned by other entities.

To develop Greeley’s entitlements, the GSM utilizes outputs from the Poudre Basin Network (PBN) Model and the Big Thompson Basin Network (BTBN) Model. The PBN and BTBN Models were collaboratively developed by Greeley, the City of Fort Collins Utilities (Ft. Collins), and the Northern Water Conservancy District (Northern Water). The BTBN and PBN are MODSIM-based models that translate natural watershed runoff in the Big Thompson River and Cache la Poudre (Poudre) River Watersheds into entitlements for all water users in the basin. Greeley utilizes an intermediate tool to apply water rights ownership and conditions of ownership to develop “inflow” timeseries for the GSM. Greeley also receives water from Northern Water’s Colorado-Big Thompson (CBT) Project, which is developed using Northern Water’s CBT Quota model.

As part of the of the model upgrade, a DMS was developed to enhance Greeley’s previously developed GSM. **Figure 2-2** shows how the DMS interacts with the GSM and the flow of data and information between them. The DMS is a .NET-based computer program that takes user inputs and automatically generates and completes desired GSM simulations. A key component of the DMS is a Microsoft SQL Server Database that stores input and output data from the GSM and a log of simulations completed with their corresponding assumptions. Data from the DMS can be extracted for analysis and visualization. The IWRP utilized the DMS to complete GSM simulations and IWRP results with their corresponding logs and settings are stored in the SQL Server Database.



INTEGRATED WATER RESOURCE PLAN

Planning Process

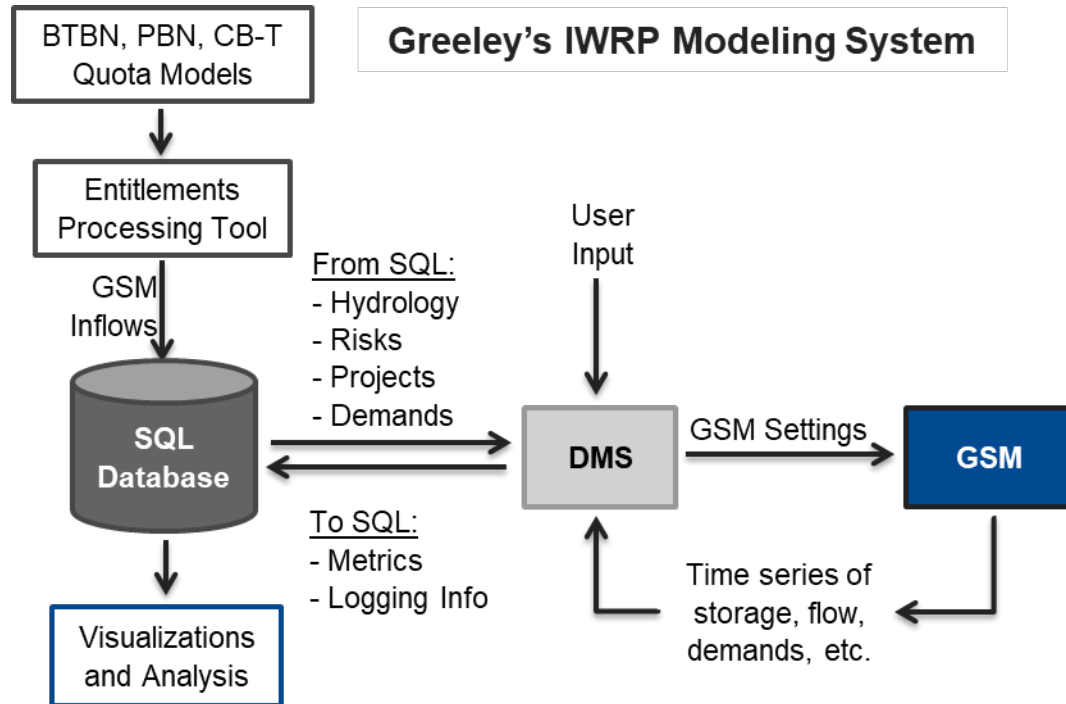


Figure 2-2. Configuration of Greeley's IWRP Modeling System

The IWRP baseline conditions reflect the water supply system that are expected to exist in the near-term regardless of IWRP outcomes. This baseline is different from the current water supply system condition that existed at the time of the IWRP. The baseline condition serves as a common point of comparison as future conditions are changed and evaluated.

Projects assumed to be in the baseline condition included Greeley's 8,000 acre-foot account in Chimney Hollow, the Equalizer Pipeline, and a winterized Boyd WTP. Of the High Mountain Reservoirs, Barnes and Peterson were assumed online for municipal use and Comanche/Hourglass and Twin were assumed to remain in agriculture. The baseline water rights portfolio assumed that all currently owned water rights are changed for municipal use by Greeley and that nearly all leases are returned for Greeley use. This baseline water rights portfolio assumes that all future changes will yield the same for Greeley as established outcomes.

2.4 WATER SUPPLY SYSTEM PERFORMANCE METRICS

To establish acceptable water supply system performance from results of the GSM simulations, the IWRP developed a set of 'planning performance criteria'. **Table 2-5** presents the planning performance criteria, the associated GSM metric, and the acceptability threshold used in the IWRP to establish when performance of a GSM simulation was acceptable. The criteria were selected to reflect Greeley's existing Level of Service. The developed performance criteria and GSM metric are not being proposed in the IWRP as new or updated Level of Service.



INTEGRATED WATER RESOURCE PLAN

Planning Process



Table 2-5. Planning Performance Criteria Used in the IWRP

| Performance Criteria | GSM Metric | Planning Acceptability Threshold |
|---|--|--|
| Are Greeley customers being significantly impacted? | How often Drought Restrictions levels are used (presented in Figure 2-3. | 20% (2 in 10 years) at Any Level 10% (1 in 10 years) at Level 3 |
| Greeley maintains sufficient emergency reserve. | April 1 storage volume always has at least 6 months of indoor demands | 100% |
| Greeley meets critical water needs for public health. | Always meet indoor demands | 100% |

The use of drought restrictions was included in the planning performance criteria to minimize how often Greeley’s customers are impacted by watering restrictions. Greeley’s current Drought Emergency Plan, updated in 2021, was implemented in the GSM according to the assumptions shown in **Figure 2-1**. On April 1st, the GSM ‘predicts’ the storage on April 1st of the following year by adding total entitlements to the current storage levels and subtracting out demands. For example, if the predicted storage is between 85% and 75% of annual demands, Level 2 restrictions are used. Acceptable performance is 20% of years in any restriction level or 10% of years in Level 3. Restrictions used in greater frequency may not be accepted by the Greeley community (increased bills, dead landscapes) and could lead to permanent changes to landscaping.

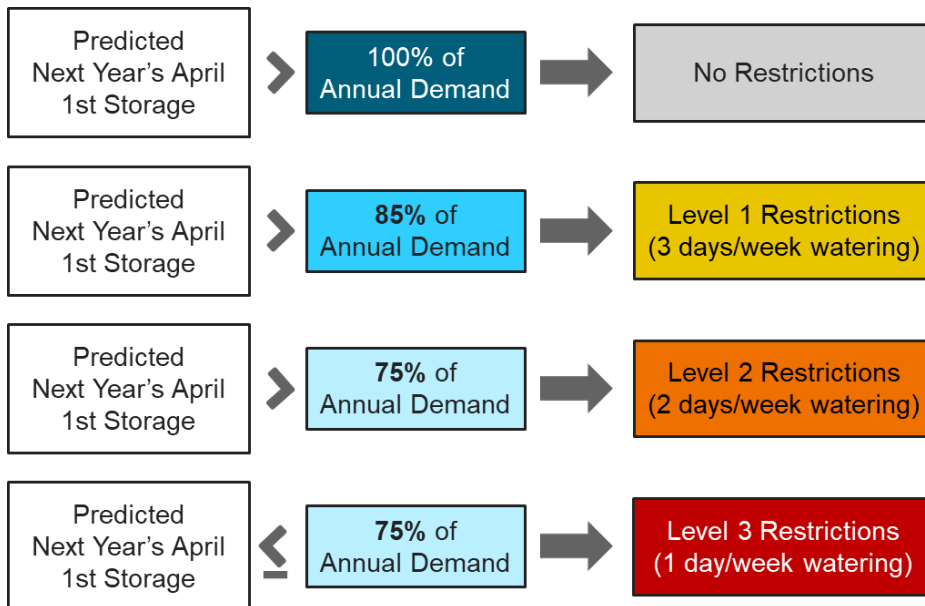


Figure 2-3. Implementation of Greeley’s Drought Response Policy in the GSM

The emergency reserve planning performance metric was included to ensure Greeley has sufficient water supplies in storage in the event of an unplanned outage or natural disaster that severely disrupts the water supply system. Six months of indoor demands were selected as these types of emergency



INTEGRATED WATER RESOURCE PLAN

Planning Process



disruptions could typically be addressed within that time horizon. Note that in calculating the storage volume for this metric, storage locations that cannot physically deliver water to Greeley's water system were not included.

The final component of the planning performance criteria was that Greeley's water supply system can always meet indoor demands. This is the critical performance criteria as any impacts to indoor water use could impact public health. As Greeley's water demands grow, the indoor components of those demands will grow as well.

2.5 INTERNAL AND EXTERNAL COORDINATION

In completing the IWRP, Greeley utilized a cross-disciplinary team of Greeley staff and consultants with close communication with Greeley's Water and Sewer Board (W&S Board). The IWRP included a Core Team that developed content and guided the overall IWRP process. The Technical Team, consisting of Subject Matter Experts (SMEs) in water rights administration, raw water operations, demand conservation, utility finance, groundwater, and legal reviewed IWRP progress and provided additional guidance and feedback for the IWRP. Finally, the Management Team consisting of Greeley leadership provided final review of IWRP outcomes and recommendations.

An important component of the IWRP was close communication with Greeley's W&S Board. W&S Board Members are council-appointed to five-year terms with no term limit in providing oversight of the Greeley Water and Sewer Department and making recommendations to Greeley's City Council for formal approval and adoption. The W&S Board was appointed with the duty, by the 1958 City Charter to "acquire, develop, convey, lease, and protect water and sewer assets, supplies, and facilities." Because of this unique role, W&S Board members have extensive knowledge of Greeley's water supply system and history. To leverage this knowledge, progress updates were given to the W&S Board throughout the IWRP process, with monthly updates provided as outcomes and recommendations were developed. Feedback from the W&S board was regularly incorporated into the IWRP development.

The IWRP also developed a new set of materials for communication with Greeley's customers and the larger public. A public-facing summary of the IWRP was developed and is housed on Greeley's website.



INTEGRATED WATER RESOURCE PLAN

Existing Water Supply System



3.0 EXISTING WATER SUPPLY SYSTEM

Greeley's existing water supply system, shown in **Figure 3-1**, is geographically diverse, obtaining water from four river basins (North Platte, Poudre, the Colorado, and Big Thompson). The system is also flexible and efficient, with multiple locations to store water, utilize existing canals, ditches, and pipelines to deliver water to two treatment plants. Greeley is also in stages of developing infrastructure to utilize the Terry Ranch Project.

Greeley owns two water treatment plants, the Bellvue Water Treatment Plant (Bellvue WTP) and the Boyd Lake Water Treatment Plant (Boyd WTP). The Bellvue WTP is located near the mouth of the Cache La Poudre Canyon and the Boyd WTP is located south of Boyd Lake within the corporate limits of the City of Loveland (Loveland). The Bellvue WTP receives water from Greeley's diversion from the Greeley Filters Pipeline on the mainstem of the Poudre as well as from Horsetooth Reservoir through the Hansen Supply Canal during the summer and the Pleasant Valley Pipeline (PVP) during the winter. The Greeley Filters Pipeline is located approximately one mile upstream from the Bellvue WTP. Greeley also owns units in the CBT Project and Windy Gap Project, taking water deliveries from those projects' water through facilities described above. Therefore, water entering the Bellvue WTP consists of any combination of the water from the Colorado, Poudre, or North Platte River Basins. The Boyd WTP receives water from the CBT Project, Windy Gap Project, or from the Greeley-Loveland Companies. These sources are diverted from the Big Thompson River through open irrigation canals into either Lake Loveland and then to Boyd Lake via the Big Barnes Ditch, or directly to Boyd Lake via the Greeley-Loveland Canal. The Boyd WTP is not currently winterized and is only operated as a peaking plant during the irrigation season (April through October).

North Platte River basin water consists of wholly consumable transbasin rights that are delivered to the Poudre River in one of two ways: through Bob Creek Ditch to the Roaring Fork drainage, or through the Laramie-Poudre Tunnel to the Poudre River eight miles downriver of Chambers Reservoir. These supplies are diverted from the mainstem at the Greeley Filters Pipeline and delivered to the Bellvue WTP.

The Poudre Basin water consists of direct flow rights and native storage and is the foundation of Greeley's water supply. Greeley owns senior direct flow and storage rights on the upper mainstem including direct flow priorities and changed and unchanged agricultural water rights that are diverted from the river through the same diversion and pipelines described above and delivered to the Bellvue WTP. In addition, Greeley owns shares in Greeley Irrigation Company's Greeley Canal No. 3 and New Cache la Poudre Irrigating Ditch Company that divert from the lower mainstem near Greeley and is used for non-potable irrigation and other non-potable uses in Greeley.

Colorado River Basin water consists of single-use and wholly consumable transbasin water and is primarily accessed through the CBT and Windy Gap Projects. Greeley can deliver CBT Project and Windy Gap Project water to the Bellvue WTP from Horsetooth Reservoir through the Hansen Supply Canal during the summer and the PVP during the winter. CBT Project and Windy Gap Project deliveries can also be diverted from the Big Thompson River and delivered to the Boyd WTP through the Greeley-



INTEGRATED WATER RESOURCE PLAN

Existing Water Supply System



Loveland Companies' canals. Greeley is a participant in the Windy Gap firming project. At the time of this IWRP, Chimney Hollow Reservoir is under construction to improve the reliability of the Windy Gap Project.

Greeley's Big Thompson River Basin water consists of transferred agricultural direct flow and storage rights, in addition to CBT Project deliveries that are treated at the Boyd WTP. Water is diverted from the Big Thompson River through either the Barnes Ditch or the Greeley-Loveland Canal, which are components of the Greeley-Loveland Companies system, of which Greeley is a shareholder. The Barnes Ditch conveys water to Lake Loveland. Water from Lake Loveland can be conveyed to Boyd Lake through Horseshoe Reservoir, while the Greeley-Loveland Canal conveys water directly to Boyd Lake. The Boyd WTP draws water directly from Lake Loveland or Boyd Lake or a blend of the two reservoirs. Greeley can also receive water from the Greeley-Loveland Canal via a pump.

Greeley owns multiple reservoirs in the upper and lower Poudre Basin, comprising the majority of its owned water storage. Greeley constructed Milton Seaman Reservoir located on the North Fork of the Poudre in 1943. Five additional reservoirs, the high mountain reservoirs, were purchased by Greeley in 1947 from the Mountains and Plains Irrigation Company. The high mountain reservoirs were constructed in the 1920s, with the exception of Hourglass Reservoir which was constructed in 1898. Two of the high mountain reservoirs were expanded in the 1970s (Barnes Meadow and Peterson Lake Reservoirs). The six high mountain reservoirs combined with Milton Seaman Reservoir currently have a total active storage capacity of approximately 13,000 acre-feet, not including other conditional storage rights owned by Greeley. These reservoirs are entitled to fill once each year and, due to ice conditions, are not suitable for wintertime operations, except for Barnes Meadow and Milton Seaman Reservoirs. Greeley also owns storage reservoirs in the lower Poudre Basin that are used within Greeley's non-potable system. In addition to the Poudre Basin reservoirs, Greeley owns shares in three interrelated agricultural water companies collectively known as the Greeley-Loveland Companies. These companies provide storage and delivery of water from the Big Thompson River to the Boyd WTF.

Greeley utilizes a non-potable system to meet outdoor/irrigation and other non-potable demands using direct flow and storage supplies currently delivered through the Greeley-Loveland Irrigation Company (GLIC) canal and the Greeley Irrigation Company Canal No 3. In the future, Greeley will expand its non-potable system outside of these two delivery canals as it also owns shares in the New Cache la Poudre Irrigating Ditch Company which delivers water through the Greeley Canal No 2.



INTEGRATED WATER RESOURCE PLAN

Existing Water Supply System

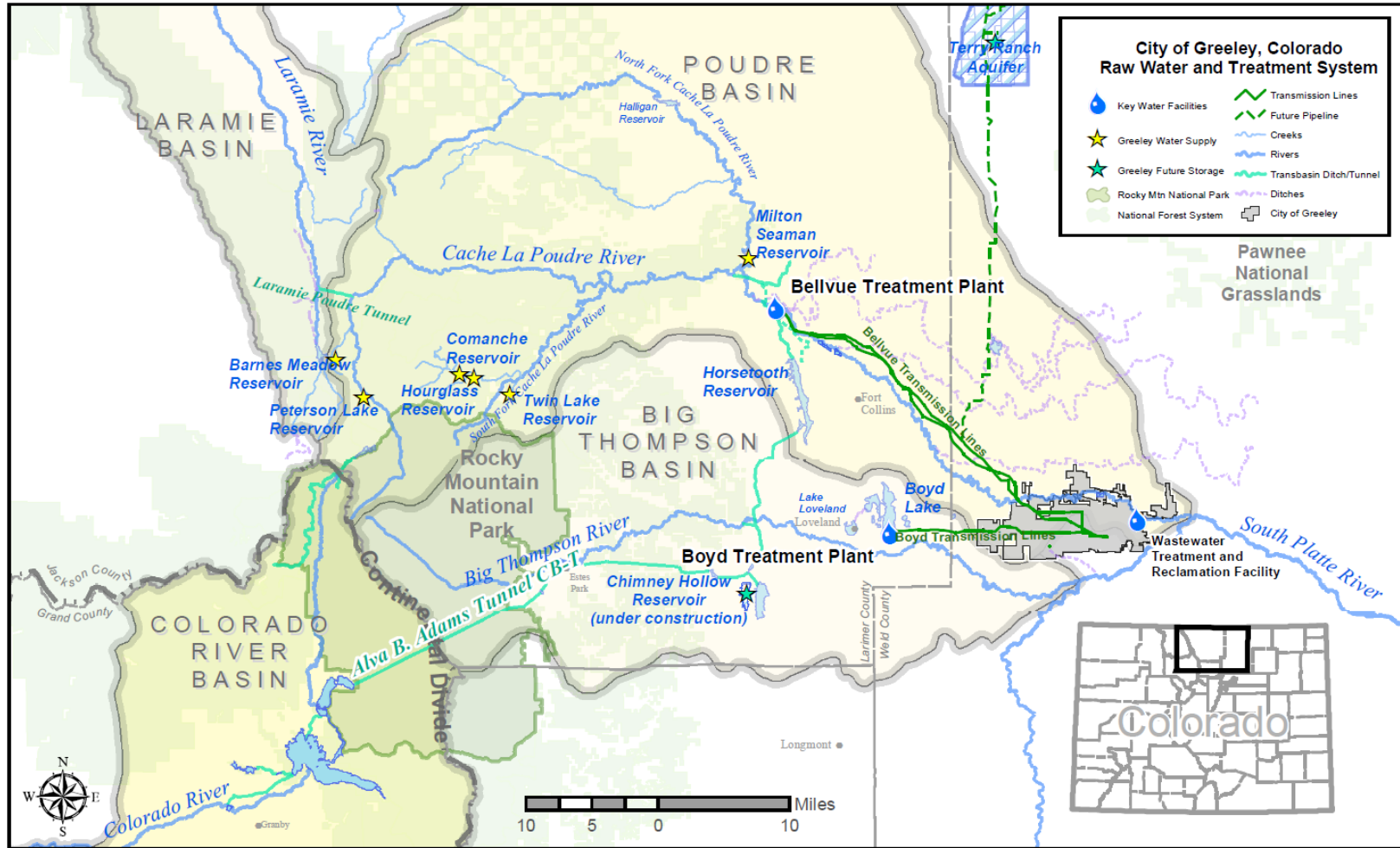


Figure 3-1. Map of Greeley's Current Water Supply System



INTEGRATED WATER RESOURCE PLAN

Current and Projected Water Demands



4.0 CURRENT AND PROJECTED WATER DEMANDS

This section describes Greeley's current water service area and demands and presents the methodology and results of the demand projections.

4.1 CURRENT SERVICE AREA

The City of Greeley (City), Colorado is located in Weld County approximately 60 miles northeast of Denver. The City is the eleventh largest community in Colorado, the second largest community in Northern Colorado and the business center for Weld County. The leading industries in Weld County are agriculture, manufacturing, energy production, health and wellness, and business services. The City hosts two academic institutions, the University of Northern Colorado and Aims Community College and is home to large industrial water users including JBS USA and Leprino Foods.

The City currently provides water services within the Greeley City limits and to a suite of outside service contracts. For planning purposes, the IWRP chose to not include outside services into demands or modeling. IWRP demand projections were developed using The City's Long Range Expected Growth Area (LREGA) is shown in **Figure 4-1**. This is the area outside of the City limits where Greeley plans to provide water and sewer services. Although Greeley's population has grown by approximately 17%, per capita in the last 25 years, demand has decreased by 11% compared to a 2012 peak. **Figure 4-2** shows Greeley's population and total water demands since 2010, highlighting this trend. This system wide per capita demand trend is driven from single family residents. Greeley's water conservation program has created efficiencies and consistencies among policies that have resulted in a 10% per capita decline in residential demand from 2012-2021. Replacements and retrofits of new high efficiency toilets, showerheads, washing machines and dishwashes have led to less use than in previous years. Savings from these existing residential homes has more than offset the increase in demand from new builds and business for almost 20-years. Greeley's Water Conservation team continues to innovate and find identify water savings opportunities through with programs that include a residential Water Budget, a turf replacement program, and most recently, leak detection with advanced metering infrastructure.



INTEGRATED WATER RESOURCE PLAN

Current and Projected Water Demands



Greeley, CO Water Service Area

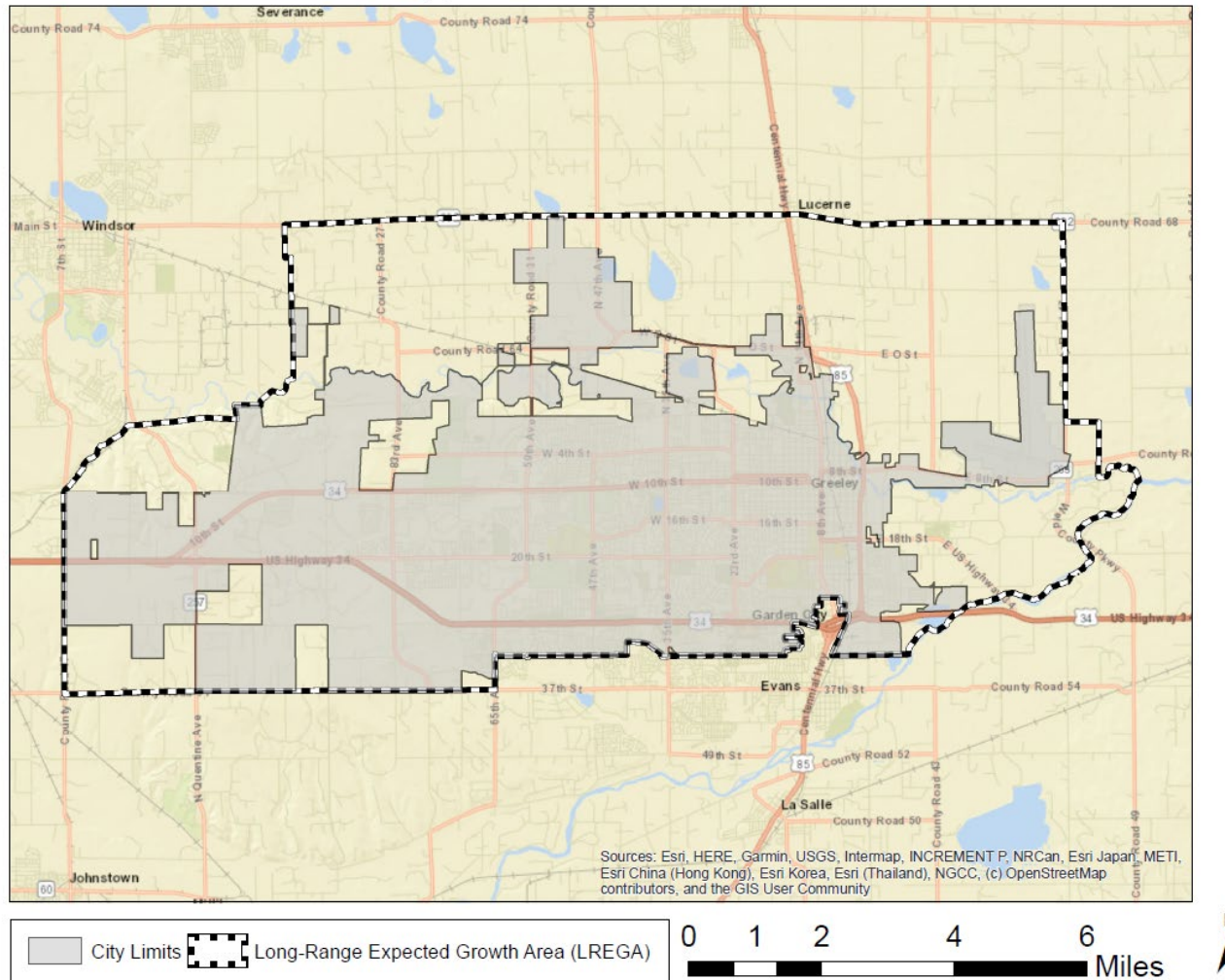


Figure 4-1. The City of Greeley’s City Limits and Long-Range Expected Growth Area



INTEGRATED WATER RESOURCE PLAN

Current and Projected Water Demands

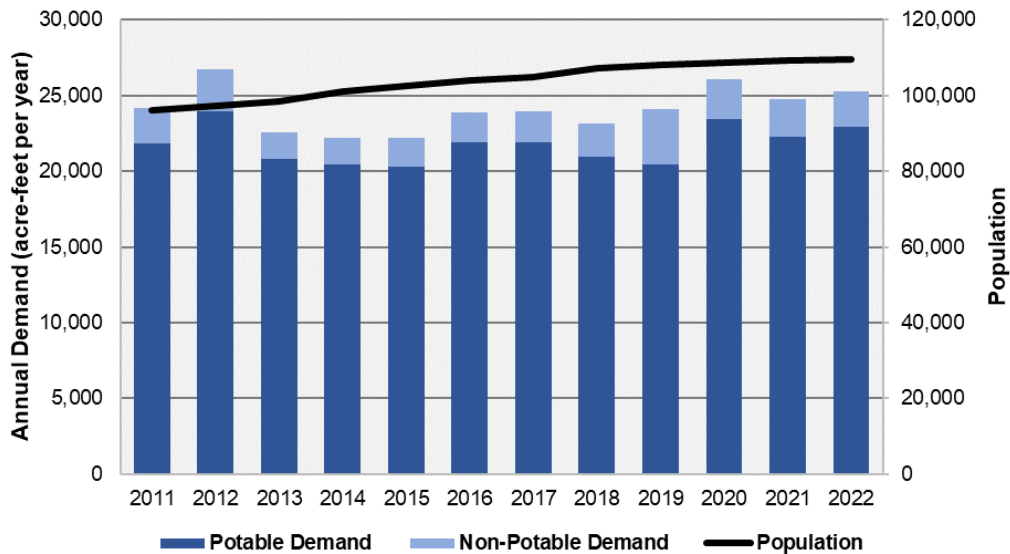


Figure 4-2. Observed Greeley Potable and Non-Potable Demands with Historical Population. The left axis corresponds to the bars and the right axis to the line.

4.2 IWRP PROJECTED DEMANDS

This section summarizes the IWRP demand projections, which are documented in the Demand Forecast TM, included in Appendix B.

The IWRP demand projections used Greeley's existing water demand model (Demand Model) (BBC Research, 2018). The model produces projections of annual indoor and outdoor water use by customer category (e.g., single family residential, multifamily residential, commercial) through 2070. The model only includes Greeley's retail customers and does not include water use by Greeley's wholesale customers who provide their own water resources (e.g., City of Evans, Town of Milliken, Town of Evans).

4.2.1 Population Projections

A significant contributor to future water use in Greeley is population growth. The IWRP developed updated population projections for Greeley that incorporated the new information described below:

- Updated historical population data from the 2020 Census
- New projections from the Colorado State Demographers Office, which lowered Weld County population projections compared to those previously used in the Demand Model
- New features developed for the Technical Update to the Colorado Water Plan that allows different alternative county-level population forecasts to be developed based off the Colorado State Demographers Office projections.



INTEGRATED WATER RESOURCE PLAN

Current and Projected Water Demands



The information above was used to develop population forecasts for three scenarios: Low, Medium, and High at 2050 and 2070. **Figure 4-3** shows the population projections for the three scenarios.

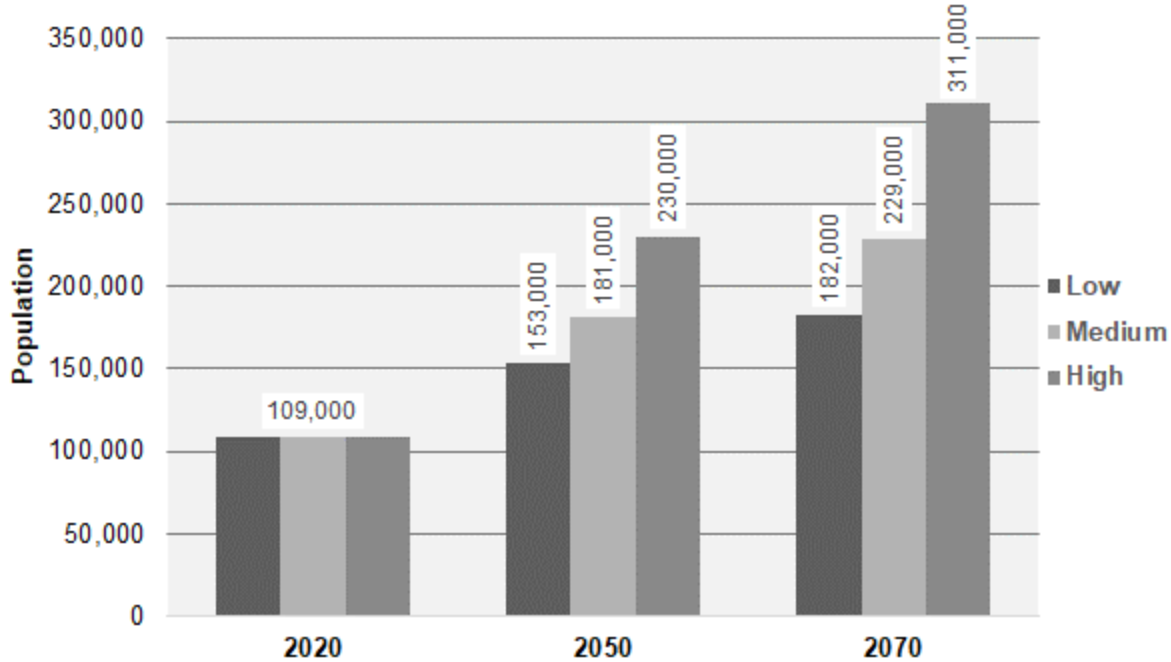


Figure 4-3. Greeley’s 2020 and Projected Populations at 2050 and 2070

The IWRP also evaluated the potential timing of “buildout” in Greeley’s LREGA and the potential city population at buildout. Buildout population and the timing of population will depend on many factors, however the IWRP varied residential unit density (in residential units per acre) and population growth rate (the previously used Low, Medium, and High scenarios) when assessing buildout. **Table 4-1** shows the buildout population for each density scenario.

Table 4-1. Buildout Population and Timing Projections

| Density Scenario | Buildout Population |
|--|---------------------|
| Current Residential Density (7.1 units per acre) | 348,000 |
| 30% Increase in New Residential Density (9.2 units per acre) | 421,000 |
| 50% Increase in New Residential Density (10.6 units per acre) | 470,000 |



INTEGRATED WATER RESOURCE PLAN

Current and Projected Water Demands



4.2.2 Demand Projections

Potable and non-potable demands were projected at 2030, 2050, and 2070 using the population projections described above for four demand scenarios. These four scenarios vary important factors that can impact future demands: the population growth scenario, the extent to which irrigation increases in response to hotter and drier future climate conditions, the extent of future conservation, and the proportion of new housing units that are multifamily apartments and condominiums. These factors were selected based off the prioritized demand risks described in Section 5. **Table 4-2** summarizes these four demand scenarios and how these factors were applied in them.

Table 4-2. IWRP Demand Scenario Settings

| Demand Scenario | Population Scenario | Increase in Irrigation Rate due to Climate | Conservation (Price Increases) | Multifamily Share of New Housing Units |
|------------------------------|---------------------|--|--------------------------------|--|
| High Bookend | High Growth | 37% | Level 2 (2%/year) | 40% |
| Median Scenario | Medium Growth | 25% | Level 1 (1%/year) | 40% |
| Low Bookend | Low Growth | 12% | Level 3 (3%/year) | 50% |
| Median with Max Conservation | Medium Growth | 25% | Level 3 (3%/year) | 40% |

The Demand Model develops separate forecasts for the portion of projected outdoor demands that will be met from non-potable sources, otherwise known as non-potable demands. The IWRP updated the non-potable forecast based off the 2021 Non-Potable Master Plan. **Table 4-3** shows the assumed percentages of outdoor demands that are non-potable by customer category that were applied to the demand forecasts. To align with the Non-Potable Master plan, the maximum non-potable demand regardless of scenario was set to a maximum of 7,100 acre-feet per year.

Table 4-3. Non-Potable Demand Forecast Assumptions

| Customer Category | Percent of New Outdoor Demands from Non-Potable Supplies |
|---------------------------------|--|
| Singly-Family Residential | 12% |
| Multi-Family Residential | 12% |
| Commercial | 16% |
| City of Greeley | 80% |
| Schools | 60% |
| University of Northern Colorado | 16% |

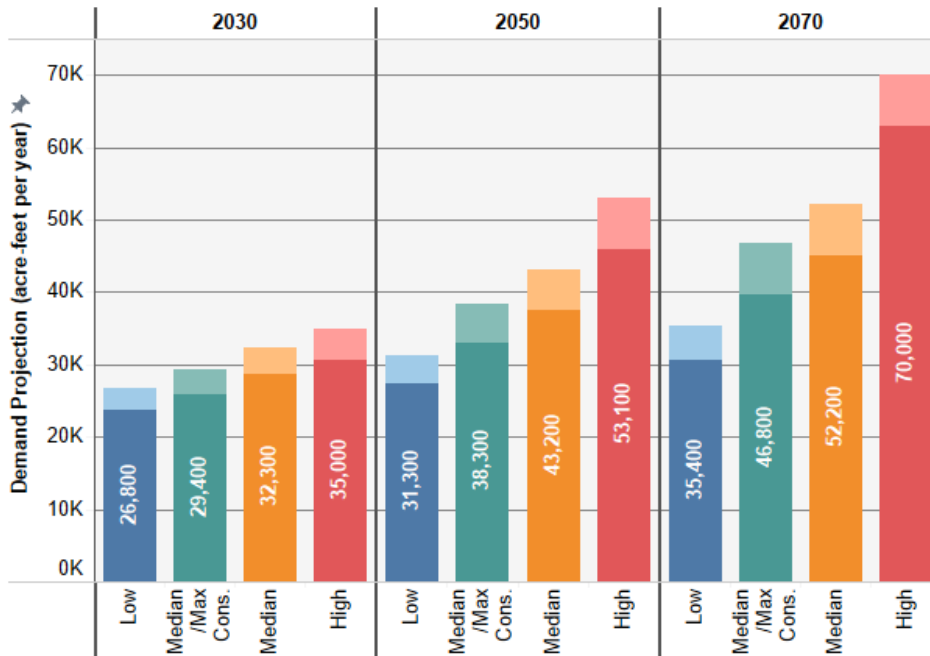


INTEGRATED WATER RESOURCE PLAN

Current and Projected Water Demands



The demand projections at 2030, 2050, and 2070 are shown by Demand Scenario in **Figure 4-4** and presented numerically in **Table 4-4**. Based on these projections, Greeley’s demands at 2070 could vary between 35,400 and 70,000 acre-feet per year. The most significant contributor to this variability is population. Under these projections, Greeley’s non-potable system will be fully built out by 2070 for all Demand Scenarios except the Low Bookend.



Dark Color is Potable, Light Color is Non-Potable. Value is Total Demand = Potable + Non-Potable

Figure 4-4. Greeley’s Demand Projects at 2030, 2050, and 2070

Table 4-4. Greeley’s Demand Projects at 2030, 2050, and 2070

| Year | Demand Type | Demand Scenario | | | |
|------|--------------|-----------------|----------------------------|-----------------|---------------|
| | | Low Bookend | Median w/ Max Conservation | Median Scenario | High Bookend |
| 2030 | Non-Potable | 3,000 | 3,500 | 3,700 | 4,300 |
| | Potable | 23,800 | 25,900 | 28,600 | 30,700 |
| | Total | 26,800 | 29,400 | 32,300 | 35,000 |
| 2050 | Non-Potable | 4,000 | 5,300 | 5,700 | 7,100 |
| | Potable | 27,300 | 33,000 | 37,500 | 46,000 |
| | Total | 31,300 | 38,300 | 43,200 | 53,100 |
| 2070 | Non-Potable | 4,800 | 7,100 | 7,100 | 7,100 |
| | Potable | 30,600 | 39,700 | 45,100 | 62,900 |
| | Total | 35,400 | 46,800 | 52,200 | 70,000 |



INTEGRATED WATER RESOURCE PLAN

Current and Projected Water Demands



Figure 4-5 compares growth in total demands between the four Demand Scenarios from 2030 to 2070. The variation in projected total demands (difference between High and Low Demand Scenario projections) increases from 8,200 acre-feet per year at 2030 to 34,600 acre-feet per year at 2070. This further emphasizes the significant variation and uncertainty in Greeley’s potential future demands. These demand projections assumed demand growth occurs immediately. However, Greeley’s total demands have not grown significantly over the last 10 years and are lower than the early-2000s peak – further contributing to uncertainty. Developing a process to manage and track demand growth uncertainty will be a key component of the Adaptive Plan.

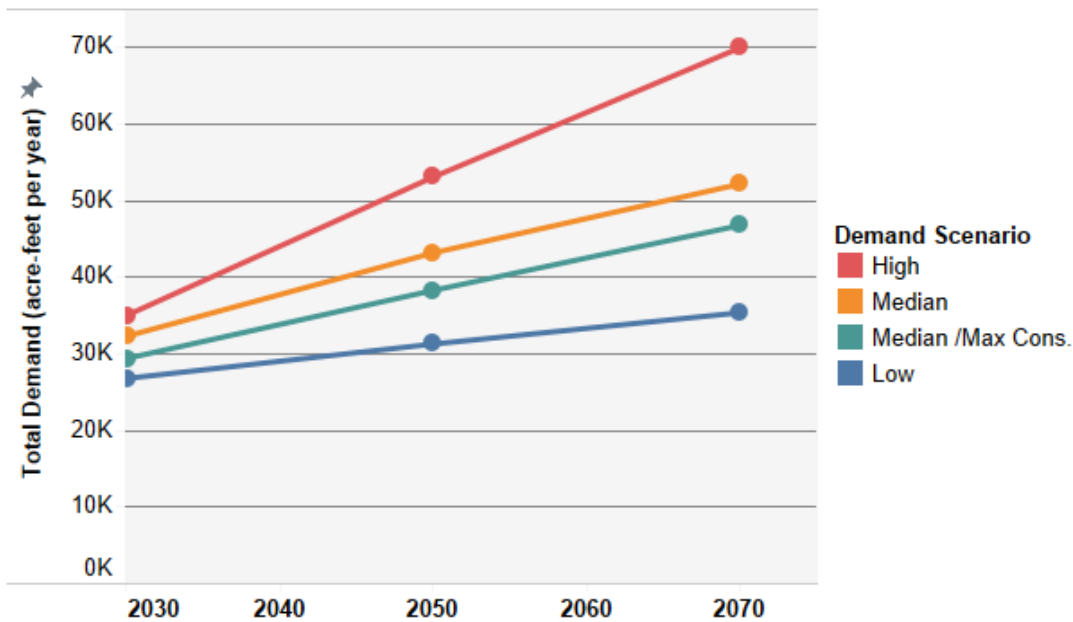


Figure 4-5. Comparison of Greeley’s Demand Growth Between 2030 and 2070



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



5.0 RISK IDENTIFICATION AND ASSESSMENT

5.1 METHODOLOGY

Risks to Greeley's water supply system were identified within five categories by a combination of Greeley Staff, consultants, and a review of other studies and relevant published literature. These risks were then evaluated using a scoring survey. The purpose of the evaluation was to prioritize risks and identify which should be included in the IWRP.

The scoring survey had Greeley staff, stakeholders, and members of the Stantec Team assign numerical likelihood and impact scores to the individual risks. Participants assigned scores from 1 to 5 using their perception of each risk according to the definitions in **Table 5-1**. The likelihood and impact scores were then multiplied together to compute a composite score. The composite scores were then used to prioritize risks for IWRP inclusion. Participants assigned scores individually and were not required to score every risk.

Table 5-1. Impact and Likelihood Scores and Definitions Used by Scoring Participants

| Score | Impact Definition | Likelihood Definition |
|-------|--|--|
| 1 | <i>Insignificant</i> – If the risk occurs the impact to the water supply system would be negligible. | <i>Rare</i> – the risk will only occur in exceptional circumstances. |
| 2 | <i>Minor</i> – If the risk occurs the impact to the water supply system would be minimal. | <i>Unlikely</i> – the risk will occur in occasional circumstances. |
| 3 | <i>Moderate</i> – If the risk occurs there would be a noticeable impact to the water supply system. | <i>Possible</i> – the risk will occur in some circumstances. |
| 4 | <i>Major</i> – If the risk occurs there would be substantial impact to the water supply system. | <i>Likely</i> – the risk will occur in a majority of circumstances. |
| 5 | <i>Extreme</i> – If the risk occurs there would be catastrophic impact to the water supply system. | <i>Almost Certain</i> – the risk will occur in almost all circumstances/is imminent. |



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



5.2 IDENTIFIED WATER SUPPLY SYSTEM RISKS

55 initial risks to Greeley's water supply system were identified by the Greeley staff and the Stantec Team. These risks were grouped into five categories:

- **Climate Change and Hydrology** – Risks that relate to climate variability and other hydrologic factors, both short- and long-term, that can impact Greeley's water entitlements
- **Colorado River Basin Issues** – Risks that could affect Greeley's water supplies from the Colorado River Basin, including the Colorado-Big Thompson Project.
- **Demand** – Risks that could increase or decrease future water demands from what is projected, resulting in Greeley's water supply system being unable to meet water needs or being overdesigned
- **Infrastructure and Operations** - Risks that include impacts to how Greeley captures and delivers their water entitlements water to customers
- **Water Rights** – Risks that could impact how Greeley's existing and potential water rights could be acquired, changed, and/or administrated

The tables on the following pages show the risks identified for each category, a brief description, and the average impact, likelihood, and composite score from scoring survey participants. **Table 5-2** shows the Climate Change and Hydrology risks and scores. **Table 5-3** shows the Colorado River Basin Issues risks and scores. **Table 5-4** shows the Demand risks and scores. **Table 5-5** shows the Infrastructure and Operations risks and scores. **Table 5-6** shows the Water Rights risks and scores.



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



Table 5-2. Identified Climate Change and Hydrology Risks with Corresponding Impact and Likelihood Scores

| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|-----|--|--|----------------------|--------------------------|--------------------------------------|------------------------------------|
| CC3 | Extended Droughts | Droughts with duration and severity greater than Greeley's historical record occur. Would occur independent of Climate Change. | 4.2 | 4.2 | 18.1 | 6.1 |
| CC1 | Colorado River Administration CC Impacts | Climate change would increase the frequency, duration, and intensity of droughts, reducing Greeley's available supply from Colorado River basin. This would result in the Colorado River Basin risks occurring more often. | 3.8 | 4.2 | 15.8 | 4.5 |
| CC4 | Hydrologic CC Impacts | More precipitation could occur as rain, runoff timing would compress and shift earlier in the season, resulting in net changes to volumetric yields and exchange availability. | 3.5 | 4.0 | 14.5 | 4.6 |
| CC5 | Increased Extreme Events | Increased frequency and intensity of extreme events such as fire and flooding within Greeley's source basins would change the timing, quantity, and quality of water supply from those watersheds. | 3.0 | 4.0 | 12.2 | 5.6 |
| CC6 | Municipal Water Use CC Impacts | Warmer temperatures increase water needs and increase the duration of the municipal irrigation season. Could also result in a change in landscaping practices - e.g., conversion of irrigated landscape to xeriscape. | 3.0 | 3.8 | 11.5 | 3.9 |
| CC2 | Evaporation Rate CC Impacts | A warmer climate would increase evaporation losses from reservoirs | 2.5 | 4.1 | 10.3 | 2.5 |
| CC7 | Water Rights Administration CC Impacts | Yields from existing water rights would change due to the shift in runoff magnitude and timing. Operational assumptions around exchange, timing, and positioning of yields would change. | 2.5 | 3.7 | 9.5 | 4 |

¹ Values shown are the average of the composite scores and not the product of the Average Likelihood Score and the Average Impact Score



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



Table 5-3. Identified Colorado River Basin Issues Risks with Corresponding Impact and Likelihood Scores

| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|------|--|---|----------------------|--------------------------|--------------------------------------|------------------------------------|
| CR1 | Colorado River Basin Administrative Actions | To comply with the Colorado River Compact/critical operational parameters (e.g., power pools in Lakes Mead and Powell), a variety of impacts to Greeley's Windy Gap and CBT yields could occur. | 4.2 | 4.6 | 19.1 | 3.4 |
| CR3 | Chronic Yield Reduction - Windy Gap | Chronic, 10% to 25% reduction in Windy Gap yields due to the effects of aridification in the Colorado River Basin. Reduction would be applied over the entire simulation period. | 3.8 | 3.7 | 14 | 5.3 |
| CR4 | Chronic Yield Reduction - Windy Gap and CBT | Chronic, 10% to 25% reduction in Windy Gap and CBT yields due to the effects of aridification in the Colorado River Basin. Reduction would be applied over the entire simulation period. | 4.3 | 3.1 | 13.2 | 2 |
| CR10 | Yield Reduction - Multi Year | 2-year, 10% to 25% reduction of Windy Gap/CBT/WSSC yields as part of State-led coordinated effort. | 4.2 | 3.2 | 13 | 5.5 |
| CR8 | Total Curtailment - Single Year, Windy Gap and CBT | 1-year complete curtailment of Colorado River Basin yields could occur in the event of Compact Compliance failure. | 4.1 | 3.1 | 12.5 | 6.9 |
| CR11 | Yield Reduction - Single Year | 1-year, 10% to 25% reduction of Windy Gap/CBT/WSSC yields as part of State-led coordinated effort. | 3.6 | 3.8 | 12.4 | 4.5 |
| CR5 | Total Curtailment - Multi-Year, Windy Gap | 2-year complete curtailment of Windy Gap yields could occur in the event of Compact Compliance failure. | 3.9 | 3.1 | 12.3 | 6 |
| CR9 | Yield Reduction - Extended | 5-year, 10% to 25% reduction of Windy Gap/CBT/WSSC yields as part of State-led coordinated effort. | 4.7 | 2.7 | 12.1 | 5.5 |
| CR6 | Total Curtailment - Multi-Year, Windy Gap and CBT | 2-year complete curtailment of Colorado River Basin yields could occur in the event of Compact Compliance failure. | 4.5 | 2.6 | 11.8 | 4.2 |



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|-----|--|--|----------------------|--------------------------|--------------------------------------|------------------------------------|
| CR7 | Total Curtailment - Single Year, Windy Gap | 1-year complete curtailment of Windy Gap yields could occur in the event of Compact Compliance failure. | 3.4 | 3.4 | 11.8 | 6 |
| CR2 | Emergency Municipal Demand Reductions | Greeley's water use would be significantly reduced as part of State-led effort to reduce demands on the Colorado River Basin. Only water use for public health and critical landscaping (e.g., mature trees) would be allowed. | 2.9 | 3.1 | 8.8 | 3.4 |

¹ Values shown are the average of the composite scores and not the product of the Average Likelihood Score and the Average Impact Score
 WSSC is Water Supply & Storage Company

Table 5-4. Identified Demand Risks with Corresponding Impact and Likelihood Scores

| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|-----|-----------------------------------|---|----------------------|--------------------------|--------------------------------------|------------------------------------|
| D10 | Regional Water Issues - Long Term | Nearby communities experience long-term water reliability issues and City of Greeley decides to provide their water service. | 3.5 | 3.7 | 13.1 | 5.3 |
| D6 | High Impact Water Rates | Higher rates to fund projects could cause demands to decrease due to affordability issues. Could also lead to political impacts where rates can no longer be raised. | 3.1 | 3.8 | 11.8 | 5.6 |
| D4 | Demand Hardening | Long-term reductions in outdoor Municipal water use reduces the proportion of total demand that is for outdoor use. This would reduce assumed savings from drought response measures. | 3.0 | 3.7 | 11.5 | 4.8 |
| D12 | Service Area Expansion | The City of Greeley expands beyond the current service area, potentially increasing buildout demand. | 3.6 | 3.2 | 11.5 | 3.9 |



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|-----|--------------------------------------|--|----------------------|--------------------------|--------------------------------------|------------------------------------|
| D7 | Increased Suburban Growth | The proportion of suburban growth is more than assumed in demand forecasts, increasing proportion of overall demands that are outdoor demands. | 3.0 | 3.6 | 10.9 | 4.4 |
| D9 | Increased Non-Potable System Growth | The non-potable system is not developed/built as assumed. Future demands assumed to be met from non-potable supplies instead are part of the potable system. | 2.9 | 3.5 | 10.3 | 5.5 |
| D13 | Uncertain Industrial Demands | Large industrial demands could be added to the system, which would quickly increase the demands on the water system. | 3.4 | 3.0 | 10.2 | 3.5 |
| D2 | Demand Growth Exceeds Forecast | Greeley's water demands could grow faster than anticipated due to a variety of conditions including rapid population growth and/or poor adoption of conservation practices. | 3.5 | 2.6 | 9.6 | 4.5 |
| D5 | Demand Stagnation | Demands continue to remain relatively static for a longer period of time than assumed. This could affect the timing of CIP projects and reduce anticipated revenue, overburdening rate payers. | 2.8 | 3.3 | 9.4 | 4.7 |
| D8 | Increased Urban Growth | The proportion of urban growth is more than assumed in demand forecasts, increasing the proportion of overall demands that are indoor demands. | 2.5 | 3.5 | 8.9 | 3.5 |
| D11 | Regional Water Issues - Short Term | Nearby communities experience emergency water reliability issues and Greeley would provide water service to them for a short period of time. | 2.2 | 3.8 | 8 | 3.6 |
| D1 | Conservation Program Ineffectiveness | Per capita water use does not decline as much as anticipated with the current water conservation program measures. | 2.9 | 2.4 | 7.1 | 4 |
| D3 | Demand Growth Slower than Forecast | Greeley's water demand grows slower than anticipated due to conditions such as high rate burden, poor economic conditions, more rapid adoption of conservation practices, and new water fixture/irrigation technology. | 2.0 | 3.0 | 6.5 | 5 |

¹ Values shown are the average of the composite scores and not the product of the Average Likelihood Score and the Average Impact Score



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



Table 5-5. Identified Infrastructure and Operational Risks with Corresponding Impact and Likelihood Scores

| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|------|--|---|----------------------|--------------------------|--------------------------------------|------------------------------------|
| IO9 | Increased Frequency/Severity of Wildfires - Poudre Watershed | Severe wildfires in Poudre watersheds would change the timing, quantity, and quality of water supply from those watersheds. July/August yields would be cut off completely for 3 of 10 years after a fire and would be reduced by 25% for the other 7 years. Barnes, Peterson, and Chambers would have a 50% reduction in storage capacity. Treatment costs would increase. | 3.5 | 4.2 | 14.8 | 6.2 |
| IO4 | Degraded Surface Water Quality | Climate change creates frequent surface water quality issues such as algal blooms that reduce Greeley's ability to treat water. | 3.1 | 3.3 | 9.9 | 3.3 |
| IO17 | Water Quality Regulation Changes | New/modified water quality environmental criteria (minimum flows, temperature standards, etc.) could be adopted that would affect Greeley's water rights and operations. | 2.7 | 3.6 | 9.8 | 3.4 |
| IO5 | Environmental Permitting Problems | Failure to obtain the necessary federal or state environmental permits would make it impossible to implement a planned project. | 2.8 | 3.3 | 9.2 | 3.8 |
| IO2 | Changes in Regional Agriculture | The regional ag. economy is more or less robust than assumed, affecting the availability/pricing of water rights for Greeley. More robust regional ag. economy would increase the likelihood of high-water use industries. | 2.6 | 3.4 | 9.1 | 5.5 |
| IO1 | Budget Instability | Temporary monetary crisis or revenue instability forces Greeley to lower use of energy-intensive infrastructure such as Terry Ranch. | 2.9 | 2.8 | 8.9 | 6.2 |
| IO11 | Multi-Year Grand River Ditch Outage | Grand River Ditch is taken out of service for 3 years due to natural hazard (flood, landslide, etc.). | 3.0 | 2.8 | 8.6 | 3.4 |
| IO14 | Regional Agricultural Water Use Practices | Changes in agricultural water use and growth practices change how Greeley's water rights yield due to shared ditch infrastructure, senior water rights calls, and reduced runoff from water-intensive irrigation practices. | 2.6 | 3.1 | 8.6 | 6.2 |
| IO8 | High Mountain Reservoir Chronic Outage | Natural disasters or changes in regulations take Greeley's High Mountain Reservoirs permanently offline. | 3.3 | 2.5 | 8.3 | 4.2 |



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|------|--|---|----------------------|--------------------------|--------------------------------------|------------------------------------|
| IO10 | Multi-Year CBT Infrastructure Outage | Variety of risks to CBT infrastructure that could take it offline for a period of time. This effect would be captured via reduced or eliminated quota to Greeley. | 3.8 | 2.2 | 8.3 | 3.7 |
| IO13 | Multi-Year Laramie-Poudre Tunnel Outage | Laramie-Poudre Tunnel is taken out of service for 3 years due to natural hazard (flood, landslide, etc.). | 3.0 | 2.8 | 8.3 | 4.6 |
| IO6 | Ground Water (GW) supplies cannot be used by Greeley | Greeley cannot utilize Terry Ranch for either GW supplies or storage. | 4.2 | 1.9 | 8.1 | 3.9 |
| IO7 | High Energy Cost | High energy costs reduce Greeley's ability to use energy-intensive infrastructure such as Terry Ranch. | 2.7 | 3.0 | 7.7 | 3.7 |
| IO12 | Multi-Year High Mountain Reservoir Outage | High Mountain Reservoirs are taken out of service for 3 years due to natural hazard (flood, landslide, etc.). | 3.2 | 2.3 | 7.5 | 4 |
| IO16 | Terry Ranch Yield Limitations | Features of Terry Ranch such as neighboring owners over-drafting and/or inconsistent uranium presence in wells change the yield assumptions from the project. | 2.8 | 2.6 | 7.3 | 3.4 |
| IO15 | Terry Ranch Interstate Compact | New interstate compacts or legal precedent changes how Greeley can use Terry Ranch | 3.1 | 2.3 | 6.9 | 2.5 |
| IO3 | Contamination Event | Contamination of a surface water supply source, storage facility, or Terry Ranch requires significant operational changes for 2 or more years. | 3.2 | 2.3 | 6.8 | 3.4 |

¹ Values shown are the average of the composite scores and not the product of the Average Likelihood Score and the Average Impact Score



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



Table 5-6. Identified Water Rights Risks with Corresponding Impact and Likelihood Scores

| ID | Risk Name | Risk Description | Average Impact Score | Average Likelihood Score | Average Composite Score ¹ | Composite Score Standard Deviation |
|-----|-----------------------------------|---|----------------------|--------------------------|--------------------------------------|------------------------------------|
| WR2 | Competition for New Water Rights | New water rights would be more expensive and yield less than anticipated. Water rights that Greeley plans to acquire come off the market due to actions by other water providers. | 3.2 | 4.4 | 14.4 | 5.3 |
| WR1 | CBT Operational Changes | Northern Water would no longer allow Greeley to carryover their CBT supplies. | 3.5 | 3.4 | 12.2 | 4.2 |
| WR6 | Water Rights Change Complexity | Water rights that Greeley currently owns but has not changed to municipal use would have their yields reduced as part of the change process or could not be changed entirely. | 2.9 | 3.9 | 12 | 5 |
| WR3 | Increased return flow obligations | Due to changes in future change cases or other water rights administration changes. Greeley must dedicate more water than planned to return flow obligations. | 2.7 | 3.3 | 9.7 | 6 |
| WR5 | Terry Ranch Storage Ability | Water that is assumed to be storable in Terry Ranch would no longer be able to be stored there due to changes in water rights administration (e.g., wholly consumptive rights) | 3.3 | 2.6 | 9.3 | 5.8 |
| WR4 | Reduced reusable effluent | Due to changes in water rights administration, treatment requirements, or operational changes Greeley has less reusable effluent than planned. | 2.4 | 2.9 | 7.7 | 4.4 |

¹ Values shown are the average of the composite scores and not the product of the Average Likelihood Score and the Average Impact Score



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



5.3 WATER SUPPLY SYSTEM RISK ANALYSIS

5.3.1 Comparative Analysis of Risks and Uncertainties

When prioritizing risks, the average likelihood and impact scores resulting the scoring survey were evaluated using the criteria shown in **Figure 5-1**. Risks with a composite score (calculated as likelihood times impact) greater than 10 were generally prioritized for the IWRP. Risks with composite score less than 5 were not prioritized for the IWRP. Risks with an impact score above 4 and likelihood score above 2 were prioritized for the IWRP regardless of the composite score. All other risks were evaluated on a case-by-case basis.

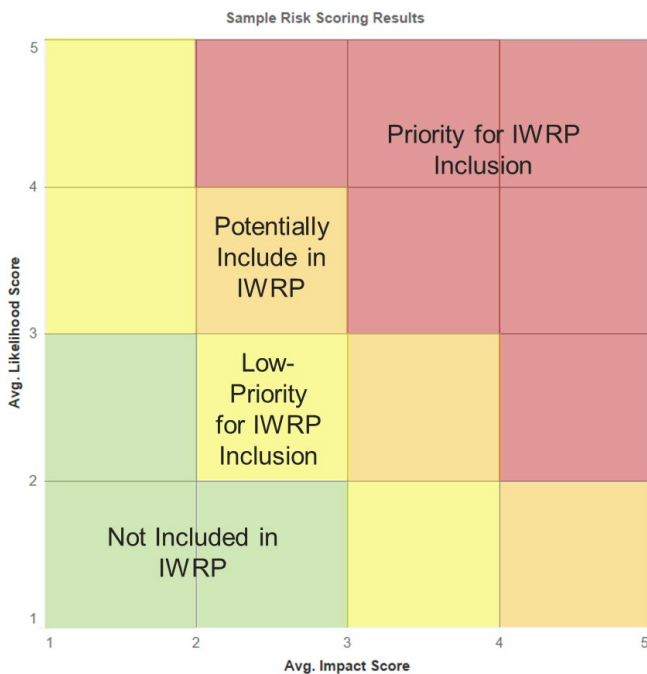


Figure 5-1. Overall Likelihood and Impact Criteria used to Prioritize Risks

Figure 5-2 presents the likelihood and impact scores of the risks averaged across all scoring survey responses with the risk category shown as the color. Labels within each circle correspond to the risk ID of a risk that was prioritized for IWRP inclusion. In this figure, the closer a risk is to the top right corner the more likely and impactful it was perceived to be. Risks from all the categories were included in the IWRP.



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



Figure 5-2. Average Impact and Likelihood Scores for Water Supply Risks

Another criterion evaluated when prioritizing risks for the IWRP was the variation of individual likelihood and impact scores. **Figure 5-3** (Climate Change and Hydrology, Colorado River Basin Impacts, and Demand risks) and **Figure 5-4** (infrastructure and Operations and Water Rights risks) show how many individual respondents assigned a likelihood/impact score of 1 to 5 for each risk (NA indicates a value was not assigned). The larger a bar is, the more respondents assigned the specified score. R&Us with larger bars of a single color indicate agreement within respondents on the likelihood/impact score while four or more individual colors indicate variability of individual scores. Most risks showed minimal variation between individual scores, indicating that the respondents have similar perceptions of likelihood and impact for most of the risks. Risks that had scores from 1 to 5 given by respondents include: Total Curtailments of the Windy Gap and CBT systems, Demand Growth Slower than Forecast, and Service Area Expansion. This variation was considered and ultimately no changes were made to the prioritized risks.



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment

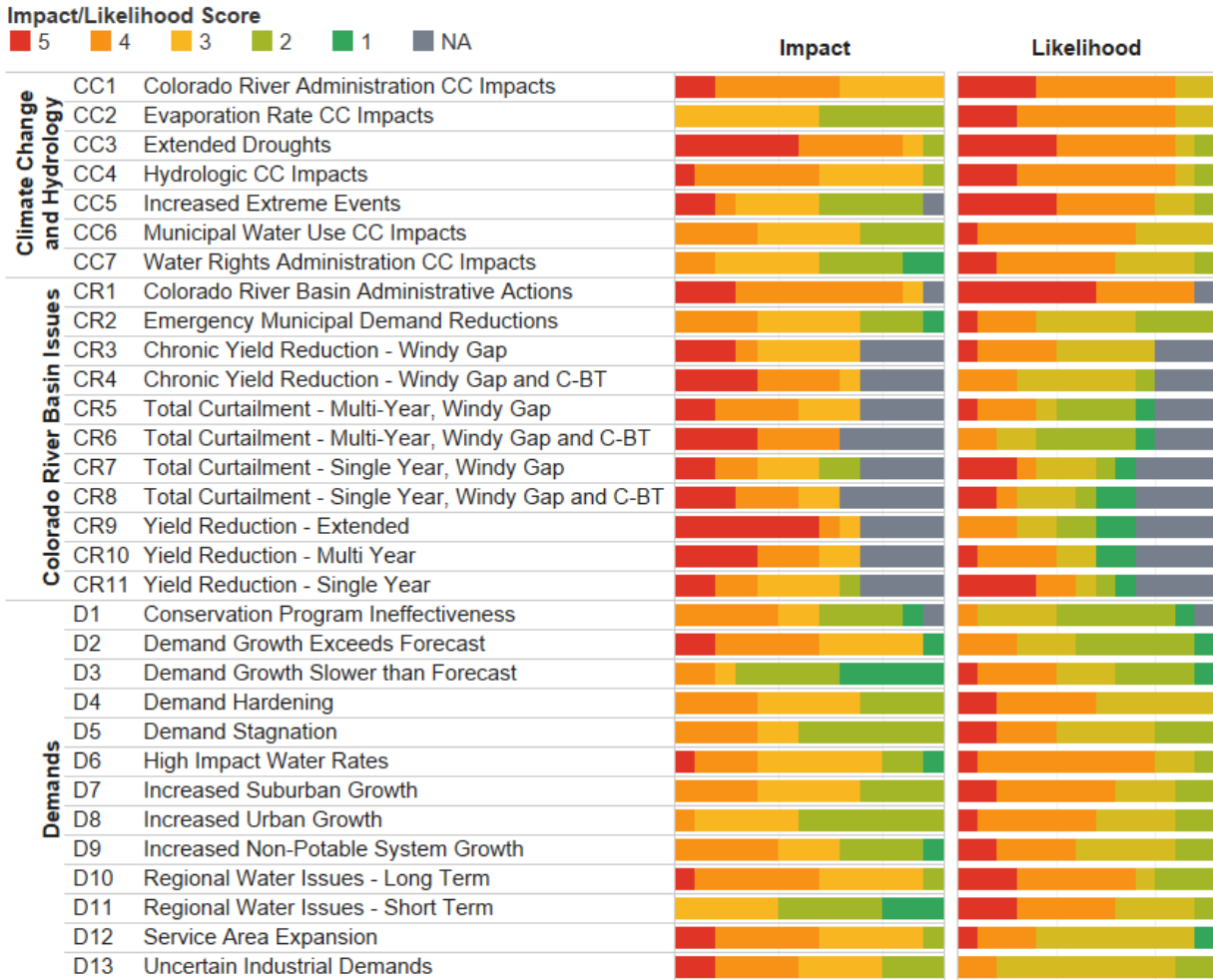


Figure 5-3. Variability in individual impact and likelihood scores for Climate Change Hydrology, Colorado River Basin Issues, and Demand Risks



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment

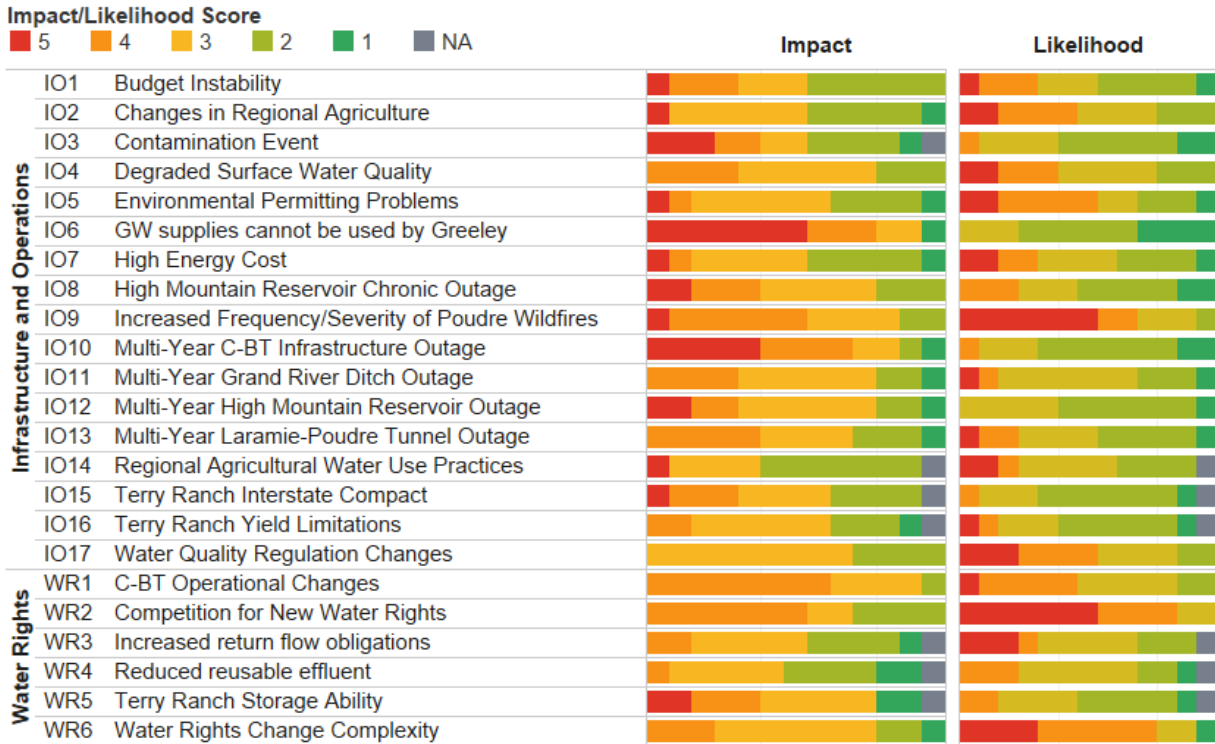


Figure 5-4. Variability in individual impact and likelihood scores for Infrastructure and Operations and Water Rights Risks

5.3.2 Prioritized Risks for IWRP Inclusion

Table 5-7 presents the water supply system risks prioritized for the IWRP using the analysis process described above, sorted by composite score. Impact and likelihood scores are the median across all responses. Prioritized risks were those that fell within the red region presented in Figure 5-1 (shown previously) and risks with an impact score greater than 4 paired with a likelihood score greater than 2. In total, 30 risks were prioritized for inclusion in the IWRP.



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



Table 5-7. List of Prioritized Water Supply Risks for IWRP

| ID | Risk Name | Impact Score | Likelihood Score | Composite Score |
|------|--|--------------|------------------|-----------------|
| CR1 | Colorado River Basin Administrative Actions | 5 | 4 | 20 |
| IO9 | Increased Frequency/Severity of Poudre Wildfires | 5 | 4 | 20 |
| WR2 | Competition for New Water Rights | 5 | 4 | 20 |
| CC1 | Colorado River Administration CC Impacts | 4 | 4 | 16 |
| CC3 | Extended Droughts | 4 | 4 | 16 |
| CC4 | Hydrologic CC Impacts | 4 | 4 | 16 |
| CR10 | Yield Reduction - Multi Year | 4 | 4 | 16 |
| D10 | Regional Water Issues - Long Term | 4 | 4 | 16 |
| CR9 | Yield Reduction - Extended | 3 | 5 | 15 |
| CC2 | Evaporation Rate CC Impacts | 4 | 3 | 12 |
| CC5 | Increased Extreme Events | 4 | 3 | 12 |
| CC6 | Municipal Water Use CC Impacts | 4 | 3 | 12 |
| CC7 | Water Rights Administration CC Impacts | 4 | 3 | 12 |
| CR11 | Yield Reduction - Single Year | 4 | 3 | 12 |
| CR3 | Chronic Yield Reduction - Windy Gap | 4 | 3 | 12 |
| D4 | Demand Hardening | 4 | 3 | 12 |
| D6 | High Impact Water Rates | 4 | 3 | 12 |
| D7 | Increased Suburban Growth | 4 | 3 | 12 |
| IO17 | Water Quality Regulation Changes | 4 | 3 | 12 |
| IO5 | Environmental Permitting Problems | 4 | 3 | 12 |
| WR6 | Water Rights Change Complexity | 4 | 3 | 12 |
| CR4 | Chronic Yield Reduction - Windy Gap and CBT | 3 | 4 | 12 |
| CR5 | Total Curtailment - Multi-Year, Windy Gap | 3 | 4 | 12 |
| CR8 | Total Curtailment - Single Year, Windy Gap and CBT | 3 | 4 | 12 |
| D12 | Service Area Expansion | 3 | 4 | 12 |
| WR1 | CBT Operational Changes | 3 | 4 | 12 |
| CR6 | Total Curtailment - Multi-Year, Windy Gap and CBT | 5 | 2 | 10 |
| IO6 | GW supplies cannot be used by Greeley | 5 | 2 | 10 |
| D2 | Demand Growth Exceeds Forecast | 4 | 2 | 8 |
| IO10 | Multi-Year CBT Infrastructure Outage | 4 | 2 | 8 |



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



5.4 RISK INCLUSION IN IWRP

The prioritized risks were further evaluated to collect and summarize common risks into “drivers” to incorporate into the IWRP Planning Scenarios. Drivers are major events or conditions that are outside Greeley’s control that could impact their ability to provide sustainable water supply to their customers. The drivers identified for the IWRP are presented below. **Table 5-8** presents how these drivers were incorporated into the Planning Scenarios described in Section 2.2.

- The **Climate Change Impacts on Hydrology** driver captures risks that could change what Greeley’s water rights yield and the timing of that yield compared to what has been experienced historically. This is due to a combination of droughts of increased intensity, duration, and/or frequency compared to the historical record, and impact on runoff and the overall hydrograph from a warmer climate.
- The **Future Demand Uncertainty** driver captures risks that affect how much water demand Greeley’s system would need to meet in the future and how water is used compared to historical. This includes future built areas being different than historical, less outdoor water use, and potential regional demand needs.
- The **Water Rights Administration Complexity and Uncertainty** driver captures risks that affect Greeley’s ability to change currently owned water rights, acquire new water rights, and how existing and future water rights may yield. This includes increased competition for new water rights, the legal complexity of changing existing rights, and uncertainty of how water rights administration may change under a different hydrograph than historical.
- The **Colorado River Basin Issues** driver captures risks to Greeley’s yields from the Colorado River Basin which could result in a variety of short- and long-term reductions or curtailments of these supplies.

Table 5-8. Risk Driver Settings for Planning Scenarios

| Driver Name | Incorporate Impact | Planning Scenario Settings |
|---|--|--|
| Climate Change Impacts on Hydrology | Change in temperature of future climate conditions compared to historical. | <ul style="list-style-type: none"> • No Change • +2°F Warmer • +5°F Warmer • +8°F Warmer |
| Future Demand Uncertainty | Rate of population growth paired with per capita water use. | <p><u>Population Growth Rate:</u></p> <ul style="list-style-type: none"> • Planned Growth • Increased Growth • Decreased Growth <p><u>Per Capita Water Use:</u></p> <ul style="list-style-type: none"> • Highest Per Capita Use • Planned Per Capita Use • Lowest Per Capita Use |
| Water Rights Administration Complexity and Uncertainty | Reductions in modeled water rights yield due to combination of inability to change water rights as assumed, acquire new water rights, and/or reductions in yield due to administration changes | <ul style="list-style-type: none"> • No Change • 10% Reduction in All Yields |



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



| Driver Name | Incorporate Impact | Planning Scenario Settings |
|------------------------------------|---|--|
| Colorado River Basin Issues | Combination of short- and long-term Colorado River Basin yield reductions and curtailments due to Colorado River Basin administration and Compact compliance. | <u>High Impacts to Yields</u> <ul style="list-style-type: none"> • 5-year 25% Reduction in CBT/Windy Gap • 1-year 100% curtailment of CBT/Windy Gap • Chronic 10% reduction in CBT/Windy Gap <u>Moderate Impacts to Yields</u> <ul style="list-style-type: none"> • 5-year 25% Reduction in CBT/Windy Gap • 1-year 100% curtailment of CBT/Windy Gap <u>Low Impacts to Yields</u> <ul style="list-style-type: none"> • 2-year 25% Reduction in CBT/Windy Gap |

Table 5-9 shows how the prioritized risks were included in the IWRP. Certain risks were included as a driver for Planning Scenarios (“Planning Scenarios”), as described above. Demand risks were primarily included by incorporating their potential impacts into the updated demand forecasts as described in Section 4. Hydrology risks were primarily included by incorporating their potential impacts into the updated hydrology as described in Section 6. Colorado River basin impacts were explicitly modeled in the GSM. Water Rights risks were included in both the Planning Scenarios and in the Water Rights Evaluation described in Section 10. Any risks that were not included using the above methodology will be included in the Adaptive Plan that will describe specific conditions to monitor and corresponding actions to trigger if the risk occurs.

Table 5-9. Methodology for Implementing Prioritized Risks in the IWRP

| ID | Risk Name | IWRP Inclusion Methodology |
|-------------|--|---|
| CR1 | Colorado River Basin Administrative Actions | Planning Scenarios |
| IO9 | Increased Frequency/Severity of Poudre Wildfires | Adaptive Plan |
| WR2 | Competition for New Water Rights | Water Rights Assessment Tool |
| CC1 | Colorado River Administration CC Impacts | Planning Scenarios |
| CC3 | Extended Droughts | IWRP Hydrology Dataset |
| CC4 | Hydrologic CC Impacts | IWRP Hydrology Dataset |
| CR10 | Yield Reduction - Multi Year | Simulated in GSM |
| D10 | Regional Water Issues - Long Term | Adaptive Plan |
| CR9 | Yield Reduction - Extended | Simulated in GSM |
| CC2 | Evaporation Rate CC Impacts | Adaptive Plan |
| CC5 | Increased Extreme Events | IWRP Hydrology Dataset |
| CC6 | Municipal Water Use CC Impacts | IWRP Demand Projections |
| CC7 | Water Rights Administration CC Impacts | Planning Scenarios and WR Assessment Tool |
| CR11 | Yield Reduction - Single Year | Simulated in GSM |
| CR3 | Chronic Yield Reduction - Windy Gap | Simulated in GSM |
| D4 | Demand Hardening | Adaptive Plan |
| D6 | High Impact Water Rates | IWRP Demand Projections |
| D7 | Increased Suburban Growth | IWRP Demand Projections |



INTEGRATED WATER RESOURCE PLAN

Risk Identification and Assessment



| ID | Risk Name | IWRP Inclusion Methodology |
|-------------|--|---|
| IO17 | Water Quality Regulation Changes | Adaptive Plan |
| IO5 | Environmental Permitting Problems | Adaptive Plan |
| WR6 | Water Rights Change Complexity | Planning Scenarios and WR Assessment Tool |
| CR4 | Chronic Yield Reduction - Windy Gap and CBT | Simulated in GSM |
| CR5 | Total Curtailment - Multi-Year, Windy Gap | Simulated in GSM |
| CR8 | Total Curtailment - Single Year, Windy Gap and CBT | Simulated in GSM |
| D12 | Service Area Expansion | Adaptive Plan |
| WR1 | CBT Operational Changes | Adaptive Plan |
| CR6 | Total Curtailment - Multi-Year, Windy Gap and CBT | Simulated in GSM |
| IO6 | GW supplies cannot be used by Greeley | Adaptive Plan |
| D2 | Demand Growth Exceeds Forecast | IWRP Demand Projections |
| IO10 | Multi-Year CBT Infrastructure Outage | Adaptive Plan |



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



6.0 FUTURE HYDROLOGY ANALYSIS

6.1 METHODOLOGY

The IWRP's future hydrology analysis developed a new climate change hydrology dataset to be simulated in the GSM. This new hydrology dataset improved the robustness of GSM simulations by incorporating impacts to Greeley's water supplies from droughts of different intensity, duration, and frequency in combination with impacts from long-term changes in temperature and precipitation. This analysis applied the methodology, tools, and data originally developed by Fort Collins during their Water Supply Vulnerability Study (FCU, 2019). In applying that study for the IWRP, Greeley reviewed the decisions and assumptions made and determined they were appropriate for IWRP application.

Figure 6-1 summarizes the methodology used to develop the climate change hydrology dataset. Each step is summarized in this section, with additional detail documented in IWRP Greeley System Model TM, included as Appendix C. The climate-related decisions in the WSVS (i.e., selection of models, emissions scenarios, downscaling methodology) were made to align the WSVS with the methodology used in the Joint Front Range Climate Change Vulnerability Study (WRF, 2012). Results of Global Climate Models (GCMs), which project future temperature and precipitation (T&P) mean changes, were applied to the Poudre River Watershed source. This ensemble or 'spread' of T&P changes was evaluated and combinations of T&P changes used to develop hydrology selected. A series of models was used to determine the water legally and physically available to Greeley (referred to as 'entitlements') for each T&P condition.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis

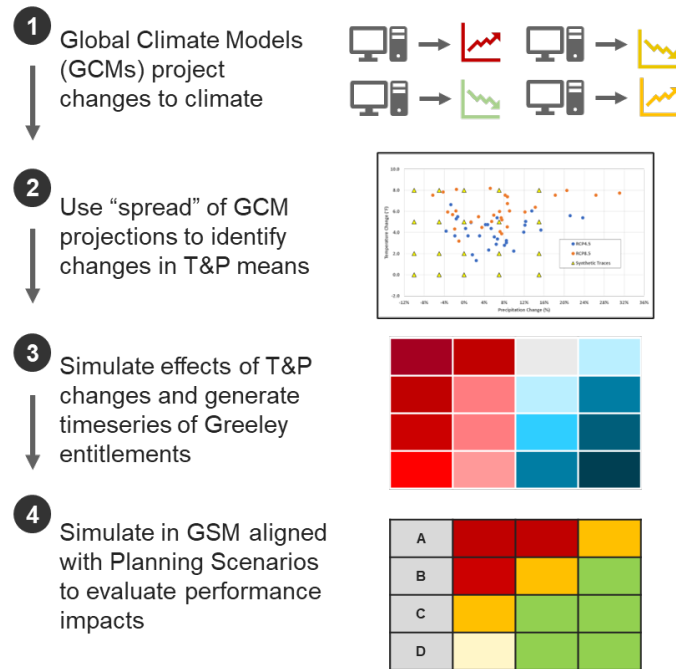


Figure 6-1. Summary of Climate Change Hydrology Dataset Development

The first step in developing the climate change hydrology dataset was establishing the long-term change in climate that could occur in Greeley’s source watersheds. GCMs project how long-term changes in climate, specifically temperature and precipitation, could occur based on different emission scenarios, warming trends, and other methodologies. This approach applied two emission scenarios to the full suite of available GCMs: RCP 4.5 assumes emissions peak around 2040 then decline while RCP 8.5 assumes emissions continue to rise throughout the twenty-first century.

The T&P changes compared to historical projected by the GCMs in the Upper Poudre Watershed between 2050 and 2074 for the two emissions scenarios described above is shown in **Figure 6-2**. The two respective GCMs used here project that the climate (i.e., mean annual temperature) will be 2°F and 8°F warmer but vary in mean annual precipitation projections, with some projecting a 5% drier climate and others projecting a 20%+ wetter climate. The yellow triangles are the combinations of T&P changes used in the IWRP. The selected T&P changes capture a majority of the T&P changes projected by the GCMs and include a drier condition (i.e., -10% precipitation, the left-most column of yellow triangles) consistent with a conservative planning approach.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis

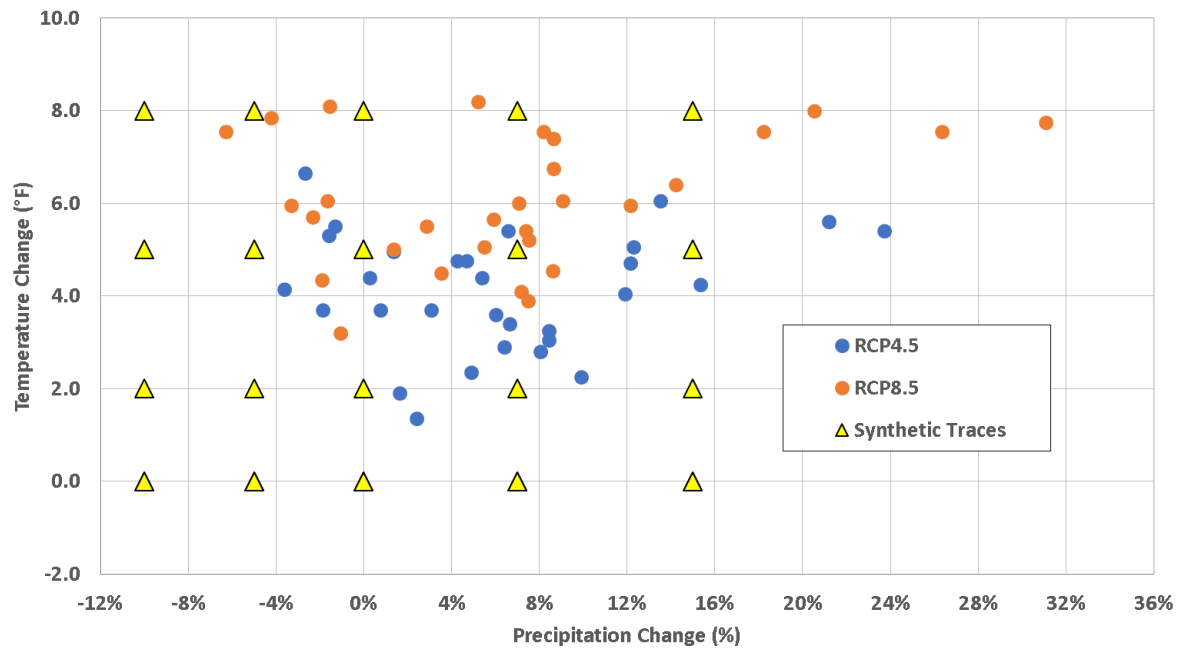


Figure 6-2. Projected Changes in Temperature and Precipitation Means in the Upper Poudre Watershed between 2050 and 2074

The selected T&P changes were applied to historical weather data and simulated in a hydrology model to generate natural watershed runoff in the Big Thompson, Colorado, and Poudre River Basins. The hydrology model developed for the Joint Front Range Climate Vulnerability Study (WRF, 2012) was used to generate natural watershed runoff. Prior to applying the T&P changes, the historical weather data was re-sequenced to generate new potential drought conditions, with six sequences selected based on their unique drought conditions. Ultimately 120 timeseries of natural watershed runoff (20 T&P changes applied to 6 drought conditions) were generated.

To translate natural watershed runoff in the Big Thompson and Poudre River Watersheds into legally and physically available water supplies for Greeley (known as entitlements), the existing Big Thompson Basin Network (BTBN) Model and the Poudre Basin Network (PBN) Model were applied. To determine Greeley's quota from the Colorado-Big Thompson (CBT) Project, Northern's CBT Quota model was applied. Because the PBN model includes all water users in the basin, the IWRP simulated the PBN Model under the two future conditions described below:

- PBN Run 2, as defined in "Summary of NISP/HSWSP CTP Model Runs and Modeling Conditions" (CDM Smith, 2013) was selected for the near-term
- A modified version of the CTP PBN Run 8, "Summary of NISP/HSWSP CTP Model Runs and Modeling Conditions" (CDM Smith, 2013) was selected for the long-term futures. These assumptions were further modified for the IWRP to exclude the expanded Seaman project and turn on CBT Carryover.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



Initial simulations of the climate change hydrology in the BTBN and PBN models showed a significant increase of yields from junior water right systems under warming conditions. Analysis showed this increase was due to the peak runoff shifting in time, becoming misaligned from the agricultural demands (which are a majority of the senior water rights in the basins). To prevent overestimation of entitlements from Greeley's junior water rights, the IWRP shifted agricultural demands in the BTBN and PBN models forward by one month for the +5°F and +8°F warmer climates – shown conceptually in **Figure 6-3**. Adjustments to agricultural demands outside of this shift were considered but ultimately deemed to be outside the scope of this project.

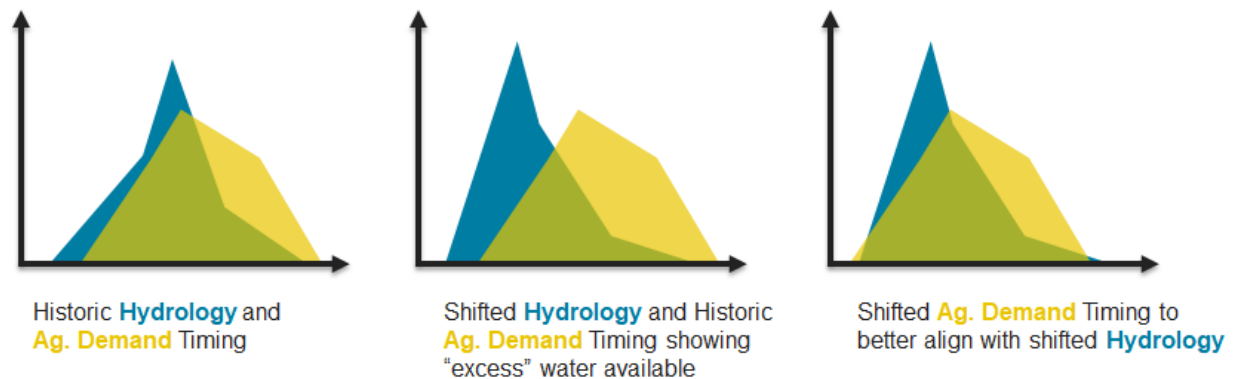


Figure 6-3. Conceptual Visual of Why Agricultural Demands Were Shifted for the IWRP

The final step in generating the climate change hydrology dataset was applying Greeley's water rights ownership and corresponding conditions to outputs from the BTBN and PBN Models to determine Greeley's entitlements from those basins. Due to the effects of climate change on the timing and volume of runoff, monthly and annual volumetric limits associated with Greeley's water rights were applied to the results. These monthly and annual volumetric limits are based off historical hydrologic patterns and as climate change pushes the runoff season earlier in spring, Greeley could see reduced entitlements despite available water. Greeley's entitlements from the climate change hydrology dataset capture the potential effect of the administrative constraint.

The climate change hydrology dataset developed using the methodology described above robustly captures the impacts of climate change and new possible droughts to Greeley's entitlements.

6.2 DROUGHT CONDITIONS VARIABILITY RESULTS

This section presents how the different drought conditions selected for the IWRP could affect Greeley's entitlements before climate change is applied. Annual entitlement values shown in this section are determined from outputs of PBN, BTBN, and CBT Models. As part of the Ft. Collins WSVS, six timeseries of droughts were selected based on how the drought was characterized compared to historical droughts. These droughts were also selected to be, on average, more severe than historical drought conditions in alignment with a conservative planning methodology. The six drought conditions and their corresponding historical characterization is shown in **Table 6-1**. As an example, **Figure 6-4** shows the timeseries of Greeley's annual entitlements for historical hydrology and Timeseries 63. In Timeseries 63, there is a 3-



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



year period near the end of the timeseries where total annual entitlements are at or below the 2002 value – indicating a short and severe drought condition.

Table 6-1. Drought Timeseries Selected for the IWRP

| Timeseries ID | Drought Characterization |
|---------------|---|
| 15 | Similar 10-year drought cycle to historical, greater severity |
| 47 | 4 2002's in a 10-year period |
| 52 | Similar to Historical |
| 63 | Back-to-Back-to-Back 2002s |
| 67 | Severe 5-year drought |
| 95 | Drought and aridification |

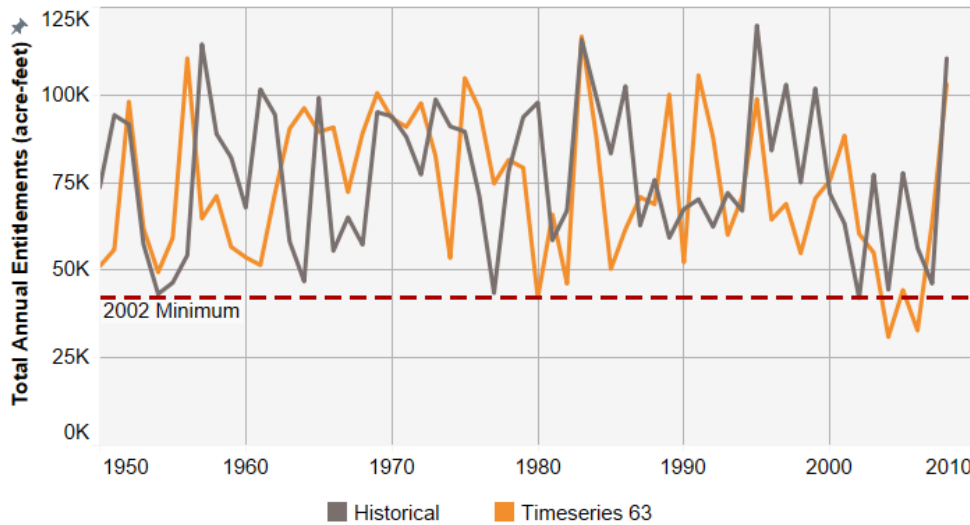


Figure 6-4. Annual Entitlements Timeseries of Historical and Synthetic Sequence 63

To numerically characterize drought conditions in the six drought timeseries, three statistics were evaluated: Greeley’s annual entitlements, and the 5-year and 10-year mean of those annual entitlements. These quantify the severity of individual years, mid-duration droughts, and longer-term drought cycles.

Figure 6-5 shows, using a box plot distribution, the variability of Greeley’s annual entitlements for historical hydrology compared to the six drought timeseries. In a box plot distribution, the solid line is the median value with the boxes extending to the 25th and 75th percentiles and the whiskers extending to the 5th and 95th percentile. Comparing the distribution of the historical data to the drought timeseries shows how the six drought timeseries have more frequent occurrences of single-year entitlements below the 2002 minimum.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis

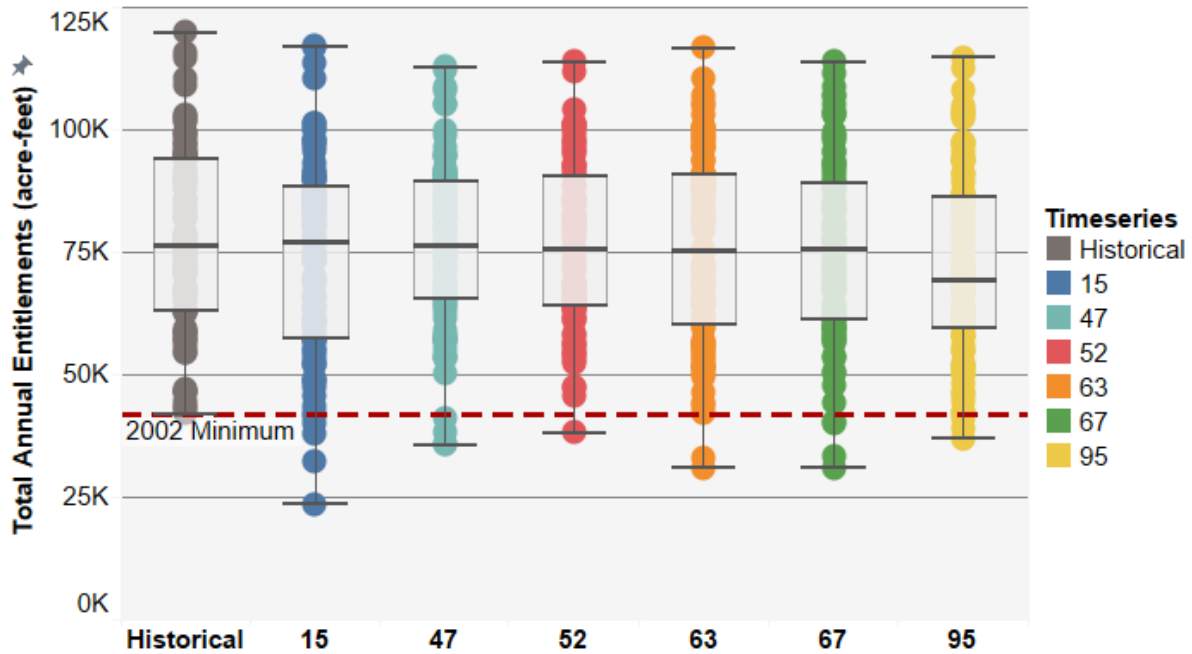


Figure 6-5. Distribution of Annual Entitlements for Historical and Synthetic Hydrology

Figure 6-6 shows, using a box plot distribution, the variability of the 5-year and 10-year Greeley annual entitlements mean for historical hydrology compared to the six drought timeseries. Comparing the distribution of the historical data to the drought timeseries shows how the six drought timeseries have more severe mid- and long-term droughts compared to the historical record. For example, nearly all drought traces have many occurrences of a 10-year mean below the historical low of 69,000 acre-feet per year. A similar trend is seen in the 5-year mean. This indicates the six drought timeseries have conditions with significantly drier mid- and long-term droughts.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis

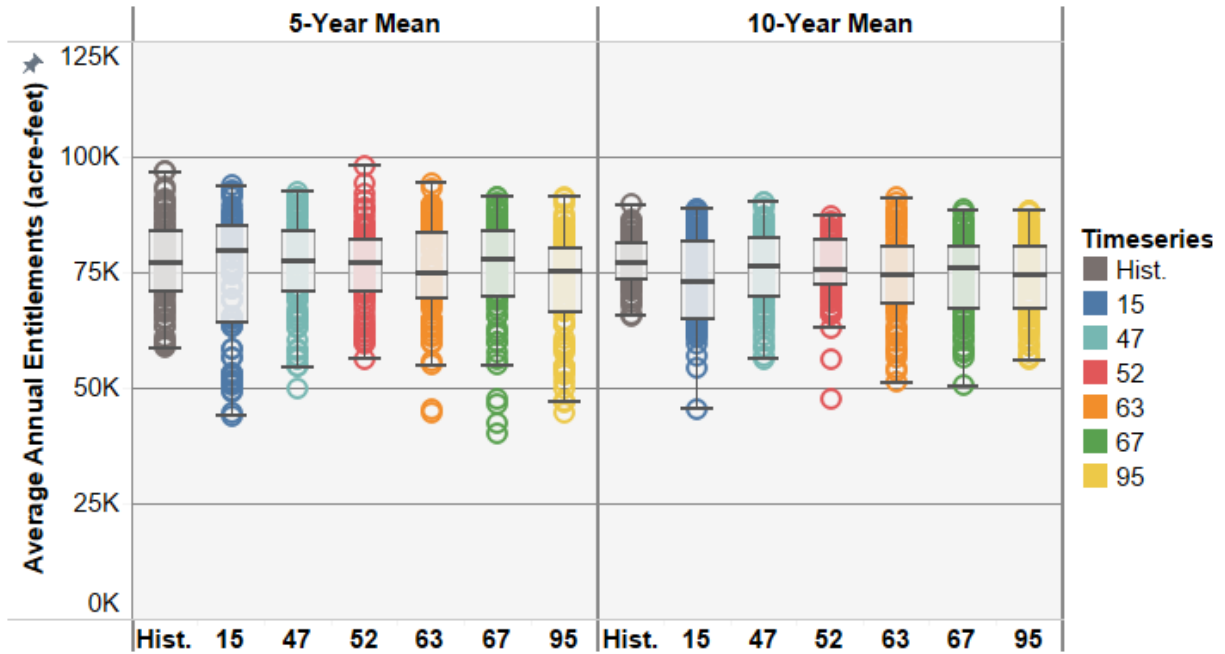


Figure 6-6. Distribution of 5-year and 10-year Mean Annual Entitlements for Historical and Synthetic Hydrology

The results above show the six drought timeseries selected for the IWRP will stress Greeley’s water supply system with droughts of greater intensity, duration, and frequency than the historical record. This outcome supports recommendations that could be robust to possible future droughts and is in alignment with a conservative planning methodology.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



6.3 LONG-TERM CLIMATE CHANGE RESULTS

This section presents how the climate change-driven T&P mean changes could impact Greeley’s entitlements from the three major systems (Poudre River, CBT Project, and Big Thompson River). Results presented are for Greeley’s average annual entitlements, (e.g., legally and physically available water) displayed using a “T&P Grid,” and are shown conceptually in **Figure 6-7**. Each cell in the grid shows the average annual entitlement, averaged across the six drought timeseries described above, for a single T&P change condition.

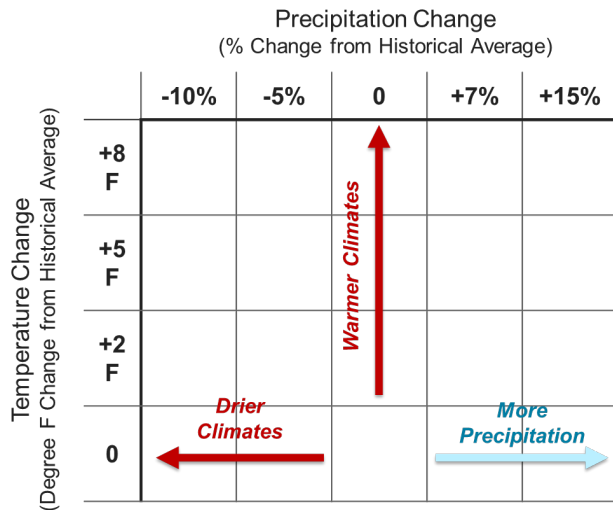


Figure 6-7. Example of Temperature and Precipitation Offset Results Presentation Grid

Figure 6-8 shows the effects of climate change on entitlements across Greeley’s entire water supply system. These results were used to develop the conclusion statements and associated confidence in those conclusion statements, shown in **Table 6-2**. In summary, Greeley’s water supply system is vulnerable to warming and/or drying climates. Results indicated that increases in precipitation could offset impacts to Greeley’s entitlements from a warming climate. However, there is significant uncertainty in how a shifting hydrograph could impact water use and administration. Additionally, the models used to allocate natural watershed runoff were not designed to account for a shifting hydrograph and may not simulate that impact with confidence. This is because demand patterns (both agricultural and municipal) and water right allocations are fixed based off historical use. It is possible that in response to a significantly shifted hydrograph, both demands and water right allocations could change. Thus, the effects of a warmer climate with increased precipitation on Greeley’s entitlements cannot be confidently quantified. Because of these uncertainties, the IWRP did not include warmer climates with increased precipitation when developing future recommendations.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



| Total Water Supply System Average Annual Entitlements (acre-feet per year) | | | | | | Change from 0/0 Climate Average Annual Entitlements & Percent | | | | | |
|--|--------|--------|--------------|--------|--------|---|-----------------|-----------------|----------------|--------------|---------------|
| Delta T | -10% | -5% | Delta P 0 | +7% | +15% | Delta T | -10% | -5% | Delta P 0 | +7% | +15% |
| +8F | 50,800 | 59,200 | 67,500 | 76,600 | 83,500 | +8F | -24,600 -33% | -16,200 -21% | -7,800 -10% | 1,200 2% | 8,100 11% |
| +5F | 51,000 | 59,000 | 67,100 | 75,700 | 82,200 | +5F | -24,300 -32% | -16,300 -22% | -8,300 -11% | 400 0% | 6,800 9% |
| +2F | 58,800 | 68,100 | 75,400 | 83,600 | 88,300 | +2F | -16,600 -22% | -7,300 -10% | 0 0% | 8,200 11% | 13,000 17% |
| 0 | 59,300 | 68,300 | 75,400 | 82,600 | 87,200 | 0 | -16,100 -21% | -7,100 -9% | 0 0% | 7,200 10% | 11,800 16% |

Figure 6-8. Average Annual Total Water System Entitlements Incorporating Climate Change Impacts

Table 6-2. Conclusion Statements of Total System Climate Change Impacts

| Conclusion Statement | Confidence | Comment |
|--|------------|--|
| Droughts of greater duration, frequency, and severity than observed are possible under current climate | High | <i>Results show these conclusions, they are consistent with other studies, and make logical sense.</i> |
| Climates with less precipitation will reduce Greeley's water supply system yields | High | |
| Warmer climates will impact Greeley's water supply system | High | |
| Greeley's water supply system is more vulnerable to reductions in precipitation than warmer temperatures | High | |
| Reductions in precipitation could decrease Greeley's entitlements between 20% and 30% | Moderate | <i>Specific yield reductions are difficult to quantify, but values in this range are plausible</i> |
| Climates with increased precipitation will mitigate impacts of a warming climate | Low | <i>Impacts from hydrograph changes cannot be confidently modeled with existing tools.</i> |

Greeley's total water supply system entitlements derive from three major systems, with the Poudre River System divided into an Upper and Lower portion based on how these supplies can be delivered to Greeley. The proportion of typical entitlements from each system is shown in **Figure 6-9**. Each system has unique dynamics which can be impacted differently by climate change. The following subsections detail climate change impacts to each of these three systems.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis

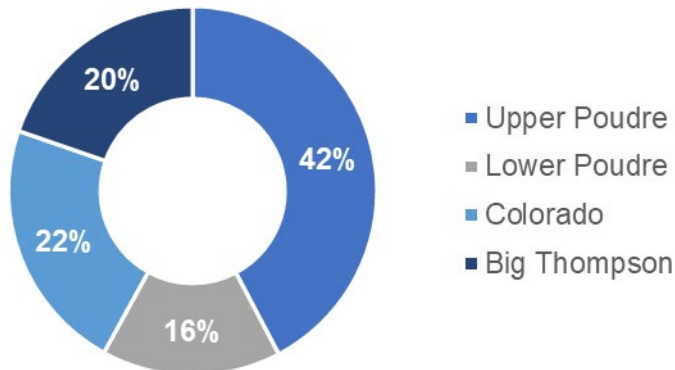


Figure 6-9. Distribution of Greeley's Typical Entitlements by Major System

6.3.1 Poudre River System Results

Figure 6-10 shows effect of climate change on Greeley's entitlements from the Upper Poudre System (e.g., locations west of Interstate 25). **Figure 6-11** and **Figure 6-12** shows the effect of climate change on subsystems within the Upper Poudre System. This system is vulnerable to warmer and drier futures and could see entitlement reductions between 10% and 35% under those conditions. Warmer conditions with increased precipitation, while showing an increase in entitlements, are difficult to quantify with confidence. The Poudre Direct and WSSC subsystems are the most resilient against climate change impacts due primarily to their seniority, though still have some entitlement reductions under warmer and drier conditions. The High Mountain Reservoirs, Seaman, and Upper Gravel subsystems are the most vulnerable to climate change impacts, with entitlements significantly reduced if climate warms by 5°F. This is due to the agricultural demands, which were shifted forward by one month in the 5°F and 8°F climate conditions. This is because these systems are more junior than direct Poudre rights. Other subsystems are moderately vulnerable to climate change impacts.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



Upper Poudre System

Average Annual Entitlements (acre-feet per year)

| Delta T | Delta P | | | | |
|---------|---------|--------|--------|--------|--------|
| | -10% | -5% | 0 | +7% | +15% |
| +8F | 19,700 | 22,400 | 25,300 | 30,100 | 35,400 |
| +5F | 18,700 | 20,900 | 24,300 | 28,900 | 34,600 |
| +2F | 22,800 | 26,600 | 30,500 | 36,000 | 40,200 |
| 0 | 22,500 | 26,300 | 29,800 | 35,200 | 39,600 |

Change from 0/0 Climate

Percent Change in Average Annual Entitlements

| Delta T | Delta P | | | | |
|---------|---------|------|------|-----|------|
| | -10% | -5% | 0 | +7% | +15% |
| +8F | -34% | -25% | -15% | 1% | 19% |
| +5F | -37% | -30% | -19% | -3% | 16% |
| +2F | -24% | -11% | 2% | 21% | 35% |
| 0 | -25% | -12% | 0% | 18% | 33% |

Figure 6-10. Average Annual Upper Poudre System Entitlements Incorporating Climate Change Impacts

Upper Poudre Subsystems

Average Annual Entitlements (acre-feet per year)

| | Delta T | Delta P | | | | |
|-----------------------|---------|---------|-------|-------|--------|--------|
| | | -10% | -5% | 0 | +7% | +15% |
| Poudre Directs | +8F | 8,900 | 9,000 | 9,000 | 9,200 | 10,000 |
| | +5F | 8,900 | 8,900 | 9,000 | 9,200 | 9,900 |
| | +2F | 8,900 | 9,100 | 9,400 | 10,100 | 10,900 |
| | 0 | 9,000 | 9,100 | 9,400 | 10,200 | 11,100 |
| HMR | +8F | 1,500 | 2,400 | 3,400 | 4,900 | 6,100 |
| | +5F | 1,000 | 1,700 | 2,900 | 4,400 | 5,900 |
| | +2F | 2,600 | 3,900 | 4,900 | 6,100 | 7,000 |
| | 0 | 2,500 | 3,700 | 4,700 | 6,000 | 6,900 |
| Seaman | +8F | 700 | 1,400 | 2,500 | 4,400 | 6,300 |
| | +5F | 400 | 1,000 | 2,200 | 4,300 | 6,500 |
| | +2F | 1,600 | 2,900 | 4,300 | 6,300 | 7,700 |
| | 0 | 1,600 | 3,000 | 4,200 | 6,100 | 7,700 |
| Upper Gravel | +8F | 0 | 0 | 100 | 600 | 1,800 |
| | +5F | 0 | 0 | 200 | 700 | 1,800 |
| | +2F | 100 | 200 | 800 | 2,000 | 3,200 |
| | 0 | 100 | 200 | 800 | 2,200 | 3,400 |

Change from 0/0 Climate

Percent Change in Average Annual Entitlements

| | Delta T | Delta P | | | | |
|-----------------------|---------|---------|------|------|------|------|
| | | -10% | -5% | 0 | +7% | +15% |
| Poudre Directs | +8F | -5% | -5% | -4% | -2% | 6% |
| | +5F | -6% | -6% | -5% | -3% | 5% |
| | +2F | -5% | -4% | 0% | 7% | 16% |
| | 0 | -5% | -4% | 0% | 8% | 17% |
| HMR | +8F | -69% | -49% | -28% | 4% | 30% |
| | +5F | -78% | -64% | -39% | -7% | 25% |
| | +2F | -44% | -17% | 3% | 31% | 48% |
| | 0 | -47% | -20% | 0% | 27% | 48% |
| Seaman | +8F | -83% | -67% | -41% | 3% | 50% |
| | +5F | -89% | -77% | -48% | 1% | 53% |
| | +2F | -62% | -31% | 1% | 49% | 81% |
| | 0 | -63% | -30% | 0% | 45% | 82% |
| Upper Gravel | +8F | -100% | -96% | -83% | -32% | 114% |
| | +5F | -99% | -97% | -78% | -19% | 114% |
| | +2F | -94% | -74% | -8% | 138% | 289% |
| | 0 | -90% | -77% | 0% | 159% | 304% |

Figure 6-11. Average Annual Upper Poudre Subsystems' Entitlements Incorporating Climate Change Impacts



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



| Upper Poudre Subsystems | | | | | | Change from 0/0 Climate | | | | | | |
|--|---------|---------|-------|-------|-------|---|---------|---------|------|------|-----|------|
| Average Annual Entitlements (acre-feet per year) | | | | | | Percent Change in Average Annual Entitlements | | | | | | |
| | Delta T | Delta P | | | | | Delta T | Delta P | | | | |
| | | -10% | -5% | 0 | +7% | +15% | | -10% | -5% | 0 | +7% | +15% |
| WSSC | +8F | 3,900 | 4,200 | 4,500 | 4,700 | 4,700 | +8F | -12% | -5% | 0% | 4% | 6% |
| | +5F | 3,900 | 4,200 | 4,400 | 4,600 | 4,800 | +5F | -13% | -7% | -1% | 4% | 7% |
| | +2F | 4,100 | 4,400 | 4,500 | 4,600 | 4,600 | +2F | -8% | -2% | 1% | 3% | 4% |
| | 0 | 4,200 | 4,400 | 4,500 | 4,600 | 4,600 | 0 | -7% | -3% | 0% | 2% | 2% |
| Larimer and Weld | +8F | 3,700 | 4,300 | 4,700 | 5,200 | 5,300 | +8F | -25% | -13% | -4% | 6% | 7% |
| | +5F | 3,400 | 3,900 | 4,300 | 4,500 | 4,400 | +5F | -31% | -20% | -11% | -9% | -10% |
| | +2F | 4,300 | 5,000 | 5,500 | 5,600 | 5,600 | +2F | -12% | 2% | 11% | 15% | 14% |
| | 0 | 4,100 | 4,700 | 4,900 | 4,900 | 4,700 | 0 | -17% | -4% | 0% | 0% | -5% |
| New Cache | +8F | 1,000 | 1,100 | 1,100 | 1,200 | 1,200 | +8F | -22% | -16% | -10% | -4% | -1% |
| | +5F | 1,100 | 1,200 | 1,300 | 1,300 | 1,300 | +5F | -10% | -4% | 0% | 4% | 6% |
| | +2F | 1,100 | 1,100 | 1,200 | 1,200 | 1,300 | +2F | -13% | -11% | -6% | -3% | 0% |
| | 0 | 1,200 | 1,200 | 1,300 | 1,300 | 1,300 | 0 | -8% | -4% | 0% | 3% | 4% |

Figure 6-12. Average Annual Upper Poudre Subsystems’ Entitlements Incorporating Climate Change Impacts (Continued)

Figure 6-13 shows the effect of climate change on Greeley’s entitlements from the Lower Poudre System (e.g., locations east of Interstate 25). This system is vulnerable to drier climates but is likely resilient against warmer climates and changes to agricultural demand changes. This is due to the influence of return flows, which are greater at this reach of the Poudre, lessening the influence of snowmelt on the hydrograph.



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



| Lower Poudre System Average Annual Entitlements (acre-feet per year) | | | | | | Change from 0/0 Climate Percent Change in Average Annual Entitlements | | | | | |
|---|---------|--------|--------|--------|--------|--|---------|------|------|-------|-------|
| Delta T | Delta P | | | | | Delta T | Delta P | | | | |
| | -10% | -5% | 0 | +7% | +15% | | -10% | -5% | 0 | +7% | +15% |
| +8F | 9,100 | 10,300 | 11,300 | 12,100 | 12,600 | +8F | -18% | -7% | 2% | 9% | 13% |
| | | | | | | | -2,000 | -800 | 200 | 1,000 | 1,400 |
| +5F | 9,500 | 10,800 | 11,400 | 12,200 | 12,500 | +5F | -14% | -3% | 2% | 10% | 12% |
| | | | | | | | -1,600 | -300 | 300 | 1,100 | 1,300 |
| +2F | 9,600 | 10,400 | 10,900 | 11,900 | 12,600 | +2F | -14% | -6% | -2% | 7% | 13% |
| | | | | | | | -1,600 | -700 | -300 | 800 | 1,400 |
| 0 | 9,900 | 10,800 | 11,100 | 12,100 | 12,500 | 0 | -11% | -3% | 0% | 8% | 12% |
| | | | | | | | -1,300 | -400 | 0 | 900 | 1,300 |

Figure 6-13. Average Annual Lower Poudre System Entitlements Incorporating Climate Change Impacts

These results presented above were used to develop the conclusion statements and associated confidence in those conclusion statements, shown in **Table 6-3**. In summary, the Poudre System is vulnerable to climate change impacts, with the Poudre Direct and WSSC subsystems being the most resilient against climate change impacts. However, due to the difficulty in confidently simulating the impacts of climate change on the complex operations of the Poudre River Basin, there is significant uncertainty with the numerical impact values. One significant trend from the results is that the greater the seniority of the subsystem, the more resilient the subsystem is against impacts from climate change.

Table 6-3. Conclusion Statements of Upper Poudre System Climate Change Impacts

| Conclusion Statement | Confidence | Comment |
|---|------------|---|
| Poudre Direct and WSSC entitlements are the most resilient to climate change and agricultural demand timing impacts. | High | <ul style="list-style-type: none"> Greeley's ability to utilize entitlements will be evaluated from GSM results. Uncertainties around results are captured in the 10% entitlement reduction risk. |
| HMRs ¹ , Seaman, and Upper Gravel entitlements are the most vulnerable to climate change and agricultural demand timing impacts. | High | |
| Larimer & Weld and New Cache entitlements are moderately vulnerable to climate change and agricultural demand timing impacts. | High | |
| The Lower Poudre system is moderately vulnerable to climate change impacts but resilient to agricultural demand timing impacts. | High | |
| The changes in entitlements due to climate change will occur as simulated. | Low | There is significant uncertainty in how long-term climate will impact hydrology, operations, and yields in the Poudre Basin |

¹ High Mountain Reservoirs



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



6.3.2 Colorado-Big Thompson Project System Results

Figure 6-14 shows effect of climate change on Greeley’s entitlements from the CBT System (e.g., driven by the quota set by Northern). This system is vulnerable to warmer and drier futures and could see entitlement reductions between 5% and 35% under those conditions. Warmer conditions with increased precipitation show decreases in entitlements due to the methodology Northern Water uses to set the quota (e.g., it is supplemental water and greater precipitation could reduce the need for CBT water supplies and thus result in a lower quota). These results presented were used to develop the conclusion statements and associated confidence in those conclusion statements, shown in **Table 6-4**. It is important to note that events that could compound from warmer and/or drier conditions, such as a Colorado River Compact curtailment, are not included in these results. The IWRP is evaluating impacts from the Colorado River Compact curtailment as a separate risk, as described in Section 2.2.

| CBT System Average Annual Entitlements (acre-feet per year) | | | | | | Change from 0/0 Climate Average Annual Entitlements & Percent | | | | | |
|---|---------|--------|--------|--------|--------|---|----------------|----------------|----------------|-------------|-------------|
| Delta T | Delta P | | | | | Delta T | Delta P | | | | |
| | -10% | -5% | 0 | +7% | +15% | | -10% | -5% | 0 | +7% | +15% |
| +8F | 10,100 | 12,100 | 14,000 | 15,500 | 15,500 | +8F | -36% -5,600 | -23% -3,600 | -11% -1,700 | -1% -100 | -1% -200 |
| +5F | 10,900 | 13,000 | 14,700 | 15,800 | 15,400 | +5F | -31% -4,800 | -17% -2,700 | -6% -1,000 | 1% 100 | -2% -300 |
| +2F | 11,800 | 13,800 | 15,200 | 15,800 | 15,100 | +2F | -25% -3,900 | -12% -1,900 | -3% -500 | 0% 100 | -4% -600 |
| 0 | 12,400 | 14,300 | 15,700 | 15,700 | 14,900 | 0 | -21% -3,300 | -9% -1,400 | 0% 0 | 0% 0 | -5% -800 |

Note: Windy Gap Yields Not Included

Figure 6-14. Average Annual Colorado-Big Thompson System Entitlements Incorporating Climate Change Impacts

Table 6-4. Conclusion Statements of Colorado-Big Thompson System Climate Change Impacts

| Conclusion Statement | Confidence | Comment |
|--|-------------|--|
| Greeley’s entitlements from the Colorado-Big Thompson Project are vulnerable to hydrologic climate change impacts. | High | <i>Other climate change impacts (basin-wide, demand management, agricultural uses) are not accounted for in the climate hydrology. Impacts of curtailments of Colorado Basin supplies are captured as a separate risk.</i> |
| The changes in entitlements due to climate change will occur as simulated. | Low | <i>There is significant uncertainty in how long-term climate will impact hydrology, operations, and yields from the Colorado-Big Thompson Project</i> |



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



6.3.3 Big Thompson River System Results

Figure 6-15 shows effect of climate change on Greeley’s entitlements from the Big Thompson System. **Figure 6-16** shows the effect of climate change on subsystems within the Big Thompson System. The system is vulnerable to warmer and drier futures and could see entitlement reductions between 15% and 50% under those conditions. Warmer conditions with increased precipitation, while showing an increase in entitlements, are difficult to quantify with confidence.

Evaluating the entitlement impacts of the Big Thompson subsystems highlights the sensitivity of these systems to a changing hydrograph and timing of agricultural demands. Entitlements from Boyd Lake, Loveland Lake, and Seven Lake inflows all increase in entitlements if climate warms by 2°F, but are then significantly reduced if climate warms by 5°F. This is due to the agricultural demands, which were shifted forward by one month in the 5°F and 8°F climate conditions. The Direct GLIC subsystem has a different behavior, but still exhibits high sensitivity to both climate warming and the timing of agricultural demands.

| Big Thompson System Average Annual Entitlements (acre-feet per year) | | | | | | Change from 0/0 Climate Average Annual Entitlements & Percent | | | | | |
|--|---------|--------|--------|--------|--------|---|---------|--------|--------|-------|-------|
| Delta T | Delta P | | | | | Delta T | Delta P | | | | |
| | -10% | -5% | 0 | +7% | +15% | | -10% | -5% | 0 | +7% | +15% |
| +8F | 7,100 | 9,500 | 12,000 | 14,000 | 15,100 | +8F | -49% | -31% | -13% | 1% | 9% |
| | | | | | | | -6,800 | -4,400 | -1,900 | 100 | 1,200 |
| +5F | 7,100 | 9,500 | 11,900 | 14,000 | 14,900 | +5F | -49% | -31% | -14% | 1% | 7% |
| | | | | | | | -6,800 | -4,400 | -2,000 | 100 | 1,000 |
| +2F | 9,900 | 12,400 | 14,000 | 15,100 | 15,600 | +2F | -28% | -11% | 1% | 9% | 12% |
| | | | | | | | -4,000 | -1,500 | 100 | 1,200 | 1,700 |
| 0 | 9,700 | 12,100 | 13,900 | 14,800 | 15,400 | 0 | -30% | -13% | 0% | 7% | 11% |
| | | | | | | | -4,200 | -1,800 | 0 | 900 | 1,500 |

Figure 6-15. Average Annual Big Thompson System Entitlements Incorporating Climate Change Impacts



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis



Big Thompson Subsystems

Average Annual Entitlements (acre-feet per year)

Change from 0/0 Climate

Average Annual Entitlements & Percent

| | | Delta P | | | | | | | Delta P | | | | |
|------------------------------|-----|---------|-------|-------|-------|-------|-------|---------|---------|------|------|------|------|
| | | Delta T | -10% | -5% | 0 | +7% | +15% | Delta T | -10% | -5% | 0 | +7% | +15% |
| Direct GLIC | +8F | | 2,300 | 2,700 | 3,200 | 3,800 | 4,500 | +8F | -40% | -28% | -16% | 0% | 19% |
| | +5F | | 3,300 | 3,900 | 4,600 | 5,500 | 6,200 | +5F | -13% | 3% | 22% | 44% | 64% |
| | +2F | | 2,000 | 2,400 | 2,800 | 3,400 | 4,200 | +2F | -46% | -36% | -25% | -10% | 10% |
| | 0 | | 2,700 | 3,200 | 3,800 | 4,500 | 5,400 | 0 | -29% | -16% | 0% | 19% | 43% |
| Boyd Lake Inflows | +8F | | 1,200 | 2,100 | 3,100 | 3,400 | 3,200 | +8F | -64% | -37% | -8% | 1% | -6% |
| | +5F | | 800 | 1,600 | 2,300 | 2,400 | 2,000 | +5F | -77% | -53% | -32% | -29% | -42% |
| | +2F | | 2,800 | 3,800 | 4,200 | 4,000 | 3,400 | +2F | -16% | 13% | 25% | 19% | 2% |
| | 0 | | 2,300 | 3,100 | 3,400 | 3,000 | 2,400 | 0 | -32% | -8% | 0% | -11% | -30% |
| Lake Loveland Inflows | +8F | | 2,400 | 3,000 | 3,600 | 4,200 | 4,500 | +8F | -41% | -26% | -13% | 1% | 9% |
| | +5F | | 2,100 | 2,700 | 3,200 | 3,900 | 4,300 | +5F | -50% | -35% | -21% | -4% | 4% |
| | +2F | | 3,300 | 3,800 | 4,200 | 4,500 | 4,700 | +2F | -21% | -7% | 2% | 10% | 14% |
| | 0 | | 3,000 | 3,700 | 4,100 | 4,500 | 4,600 | 0 | -26% | -10% | 0% | 8% | 12% |
| Seven Lakes Inflow | +8F | | 1,200 | 1,700 | 2,200 | 2,700 | 3,000 | +8F | -54% | -37% | -18% | 1% | 13% |
| | +5F | | 900 | 1,400 | 1,800 | 2,200 | 2,500 | +5F | -64% | -48% | -34% | -17% | -6% |
| | +2F | | 1,800 | 2,400 | 2,800 | 3,200 | 3,300 | +2F | -31% | -11% | 5% | 19% | 25% |
| | 0 | | 1,700 | 2,100 | 2,600 | 2,900 | 3,000 | 0 | -36% | -19% | 0% | 9% | 13% |

Figure 6-16. Average Annual Big Thompson Subsystems' Entitlements Incorporating Climate Change Impacts

These results presented were used to develop the conclusion statements and associated confidence in those conclusion statements, shown in **Table 6-5**. It is important to note that events that could compound from warmer and/or drier conditions, such as a Colorado River Compact curtailment, are not included in these results.

Table 6-5. Conclusion Statements of Big Thompson System Climate Change Impacts

| Conclusion Statement | Confidence | Comment |
|--|------------|---|
| Greeley's entitlements from the Big Thompson System are vulnerable to climate change impacts. | High | <i>Due to the junior nature of the Big Thompson Subsystems Greeley has ownership in, entitlements are likely to be highly vulnerable to changes in water supply volume and timing changes. This could be compounded by how senior agricultural users change their water supply use in the future.</i> |
| Greeley's entitlements from the Big Thompson System are vulnerable to the timing of agricultural demands. | High | <i>Due to the junior nature of the Big Thompson Subsystems Greeley has ownership in, entitlements are likely to be highly vulnerable to changes in water supply volume and timing changes. This could be compounded by how senior agricultural users change their water supply use in the future.</i> |
| Warmer climates with no change in precipitation or an increase in precipitation will increase Greeley's entitlements from the Big Thompson System. | Low | <i>There is significant uncertainty in how long-term climate will impact hydrology, operations, and yields within the Big Thompson River system.</i> |



INTEGRATED WATER RESOURCE PLAN

Future Hydrology Analysis

**6.4 CONCLUSION**

The IWRP's future hydrology analysis developed a new climate change hydrology dataset that captures the potential impacts of long-term climate change paired with droughts of increasing intensity, duration, and frequency. GCMs project changes in long-term T&P means for the Upper Poudre Watershed between 2050 and 2074 for both a moderate and high emissions scenario. GCM results indicated future climates will be between 2°F and 8°F warmer with between 10% less precipitation and 15% more precipitation. This spread of T&P changes was applied to a series of models that quantified how changes could impact Greeley's entitlements (e.g., water legally and physically available to Greeley).

Evaluating how changes in long-term T&P means could impact Greeley's entitlements showed consistent impacts across the three major river basins. Greeley's water supply system is vulnerable to warmer and/or drier climates, with results indicating these climates could reduce Greeley's entitlements. Some subsystems such as Poudre Direct and WSSC are more resilient against climate change impacts. Results from future climates that are warmer but have increased precipitation, while showing a potential increase in Greeley's entitlements, are highly uncertain. Warmer temperatures could alter the runoff pattern and hydrograph - the effect of that shift on the complex operations within the Big Thompson River and Poudre River basins cannot be confidently modeled. The most significant operational uncertainty in these basins is how agricultural demands and their corresponding water rights administration might change in response to a warmer climate. Results from this analysis showed that impacts to Greeley's entitlements from changes in agricultural demands could be as significant as impacts from climate change – especially in more junior water rights systems.

Results from this future hydrology analysis highlighted both the vulnerability of Greeley's water supply system to climate change impacts and the significant uncertainty of those impacts. The IWRP addressed these using the techniques listed below:

- Multiple climate change futures with increased warming were selected for the Planning Scenarios.
- Climate change conditions with increased precipitation were not included in Planning Scenarios due to the significant uncertainty around effects on entitlements.
- Some Planning Scenarios included an additional 10% reduction in entitlements to capture the uncertainty in agricultural demand and water right administration impacts.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Project Evaluation



7.0 TERRY RANCH PROJECT EVALUATION

This section provides an overview of the Terry Ranch project and presents the methodology and assumptions used to incorporate that project into the IWRP modeling. The information on the Terry Ranch Project presented in this section is limited to what was relevant for the IWRP, additional information on the Terry Ranch Project can be found in Greeley's Terry Ranch Project information section of the Water & Sewer Department website.

7.1 OVERVIEW OF TERRY RANCH PROJECT

The Terry Ranch Project will develop approximately 1.2 million acre-feet of non-tributary (i.e., does not flow from or to a surface water supply source) groundwater in northwest Weld County. The Terry Ranch Project is an aquifer storage and recovery project. In this type of project, treated surface water can be injected into the aquifer and stored and then recovered at a future time to be treated and delivered as water supply. Once brought online, Terry Ranch Project water will be used as a supply source during droughts when surface water supplies are stressed. Greeley plans to operate Terry Ranch 'sustainably' such that the aquifer supplies will be available to Greeley in perpetuity and would not be depleted.

The 1.2 million acre-feet of Terry Ranch Project water (referred to as Terry Ranch Project native supply) is already in the ground and is protected from droughts and other identified risks such as wildfires and Colorado River Compact curtailments. The same aquifer with the Terry Ranch Project native supply can also be used to store excess surface water supply by injecting treated water into the aquifer. This allows Greeley to use the same infrastructure facilities to inject excess surface water supplies during wet years and extract/recover water from the aquifer in drought years.

To utilize the Terry Ranch Project, Greeley will need to develop new conveyance, treatment, and wellfield infrastructure and integrate it into the existing water supply system. **Figure 7-1** shows the major infrastructure features and their locations. Terry Ranch Water will be extracted from primarily new wells, treated at a new centralized plant, and transmitted to Greeley via a new transmission pipeline. Water from the Terry Ranch Project will be delivered to Greeley via the existing Bellvue Transmission System using a new intertie with the Terry Ranch Transmission Pipeline. Facilities will be bi-directional, where surface water supplies can be delivered via the Bellvue Transmission System and injected into the Terry Ranch Aquifer. Note that extraction and injection cannot occur simultaneously.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Project Evaluation

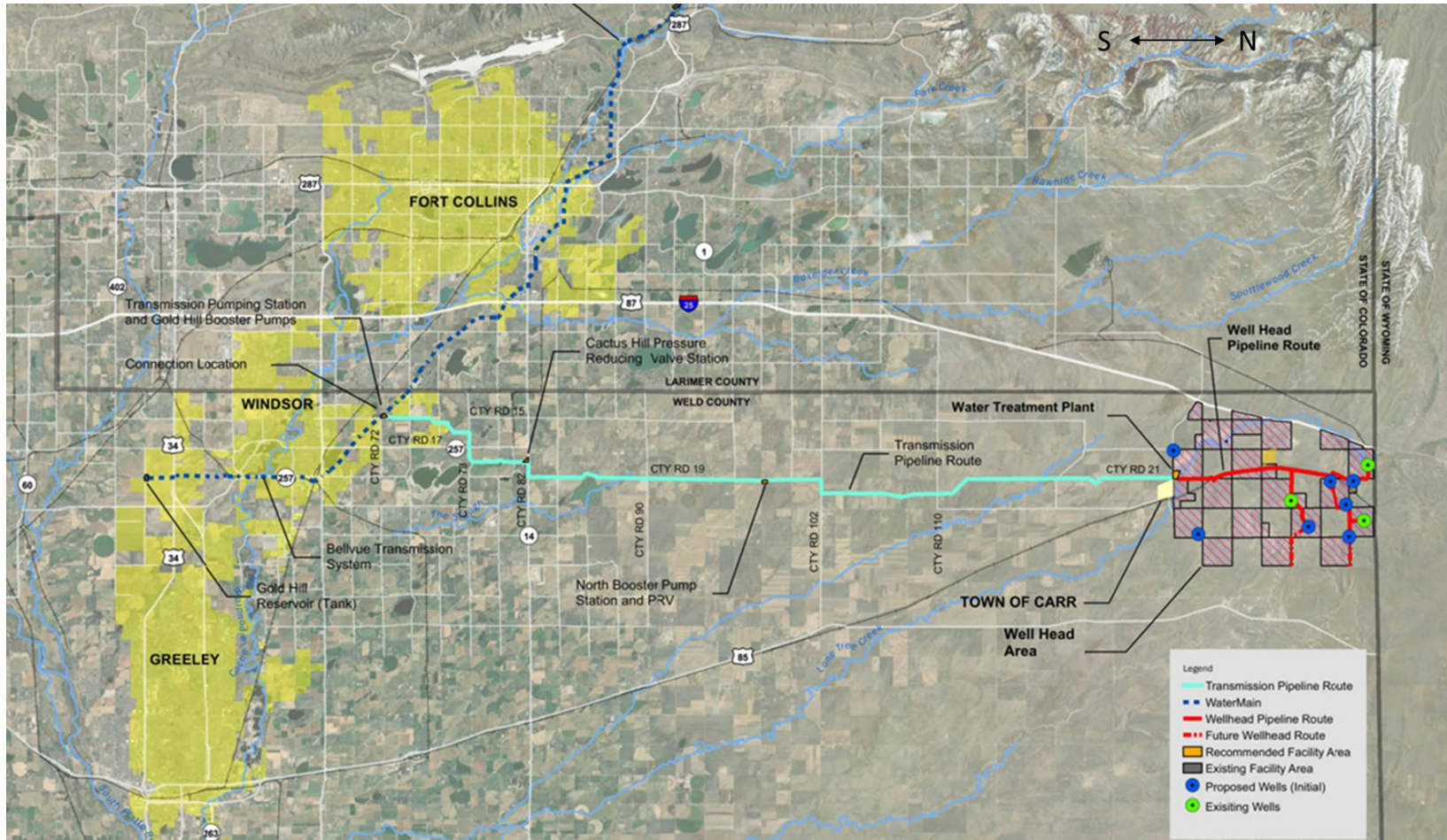


Figure 7-1. Terry Ranch Project Map. North is oriented on the right side of the map.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Project Evaluation



7.2 SIMULATION IN GSM

The IWRP evaluated a single Terry Ranch condition where it is fully developed and integrated into Greeley's water supply system. In practice, the Terry Ranch Project can be developed in phases which will be evaluated in future studies. In this condition, Terry Ranch can inject surface water supplies delivered via the Bellvue treatment plant and extract Terry Ranch native and injected supplies for delivery to Greeley up to the project's currently estimated maximum size. This section summarizes how Terry Ranch was implemented in and operated by the GSM for the IWRP. A more detailed description is included in the Greeley System Model TM, included as Appendix C.

Table 7-1 lists the key physical and infrastructure assumptions in the GSM of the Terry Ranch Project used for the IWRP. These assumptions were based off the maximum size Greeley could ultimately build Terry Ranch out to as well as the best understanding of the well operations at the time of the IWRP.

Table 7-1. Summary of Terry Ranch Facility Assumptions used in the GSM

| Terry Ranch Feature | IWRP GSM Assumption |
|------------------------------------|---|
| Initial Native Storage Volume | 1,200,000 acre-feet |
| Maximum Aquifer Storage Capacity | 1,500,000 acre-feet |
| Number of Wells ¹ | 30 |
| Total Extraction Capacity | 30 cfs |
| Extraction Losses | 7% |
| Total Injection Capacity | 22.5 cfs |
| Minimum Injection Rate | 25% of Injection Capacity |
| Injection Losses | 2% |
| Greeley Drought Restriction Policy | Level 1 Trigger: 75% of annual demands Level 2 Trigger: 60% of annual demands Level 3: Not Used |

¹ Maximum feasible number of wells at the time of the IWRP.

When operating the Terry Ranch Project, the GSM is limited in its ability to balance injection and extraction to/from Terry Ranch with the surface water supply system. This is due to the monthly timestep and the limitations of GSM logic in capturing the nuances of Greeley's system that real-life operators can account for. For the IWRP, the Terry Ranch Project operating logic in the GSM was developed to best address these limitations and is summarized below:



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Project Evaluation



1. On April 1, determine if Greeley's surface water storage on April 1st of the next year would be less than 0.75 years of demand (YOD) (e.g., a 'storage shortage').
 - a. If a 'storage shortage' is projected, the GSM proactively extracts water over the next 12 months from Terry Ranch to make up the deficit.
 - b. If next year's projected storage is greater than 1.0 YOD, the GSM proactively injects water into Terry Ranch between October and April such that the excess storage is injected into Terry Ranch.
 - c. If next year's projected storage is between 0.75 YOD and 1.0 YOD, Terry Ranch is not operated proactively for injection or extraction.
2. If during any month there is water entitled to Greeley that cannot be captured in the surface water system (referred to as a 'spill') that can be physically moved to Terry Ranch, the GSM opens injection pathways to reactively inject this spill volume into Terry Ranch.
3. If during any month Greeley would experience a demand shortage, the GSM reactively extracts this demand shortage volume from Terry Ranch.
4. Terry Ranch must always be operated at a minimum rate of 130 acre-feet per month (based on 30 wells) to sufficiently cycle the wells. If injectable supplies are not available, then the GSM will extract water from Terry Ranch to meet this minimum rate.

7.3 SUSTAINABLE USE

A unique aspect of the Terry Ranch Project in the context of the IWRP is its native volume of approximately 1.2 million acre-feet, significantly higher than Greeley's current demands. This native volume could be further increased with injection of surface water supplies into Terry Ranch up to 1.5 million acre-feet total. As opposed to surface water supplies that can vary significantly from year to year and are vulnerable to climate change impacts, water from Terry Ranch can be extracted as needed even during the most severe droughts. Greeley plans to operate Terry Ranch 'sustainably' such that the aquifer supplies will be available to Greeley in perpetuity and would not be depleted. Certain future conditions could require the additional water resources opportunities described in Section 7.4.

As the IWRP simulated Terry Ranch in the GSM and used quantitative results to evaluate the performance of the system, the 'sustainable' use of Terry Ranch had to be established. The primary metric used to establish sustainable use of Terry Ranch was the percent of aquifer storage at the end of a GSM simulation compared to the initial aquifer storage volume of 1.2 million acre-feet. GSM simulations were 86 years long and contain a variety of hydrology conditions that alternative between droughts of differing intensity, duration, and frequency with wetter years. If after 86 years of operation, the Terry Ranch aquifer volume was at least 80% of the initial water supply volume of 1.2 million acre-feet, the long-term operations of Terry Ranch were considered sustainable. These criteria are an initial planning threshold used for the IWRP and will be refined and updated as further Terry Ranch analysis is completed.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Project Evaluation

**7.4 ADDITIONAL WATER RESOURCES OPPORTUNITIES INCLUDED**

The Terry Ranch Project is Greeley's long-term new water supply source to deliver sustainable and affordable water through increasing demands, a changing climate, and other potential risks. The Terry Ranch Project's superior performance compared to other large water supply projects was previously determined and as such, other large water supply projects were not evaluated in the IWRP. However, two water resources opportunities that could improve the sustainability of Terry Ranch if needed were evaluated in the IWRP and are described below.

- **Additional Surface Water Rights** – Greeley has developed a water rights acquisition strategy that bridges water supply needs prior to Terry Ranch Project completion using water rights that can be integrated into Terry Ranch or supplement Greeley's growing non-potable system. If needed, Greeley could pursue more water rights than what is included in the existing water rights portfolio. For the IWRP, two surface water right conditions (moderate acquisition of water rights and low acquisition of water rights) were available if Terry Ranch sustainability was insufficient.
- **Retiming Storage** – Terry Ranch can store Greeley entitlements that cannot be captured in the surface water supply system (referred to as 'spills'). These spills typically occur for a short duration during the runoff season. Due to limitations in Terry Ranch delivery and injection infrastructure, not all spills may be captured using the baseline assumed infrastructure. Greeley could develop 'retiming storage' that would capture these excess spills, store them, then gradually inject them into Terry Ranch when there is pipeline capacity. This retiming storage project was defined conceptually for the IWRP, with a maximum assumed capacity of 15,000 acre-feet. Post-IWRP analysis will further develop this retiming storage concept.



INTEGRATED WATER RESOURCE PLAN

Near-Term 10-Year Analysis Results



8.0 NEAR-TERM 10-YEAR ANALYSIS RESULTS

The IWRP near-term analysis simulated Greeley's current and baseline water rights portfolio in the GSM across the IWRP Planning Scenarios. This analysis established the performance of Greeley's currently planned water supply system to highlight potential future vulnerabilities and their severity. The current and baseline assumptions are described in Section 2.3. The Planning Scenario conditions applied in the GSM are shown in **Table 8-1**.

Table 8-1. Near-Term Planning Scenario Conditions

| Planning Scenario Name | Climate Change | Colorado River Basin Impacts | Water Supply System |
|--------------------------|----------------|------------------------------|---------------------|
| Unbearable | 5°F Warmer | High Impacts | 10% Reduced Yields |
| Stressed | 5°F Warmer | Moderate Impacts | 10% Reduced Yields |
| Continued Trends | 2°F Warmer | Moderate Impacts | 10% Reduced Yields |
| Optimistic | 2°F Warmer | Low Impacts | No Reduction |
| No Climate Change | No Change | Low Impacts | No Reduction |

Table 8-2 shows the simulated performance for the current and baseline water rights portfolios across the five Planning Scenarios. Values shown contain the GSM results across the six timeseries presented in **Table 6-1**. Cell values are colored with respect to the planning performance criteria of 1) drought restrictions occurring in less than 20% of years, 2) Level 3 drought restrictions occurring in less than 10% of years, and 3) meeting indoor demands in 100% of years. Results show that the current water rights portfolio will be insufficient to meet the planning performance criteria under the conditions in the Continued Trends, Stressed, and Unbearable planning scenarios. With the baseline water rights portfolio, the performance of the system under the Continued Trends conditions meets the planning performance criteria. The Unbearable and Stressed Planning Scenarios, while not meeting the overall percent of years in drought restrictions performance criteria, are close to meeting the Level 3 drought restrictions criteria. Indoor demands are met in all Planning Scenarios regardless of water rights portfolio.



INTEGRATED WATER RESOURCE PLAN

Near-Term 10-Year Analysis Results



Table 8-2. Near-Term Analysis Performance Results

| Water Rights Portfolio | Planning Scenario | Percent of Years in Drought Restrictions | Percent of Years in Level 3 Drought Restrictions | Percent of Years with April 1 Storage > 6 months of Indoor Demand | Percent of Years Meeting indoor demands |
|------------------------|-------------------|--|--|---|---|
| Current | Unbearable | 86% | 51% | 99.8% | 100% |
| | Stressed | 76% | 41% | 99.6% | 100% |
| | Continued Trends | 33% | 14% | 100% | 100% |
| | Optimistic | 15% | 4% | 100% | 100% |
| | No Climate Change | 11% | 1% | 100% | 100% |
| Baseline | Unbearable | 38% | 12% | 100% | 100% |
| | Stressed | 32% | 11% | 100% | 100% |
| | Continued Trends | 7% | 0% | 100% | 100% |
| | Optimistic | 0% | 0% | 100% | 100% |
| | No Climate Change | 0% | 0% | 100% | 100% |

Color Key Indicates Planning Performance Criteria: **Green** Passes, **Yellow** is close to meeting, **Red** Fails

Figure 8-1 shows the April 1st total system storage and drought restriction level under the No Climate Change Planning Scenario with Greeley’s current water rights portfolio for one of the six hydrology simulated, which included back-to-back-to-back 2002 conditions. Under these conditions, the water supply system does not need drought restrictions except in year 55 when a single Level 2 restriction is required. This is at the very end of the severe drought conditions and demonstrates strong resilience.

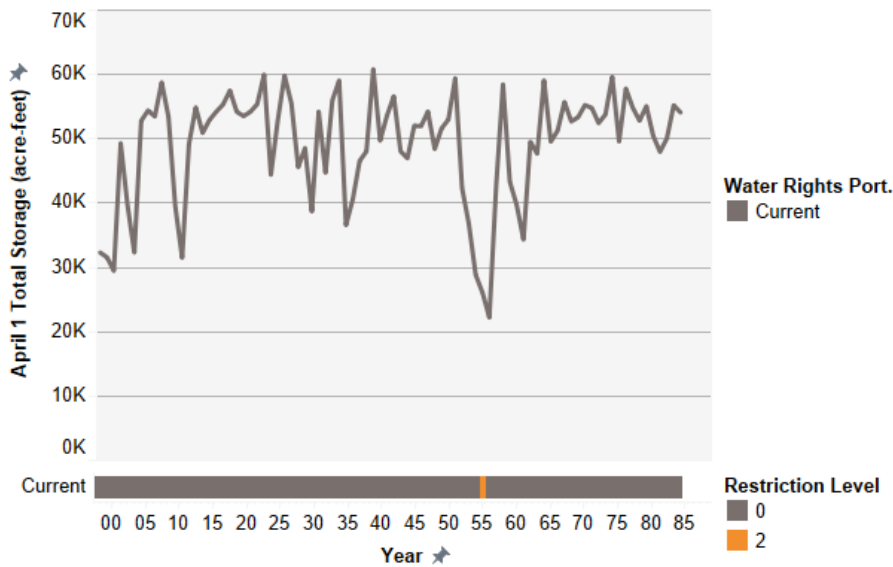


Figure 8-1. April 1 Storage Under No Climate Change Planning Scenario with Current Water Rights



INTEGRATED WATER RESOURCE PLAN

Near-Term 10-Year Analysis Results



Figure 8-2 shows the April 1st total system storage and drought restriction level under the Continued Trends Planning Scenario for the same sample hydrology as Figure 8-1 comparing the current and baseline water rights portfolio. With the current water rights portfolio, the water supply system needs three consecutive drought restrictions, including back-to-back level 3 restrictions during the severe drought period. When the baseline water rights are applied, the water supply system requires only a single level 2 restriction during the same drought period. This shows the benefit to the water supply system of changing all water rights as assumed in the baseline water rights portfolio.

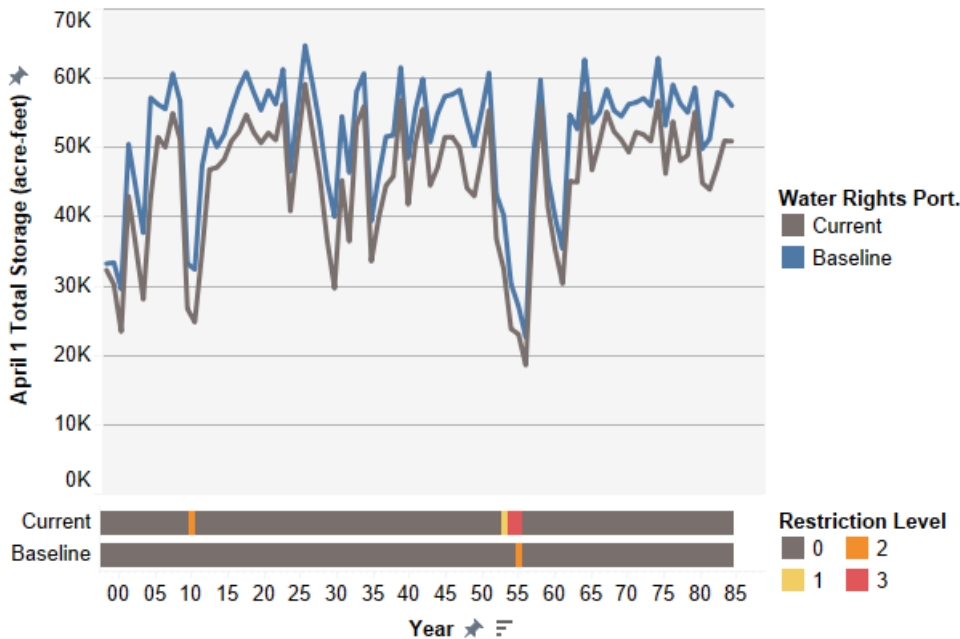


Figure 8-2. April 1 Total System Storage Under Continued Trends Planning Scenario Comparing Current and Baseline Water Rights

Results from the baseline analysis supported the conclusions below regarding Greeley’s water supply system. Note that this analysis used Greeley’s current demands of approximately 25,000 acre-feet, and the Terry Ranch Timing analysis described in Section 10.2 evaluates demand growth.

- The current water rights portfolio under current demands is sufficient to meet the Planning Scenario conditions anticipated to occur over the next decade. This includes conditions with mild warming and some Colorado River Basin risks.
- If the more stressful conditions of the Continued Trends Planning Scenario occur, Greeley will need the baseline water rights portfolio to meet planning performance criteria under current demands. This emphasizes the importance of Greeley changing existing water rights to municipal use in the near-term to improve robustness against more stressful futures.
- If the most stressful conditions in the Unbearable or Stressed Planning Scenarios occur, Greeley will need to do more than what is in the baseline water rights portfolio to meet planning performance criteria. This establishes the importance of the Terry Ranch Project in order to ensure a sustainable water supply for Greeley in the long-term.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results



9.0 TERRY RANCH TIMING AND INTEGRATION RESULTS

The IWRP evaluated the Terry Ranch Project using two of the Planning Horizons. The Terry Ranch Timing analysis established the water supply system and demand conditions under which the Terry Ranch Project would be required. The Terry Ranch Integration analysis established how Greeley could use the Terry Ranch Project after it is fully integrated (e.g., extracting and injecting water at the maximum feasible capacity) and if that use was sustainable. The IWRP used results from the Terry Ranch Timing analysis to recommend an approach for triggering the Terry Ranch Project. Results from the Terry Ranch Integration analysis were used to identify other water resources opportunities that would improve Terry Ranch operations that Greeley may need to act on in the next 10 years.

9.1 METHODOLOGY

The methodology for the Terry Ranch Timing and Terry Ranch Integration analyses used related approaches and tools for consistent evaluation, but a different overall analysis process. The Terry Ranch Timing analysis focused on determining the maximum demand Greeley's baseline water supply system (without Terry Ranch) could meet while meeting the planning performance criteria described in Section 2.4. The Terry Ranch Integration analysis focused on determining if the use of Terry Ranch once fully implemented is sustainable using the sustainability criteria described in Section 7.3. Both analyses used the GSM to complete water supply system simulations and applied the Planning Scenarios.

In the GSM, the Terry Ranch Timing analysis simulated the Planning Scenario settings shown in **Table 9-1** across the baseline system described in Section 2.3 under annual potable demands from 28,000 acre-feet per year to 40,000 acre-feet in 2,000 acre-foot increments. Performance results were compared to the planning performance criteria defined in Section 2.4 to determine the maximum demand the baseline system could supply to Greeley. The climate conditions selected for the Terry Ranch Timing analysis reflected possible climates around the year 2040.

Table 9-1. Planning Scenario Settings for Terry Ranch Timing Analysis

| Planning Scenario Name | Climate Change | Colorado River Basin Impacts | Water Rights Administration Impacts |
|--------------------------|----------------|------------------------------|-------------------------------------|
| Unbearable | 5°F Warmer | High Impacts | 10% Reduced Yields |
| Stressed | 5°F Warmer | Moderate Impacts | 10% Reduced Yields |
| Continued Trends | 2°F Warmer | Moderate Impacts | 10% Reduced Yields |
| Optimistic | 2°F Warmer | Low Impacts | No Reduction |
| No Climate Change | No Change | Low Impacts | No Reduction |



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results



In the GSM, the Terry Ranch Integration analysis simulated the Planning Scenario settings shown in **Table 9-2** across the Terry Ranch Project assumptions described in Section 7.2. Performance results were compared to the planning performance criteria defined in Section 2.4 and the Terry Ranch sustainable use criteria identified in Section 7.3 to determine if additional water resources opportunities could be required. The climate conditions selected for the Terry Ranch Timing analysis reflected possible climates around the year 2070.

Table 9-2. Planning Scenario Settings for Terry Ranch Integration Analysis

| Planning Scenario Name | Climate Change | Colorado River Basin Impacts | Water Rights Administration Impacts | Total Demands (Potable + Non-Potable) |
|--------------------------|----------------|------------------------------|-------------------------------------|--|
| Unbearable | 8°F Warmer | High Impacts | 10% Reduced Yields | 70,000 af/yr (2070 High Bookend) |
| Stressed | 8°F Warmer | Medium Impacts | 10% Reduced Yields | 57,100 ¹ af/yr |
| Continued Trends | 5°F Warmer | Medium Impacts | 10% Reduced Yields | 46,800 af/yr (2070 Median w/Decreased Per Capita Use) |
| Optimistic | 2°F Warmer | Low Impacts | No Reduction | 46,800 af/yr (2070 Median w/Decreased Per Capita Use) |
| No Climate Change | No Change | Low Impacts | No Reduction | 57,100 ¹ af/yr |

¹ This demand value was selected as it is approximately twice the current annual demands.

9.2 TERRY RANCH TIMING RESULTS

The Terry Ranch Timing analysis used performance metrics from the GSM simulations of the Planning Scenario conditions described above to determine the maximum annual demand the system can meet under each Planning Scenario. **Table 9-3** shows the maximum annual demand the baseline system can meet for each Planning Scenario. Values listed are estimations used for planning purposes and do not reflect the firm yield of Greeley's water supply system.

Depending on Planning Scenario conditions, the maximum demand the baseline system can meet varies between 32,600 acre-feet per year and 43,800 acre-feet per year. This compares to Greeley's recent total annual demands of approximately 25,300 acre-feet per year. These results show that even if future conditions are like those in the *Unbearable* Planning Scenario, Greeley's baseline system is sufficient to meet some demand growth. If future conditions are like those in the *Continued Trends* Planning Scenario, Greeley's baseline system can accommodate an additional 10,000 acre-feet per year of demand growth, which is approximately 40% more demand than current. These results show that while the baseline system can accommodate some demand growth, it is vulnerable if demand growth occurs rapidly or in combination with climate and risk impacts to water supply. Therefore, the Terry Ranch Project will be required in order for Greeley to meet projected future demands under a range of projected future conditions.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results



Table 9-3. Maximum Demand the Baseline System Meets while Maintaining Planning Performance Criteria for each Planning Scenario

| Planning Scenario | Annual Potable Demand (acre-feet per year) | Annual Non-Potable Demand ¹ (acre-feet per year) | Total Annual Demand (acre-feet per year) |
|--------------------------|---|--|---|
| Unbearable | 28,000 | 4,600 | 32,600 |
| Stressed | 30,000 | 4,600 | 34,600 |
| Continued Trends | 32,000 | 5,800 | 37,800 |
| Optimistic | 36,000 | 5,800 | 41,800 |
| No Climate Change | 38,000 | 5,800 | 43,800 |

¹ Non-Potable demands are set based off annual potable demand. At certain demand thresholds, the non-potable demand was increased reflecting additional service area development.

A key outcome of this analysis was timing the Terry Ranch Project implementation using the demand results above. However, Greeley has not experienced demand growth over the last 10 years, as discussed in Section 4.1, and thus the IWRP cannot determine if the projected demand growth is going to begin immediately. In addition, the differences in projected 20-year demands between the high- and low-bookend scenarios is slightly less than Greeley's current annual demands. Thus, there is also significant uncertainty in the rate of demand growth when it starts to occur again. Because of these highly uncertain demand factors, the IWRP could not confidently time the Terry Ranch Project implementation. If the Terry Ranch Project is implemented before it is needed, it could unnecessarily overburden Greeley's customers with high water rates.

In-lieu of being able to time Terry Ranch Project implementation, the IWRP identified a process Greeley can use to monitor demands and water supplies, which is detailed as part of the Adaptive Plan in Section 12.2. In this approach, Greeley will monitor observed demands and compare them to the estimated maximum demand the water supply system can meet. After demand growth occurs, Greeley can compare the rate of growth to what the water supply system can meet. This approach is visualized in **Figure 9-1**. In this figure, the solid green line is Greeley's observed total demand values, the green shaded area is a conceptual range of possible future demands, and the dashed green line as an example demand growth trajectory Greeley could experience. The grey and yellow lines showing the maximum demand the baseline system can meet under the *No Climate Change* and *Continuing Trends* Planning Scenarios, respectively. Note that the x-axis after 2020 is conceptual and is not tied to actual future years.

Figure 9-1 shows that as the future evolves, the demand Greeley's baseline system can meet could gradually decrease as impacts from climate change and other risks occur. This is why the solid line decrease from the 2010 to 2020 value. Simultaneously, demand growth is expected to occur, though the exact start of growth and rate is unknown. Comparing the rate of demand growth to the water supply system conditions will provide Greeley sufficient foresight to start Terry Ranch implementation such that when it is required it will be fully completed.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results

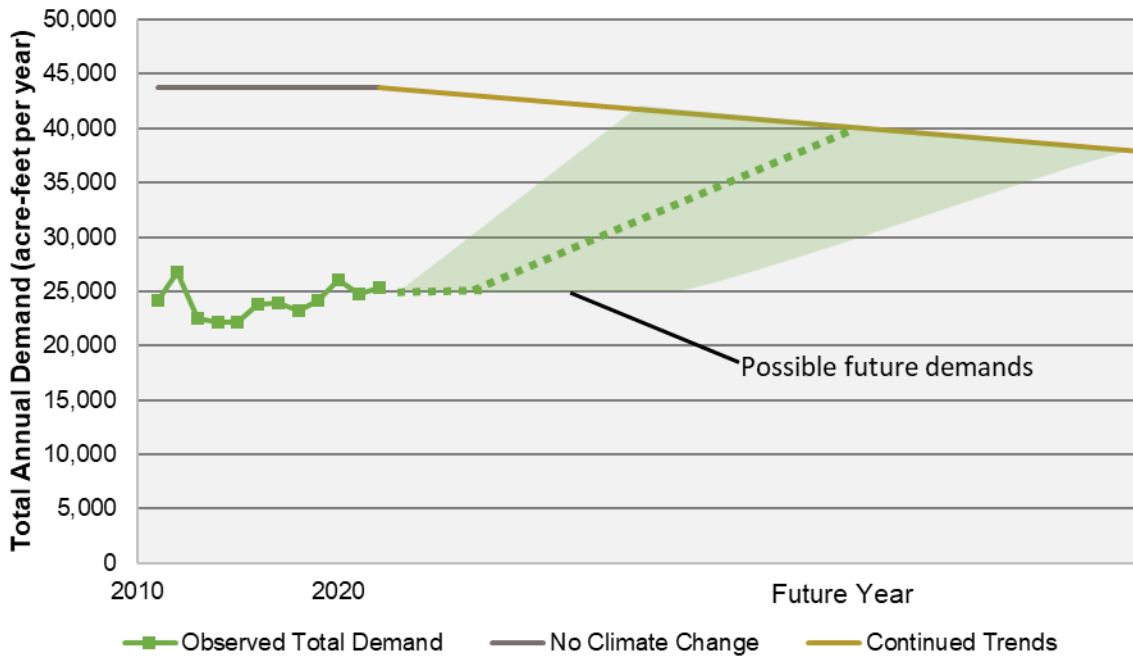


Figure 9-1. Conceptual example of timing the Terry Ranch Project showing how demands (green shaded area/dashed line) could grow while the water the supply system provides could decrease (grey and yellow line)

9.3 TERRY RANCH INTEGRATION RESULTS

The Terry Ranch Integration analysis used performance metrics and Terry Ranch sustainability results from the GSM simulations of the Planning Scenario conditions described above to determine if Terry Ranch operations were sustainable long-term. In summary, Terry Ranch operations are sustainable if it can deliver sufficient supplies during drought to minimize drought restrictions while maintaining at least 80% of the 1.2 million acre-foot native aquifer storage volume long-term. This sustainability definition was developed as a planning criterion for the IWRP to evaluate future conditions and could be altered in the future if desired. **Table 9-4** shows the results of the Terry Ranch integration analysis by Planning Scenario. This table indicates what (if any) additional water resources were included, the percent of years Greeley drought restrictions were used, the average annual Terry Ranch “Delta” (injection minus extraction), and the percent of the native aquifer remaining at the end of the 86-year simulation.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results



Table 9-4. Tabular Summary of Terry Ranch Integration Results

| Planning Scenario | Additional Water Resources | % Years with Drought Response | Annual Terry Ranch Delta (acre-feet per year) | Ending Aquifer Volume (% of 1.2 million acre-foot Volume) |
|--------------------------|--|-------------------------------|---|---|
| Unbearable | Retiming Storage + Moderate Water Acquisitions | 100% | -10,700 | 23% |
| Stressed | Retiming Storage + Moderate Water Acquisitions | 64% | -6,500 | 53% |
| Continued Trends | Retiming Storage + Moderate Water Rights | 35% | -1,200 | 91% |
| Optimistic | None | 12% | +1,900 | 113% |
| No Climate Change | Retiming Storage + Low Water Acquisitions | 36% | -1,900 | 86% |

Color Key Indicates Terry Ranch Sustainability Criteria: **Blue** has sufficient remaining aquifer percentage, **Orange** has insufficient remaining aquifer percentage

Results from the Terry Ranch integration analysis show that the Terry Ranch Project can be operated sustainably in the *Continued Trends*, *Optimistic*, and *No Climate Change* Planning Scenarios. Sustainable operation in these Planning Scenarios will require some additional water supplies and retiming storage. The percent of years in drought restrictions for the *Continued Trends* and *No Climate Change* Planning Scenarios are above the 20% performance planning criteria. As the Terry Ranch Project is a drought-resilient supply source, Greeley could change the current drought response policy by lowering the thresholds that trigger watering restrictions. How the drought response policy could change was not evaluated in this IWRP but should be considered in future studies. Simulations of the *Optimistic* Planning Scenario showed that the long-term Terry Ranch storage will be above the initial native aquifer storage volume. Comparing these results to the results of the *No Climate Change* Planning Scenario, which does not include climate change impacts but does include approximately 10,000 acre-feet more demands, highlights the sensitivity to annual demands. Completing the Terry Ranch Project at a lower total annual demand could help increase aquifer storage to be used as demand increases.

Results from the *Unbearable* and *Stressed* Planning Scenarios show that under these conditions, Terry Ranch Operations are not sustainable. Both Planning Scenarios use drought restrictions significantly more frequently than 20% of years, and the long-term aquifer storage is well below the 80% threshold. These results indicate that Greeley's water supply system with Terry Ranch is vulnerable to the conditions listed in those Planning Scenarios, which include the hottest climate change projections and significant demand growth. The vulnerable demand and climate conditions identified in these Planning Scenarios will likely emerge gradually over an extended period of time. Greeley can monitor these conditions as part of the Adaptive Plan and, if they emerge, can adjust the long-term water supply strategy.

How the Terry Ranch Project use is simulated in the GSM was also evaluated. **Figure 9-2** shows deliveries to Greeley from the two existing surface water treatment plants (in blue) and the Terry Ranch Project (in orange) under future conditions for one of the six hydrology simulated, which included back-to-back 2002 conditions. **Figure 9-3** shows the annual Terry Ranch extraction (orange, negative



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results

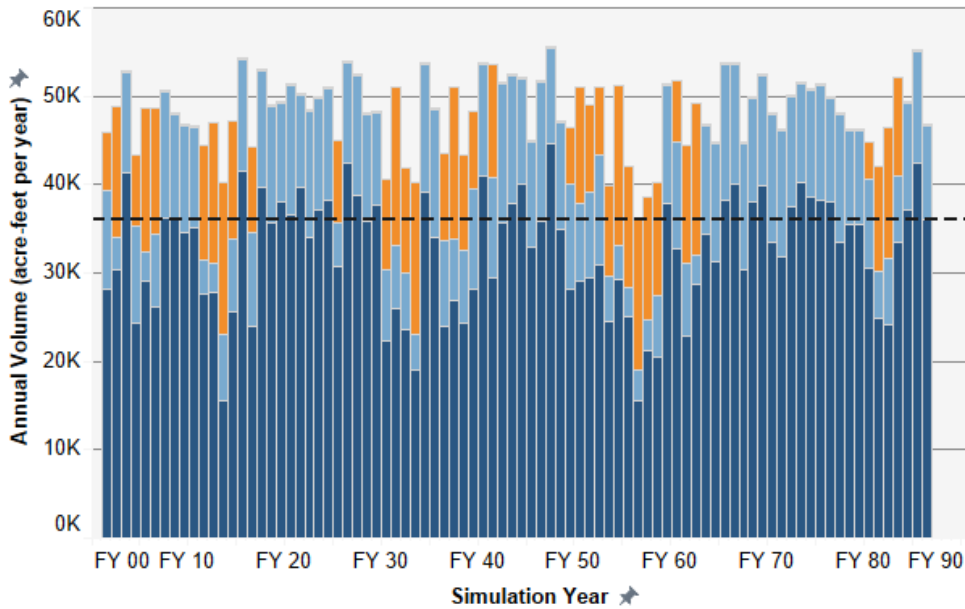


bars), injection (blue, positive bars), and the cumulative aquifer storage as a percent of the initial 1.2 million acre-foot native volume (black line). The first figure shows that Terry Ranch can be a significant supply source for Greeley during droughts, contributing up to 50% of needed supplies during the severe drought period. The second figure shows that in between these drought periods, the surface water supply system can inject excess supplies such that the aquifer volume nearly fully recovers. These results indicate that the GSM is simulating the Terry Ranch Project as intended – a water supply source during droughts and a large storage bucket for excess surface water supplies outside of droughts.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results



Supply Source
 TR Extraction Boyd Treated Water Bellvue Treated Water

Figure 9-2. Met Demand Source Under Continued Trends Planning Scenario for Timeseries 63. Dashed line is annual demand under Level 2 watering restrictions.

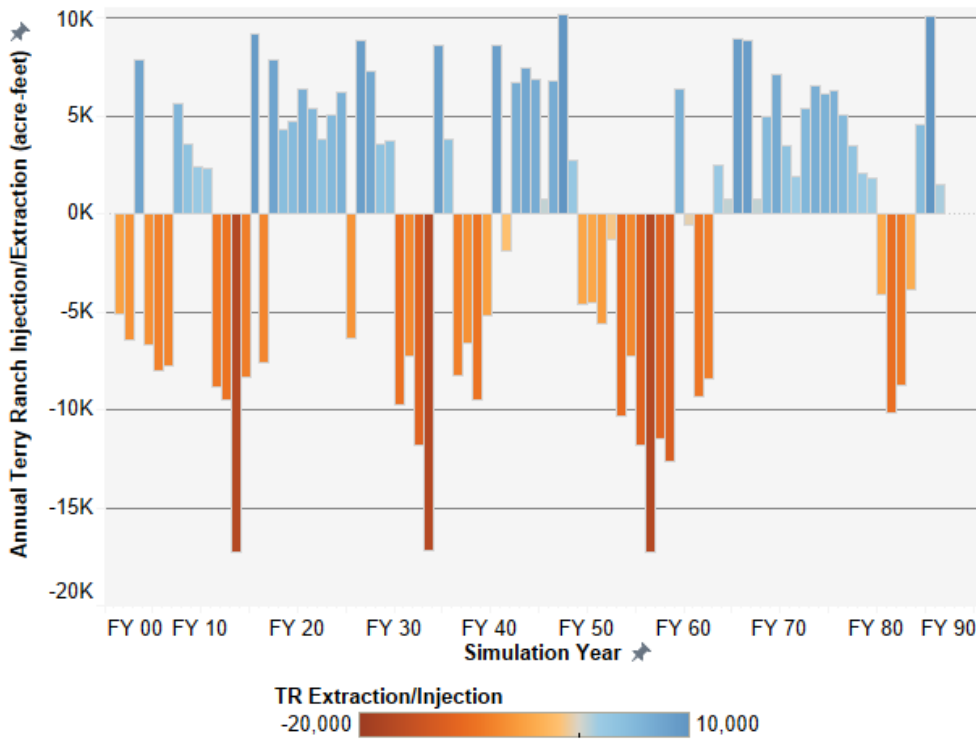


Figure 9-3. Terry Ranch Injection/Extraction Timeseries Under Continued Trends Planning Scenario for Timeseries 63. Left axis corresponds to bar chart and right axis corresponds to line plot.



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results



Figure 9-4 highlights the value of the additional water resources opportunities to achieving sustainable operations of the Terry Ranch Project. This figure shows the percent of the native Terry Ranch aquifer level for the *Continued Trends* Planning Scenario under Timeseries 63. Including additional water rights and retiming storage with Terry Ranch without any additional projects (darkest line) preserves over 30% of the native aquifer level at the end of the 86-year simulation period compared to no additional acquired water rights and retiming storage (lightest line). This shows how these additional water resources will be essential to long-term sustainable operations of the Terry Ranch Project.

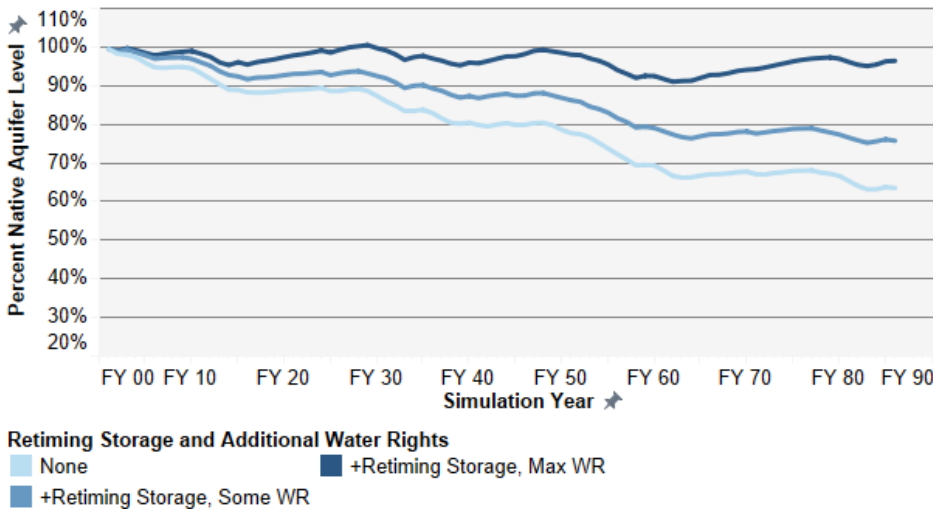


Figure 9-4. Use of Native Terry Ranch Aquifer by Retiming Storage and Additional Water Rights Combinations Under Continued Trends Planning Scenario for Timeseries 63



INTEGRATED WATER RESOURCE PLAN

Terry Ranch Timing and Integration Results

**9.4 CONCLUSIONS**

The IWRP evaluated the Terry Ranch Project using two approaches. The Terry Ranch Timing analysis established the water supply system and demand conditions under which the Terry Ranch Project would be required. The Terry Ranch Integration analysis established how Greeley could use the Terry Ranch Project after it is fully integrated. Results from these analyses showed the following conclusions:

- The Terry Ranch Project integrated into Greeley's water supply system is resilient against many possible future conditions including warmer climates, higher demands, and reduced yields. In those same future conditions, Greeley can sustainably utilize the Terry Ranch Project as a water supply source during droughts long-term with some additional water resources.
- Additional water resources opportunities such as water rights and retiming storage, can significantly improve the long-term sustainability of the Terry Ranch Project in futures with warmer climates and/or significant demand growth. Under less stressful future conditions, the Terry Ranch Project is sustainable without these additional water resources opportunities.
- If impacts from climate change are severe and tracking with the hottest projections, Greeley may need to consider additional long-term solutions. These will have long lead times that Greeley can monitor and adapt to.
- Terry Ranch being implemented cannot be confidently scheduled due to the significant uncertainty in when demands will grow and the rate of that growth.
- Greeley should utilize an Adaptive Plan to properly time Terry Ranch and monitor emerging climate and demand conditions.



INTEGRATED WATER RESOURCE PLAN

Water Rights Evaluation



10.0 WATER RIGHTS EVALUATION

The Future Hydrology Analysis presented in Section 6 showed that Greeley's current water rights portfolio is vulnerable to climate change impacts across the three major river basins. In addition, near-term analysis results in Section 8 and results from the Terry Ranch Project timing and integration analysis in Section 9 show additional water rights will be required to meet projected demands. The IWRP therefore updated Greeley's water acquisition strategy. This section describes the Water Acquisition Decision Tool (WADT) developed that helps Greeley target the most beneficial water resources and presents a general overview of Greeley's water acquisition strategy resulting from the development of the WADT.

10.1 WATER ACQUISITION DECISION TOOL

As part of the IWRP, the Water Acquisition Decision Tool (WADT) was developed to help define Greeley's water acquisition strategy and to inform decisions on future updates to Greeley's water acquisition strategy. Another motivator for the WADT is to create a centralized location for water rights-related data and to improve knowledge transfer during future water acquisition strategy updates. The WADT is not designed to determine if acquisitions are needed; rather it is an adaptable, data-driven tool to inform decision-making when evaluating potential acquisitions or when re-evaluating the acquisition strategy. Importantly, the tool will help to track purchases and SME opinions over time.

The WADT identifies water rights in the Poudre River, Big Thompson River, and Colorado River basins as well as non-tributary groundwater rights as possible acquisition targets. These acquisition targets are divided into three different Water Right Classes based on their acquisition strategy: Aggressive Acquisition, Active Acquisition, and Passive Acquisition. **Table 7-1** shows the criteria used to classify each water right and the overall acquisition strategy. A water right should meet most of the criteria to be assigned to a certain Class, but it is not necessary for it to meet all of the criteria.



INTEGRATED WATER RESOURCE PLAN

Water Rights Evaluation



Table 7-1. Water Right Classification Strategies and Criteria in Water Acquisition Decision Tool

| Water Right Class | Criteria | General Acquisition Strategy |
|-------------------|--|--|
| Class 1 | <ul style="list-style-type: none"> • Use for potable supply • Sources are from the upper Poudre River, Big Thompson, and Colorado River basins. Also, non-tributary groundwater rights to the extent that they can be integrated into Greeley's potable water system • Ability to provide firm yield at existing Bellvue and Boyd WTFs • Relatively low regulatory risk; established history of changes in water court • Ability to meet return flows from existing supplies and infrastructure • Greeley already owns shares or has the ability to acquire a large number of shares or interest in the company | Aggressive Acquisition - Greeley is actively seeking acquisitions and is willing to make offers based on a predetermined offer price, subject to budget availability |
| Class 2 | <ul style="list-style-type: none"> • Use for potable or non-potable supply • Sourced from upper/lower Poudre River or Big Thompson River basins. Also non-tributary groundwater rights to the extent that they can be integrated into Greeley's potable water system • Ability to provide firm yield at existing Bellvue and Boyd WTFs or for use in non-potable system. • Relatively low regulatory risk; may or may not have established history of changes • May have other issues that make it less desirable than Class 1 water • Ability to acquire a moderate number of shares or interest in the company • Price per AF is less than Class 1 rights | Active Acquisition - Greeley evaluates potential sales brought by sellers or brokers and executes only if Class 1 water is unavailable to buy, the water is priced at or below market, or the water has other positive attributes |
| Class 3 | <ul style="list-style-type: none"> • Use primarily for non-potable supply or for meeting return flow obligations • Sourced from lower Poudre or Big Thompson River basins • Not required to be a firm supply • No or limited prior change cases in the system • May only be able to acquire smaller volumes of shares and interest in the company • Price per AF is less than Class 1 and 2 rights | Passive Acquisition - Greeley evaluates potential sales on a case-by-case basis and executes only if Class 1 and 2 water is unlikely to be available for the duration of budget. To purchase, Class 3 water should be priced below market or have some other positive attributes |

There are many variables that can be used when assessing water rights acquisitions. To define and organize these, the WADT defined five categories that are used to evaluate and prioritize water rights within the three Water Right Classes. These categories are cost, reliability, availability, system integration, and water rights administration considerations. More categories may be added in the future if desired. Within each of these categories, the WADT defined discrete evaluation criteria and defines how to score water rights for each criterion. The evaluation criteria and their categories are shown in **Table 7-2**.

The WADT allows Greeley to assign individual scores for each evaluation criteria and then weight the scores between categories. Scores and weights can be adjusted based on departmental priorities, budget



INTEGRATED WATER RESOURCE PLAN

Water Rights Evaluation



constraints, changes in acquisition strategy informed by IWRP updates, or other factors. The resulting weighted scores will help identify, target, and prioritize water rights for acquisition.

Table 7-2. Evaluation Criteria and Categories in Water Acquisition Decision Tool

| Category | Evaluation Criteria |
|--|--|
| Cost | <ul style="list-style-type: none"> • Purchase Price • Integration Cost • Operation and Maintenance Cost |
| Reliability | <ul style="list-style-type: none"> • Potential Yield under Shifted Hydrograph • Seniority of Water Right • Vulnerability to Change of Water Right |
| Availability | <ul style="list-style-type: none"> • Availability of Water for Acquisition • Willingness of Owner to Sell • Risk of Price Escalation |
| System Integration | <ul style="list-style-type: none"> • Integration into Existing System • Integration into Terry Ranch • Time to Implement |
| Water Right Administration Considerations | <ul style="list-style-type: none"> • Legal Complexity • Ditch/Reservoir Company Considerations • Water Right Operational Flexibility |

10.2 WATER ACQUISITION STRATEGY

Greeley has actively acquired raw water supplies through purchase of water rights and via its raw water dedication program. The primary focus of Greeley's past water acquisition strategy was to acquire water resources that were within Greeley's growth path and to obtain water resources that could be stored in an enlarged Milton Seaman Reservoir. The Terry Ranch Project has changed the focus of Greeley's water acquisition strategy to water supplies that improve the sustainability of that project as described in Section 7.4. The IWRP updated Greeley's acquisition strategy in parallel with developing the WADT using subject matter expertise on how potential water acquisitions can be integrated into Greeley's system and their associated characteristics (price, changeability, etc.).

The goals of the acquisition strategy include water supplies with the following features:

- add security and redundancy to the water supply system prior to Terry Ranch implementation
- improve the sustainability of the Terry Ranch Project
- maximize and make the most efficient use of potable water supplies
- allow for the retiming of water resources for utilization in the Terry Ranch Project
- can be used in Greeley's non-potable system

The primary supplies that can be most easily integrated into the Terry Ranch Project are direct flow or storage rights in the upper Poudre River and Colorado River basins, and non-tributary groundwater rights. Although additional water supplies in the Big Thompson River basin cannot be currently integrated into



INTEGRATED WATER RESOURCE PLAN

Water Rights Evaluation



the Terry Ranch Project, they can be used for direct potable use, storage, and non-potable use to decrease the immediate demands from and make most efficient use of the Poudre River and Colorado River potable supplies for integration into the Terry Ranch Project when needed. The water supplies on the upper Poudre River, upper Big Thompson River, and Colorado River basins have high demand, high increases in water right costs, and decreased availability relative to other supplies in those basins.

While Greeley should still pursue these more expensive water resources, reliance on these resources can be partially offset by integrating non-potable supplies into Greeley's acquisition strategy. Greeley's 2022 Non-Potable Master Plan identifies a goal of 15 percent of its future demands to be met by non-potable supplies. This goal will serve several purposes such as maximizing the use of untreatable water supplies, providing the lowest cost of water service to citizens, and making the most efficient use of potable water supplies that can be integrated into the Terry Ranch Project.

Northern Colorado has experienced a high population growth rate over the last decade with this population growth projected to continue. Because of this, regional demand for water rights has increased dramatically, resulting in decreased water rights acquisition availability, rapidly increasing costs, and increased competition. Additionally, water providers that historically relied on water from the mainstem of the South Platte River are also now acquiring water rights on tributaries such as the Poudre River because of the increased competition for water rights on the mainstem of the South Platte River. It is anticipated that these challenges will continue or worsen as availability of water resources diminish across the entire South Platte River basin. Therefore, it is recommended that Greeley continue acquiring additional water rights as aggressively as possible given budgetary considerations and constraints.

The following are recommendations for Greeley in order to meet the water acquisition strategy goals identified in the IWRP while also preserving Greeley's agricultural heritage.

1. Acquire potable direct flow and storage supplies in the Poudre River, Big Thompson River, and Colorado River basins and non-tributary groundwater rights.
2. Acquire non-potable direct flow and storage supplies in the Poudre River and Big Thompson River basins.
3. The distribution of acquisitions between potable and non-potable can be dynamic if the availability of water resources for acquisitions warrants.
4. Pursue water rights that will permit Greeley to lease out water rights for decreed agricultural irrigation uses until such time as those water rights are needed by Greeley.
5. Pursue water rights that will allow for Interruptible Supply Use in order to support the agricultural community while maintaining the water supplies for Greeley's use during droughts. These opportunities exist under a number of ditch systems within the Cache la Poudre River and Big Thompson River.
6. Pursue changes of water rights as quickly as possible given budgetary, personnel, and other constraints. This may result in Greeley obtaining a higher yield with more favorable terms and conditions than if Greeley waited to change the water rights in the future.
7. Prioritize agricultural leases for individual farms and ditch companies that connect to the Greeley economic zone and pursue recovery of higher value leases for industrial and augmentation water to support the CIP and water acquisition goals.



INTEGRATED WATER RESOURCE PLAN

Water Rights Evaluation



10.3 WATER ACQUISITION SUMMARY

The IWRP recommends that Greeley develop a water acquisition strategy to meet projected demand growth and mitigate the impacts from climate change and other risks to their existing water supply system. The goals of the acquisition strategy include water supplies with the following features:

- add security and redundancy to the water supply system prior to Terry Ranch implementation
- improve the sustainability of the Terry Ranch Project
- maximize and make the most efficient use of potable water supplies
- allow for the retiming of water resources for utilization in the Terry Ranch Project
- can be used in Greeley's non-potable system.

The IWRP also developed the WADT, which provides Greeley a data-driven tool to help make informed decisions on water acquisition strategy to meet these acquisition strategy goals. The WADT is intended to be adaptive as it can be updated to reflect changes in market conditions, meet changing goals and strategies, and/or to include additional evaluation criteria.



INTEGRATED WATER RESOURCE PLAN

10-Year Capital Improvement Plan



11.0 10-YEAR CAPITAL IMPROVEMENT PLAN

A water resources Capital Improvement Plan (CIP) was developed provide a timeline and estimated budget for implementation of the outcomes and recommendations from the IWRP. This section lists the CIP assumptions and summarizes the CIP. The detailed water resources CIP is included Appendix A.

A 10-year planning horizon was utilized for this CIP, starting in 2024 and continuing through 2033. This 10-year planning horizon does not capture the full implementation of recommendations identified in Greeley's IWRP. To the extent additional CIP projects may be required beyond 2033, those needs are addressed in the discussion about the identified capital improvement plan projects below.

This CIP represents Greeley Water Resources Department portion of project costs. Cost sharing opportunities with developers, funding partners, or other Departments within Greeley do exist for some of the projects included in this CIP. Those cost sharing opportunities are described in further detail in the project descriptions below. Costs do not include "internal City costs" to complete projects. Internal City costs are defined as additional staff requirements associated with project development and implementation

Project cost estimates presented within this CIP are in 2023 dollars. Project costs associated with reoccurring projects assume an annual escalation rate of 3%. Project costs were developed based on input from Greeley, existing cost estimates from previous CIPs, and actual spending by Greeley.

Overall project sequencing is based on input from Greeley staff on the interdependencies between projects and on progressive expansion of Greeley's water resources portfolio to meet or exceed the demand projections described in this IWRP.

The following key assumptions were made to develop this CIP:

- Land and/or easements will be required and ready for development of projects when needed.
- Cost associated with land acquisition / easements and right-of-ways are not included in this CIP.
- Estimated capital costs include costs associated with permitting, design, and construction management.
- Ancillary costs associated with capital projects such as pipeline connections, inlet and outlet structures, measurement, and controls were assumed to be included in the total project costs.
- Management of Greeley's water rights portfolio could include such things as maintenance of ditch and conveyance systems, regular measurement and recording of water deliveries, preparation of water accounting, land management for compliance with dry up or revegetation requirements. These on-going compliance requirements are considered regular operations and maintenance and are therefore not included in this CIP.

Figure 11-1 presents the 10-year Water Resources CIP by project category and illustrates the annual and cumulative capital requirements associated with all water resource projects included herein through the 2033 planning horizon. A summary of the CIP identified water resources projects and their corresponding categories are listed below. **Table 11-1** lists individual projects, their associated costs to



INTEGRATED WATER RESOURCE PLAN

10-Year Capital Improvement Plan



Greeley, and anticipated start dates. The total capital requirement for the recommended IWRP CIP between 2024 and 2033 is \$134,480,000. Delays to the projects in this CIP may delay other projects and potentially result in Greeley not being able to meet demands. For this reason, this CIP should be reviewed and updated annually.

- **Terry Ranch Infrastructure** – projects associated with implementing the Terry Ranch Project which include pipeline installation and State Land Board wellfield development. This infrastructure is being developed using the first \$62.5 million from the Wingfoot deal, plus Greeley’s \$12.5 million 20% match for a total investment of \$74 million.
- **Water Rights Acquisition** – Greeley continues an opportunistic and strategic approach to acquiring water rights. The CIP includes an annual cost of \$6 million per year with a 5% escalation factor.
- **Water Rights Development** – The legal and engineering costs associated with protecting existing water rights and changing new water rights at a rate consistent with the 2018 to 2022 expenditures. The CIP assumes \$350,000 per year for legal costs and \$275,000 per year for engineering costs, escalated at 3% per year.
- **Planning Studies** – Completing the planning studies identified in the IWRP. This includes \$250,000 for the Storage Retiming Investigation in 2024 and 2025, \$200,000 for Greeley’s portion to update the PBN Model, \$300,000 for an update to the IWRP in approximately 2028, and \$550,000 for a Terry Ranch Investigation Study after the IWRP update.
- **Water Resources Projects** – Variety of additional water resources projects including continuation of investment into water conservation, infrastructure projects required for growing demands, infrastructure projects associated with water rights, and any retiming storage project. Water conservation programs should address environmental justice goals and provide sustainable landscaping opportunities to the entire community. Cost sharing opportunities exist for a number of identified water resources projects and should be further evaluated during project planning.



INTEGRATED WATER RESOURCE PLAN

10-Year Capital Improvement Plan

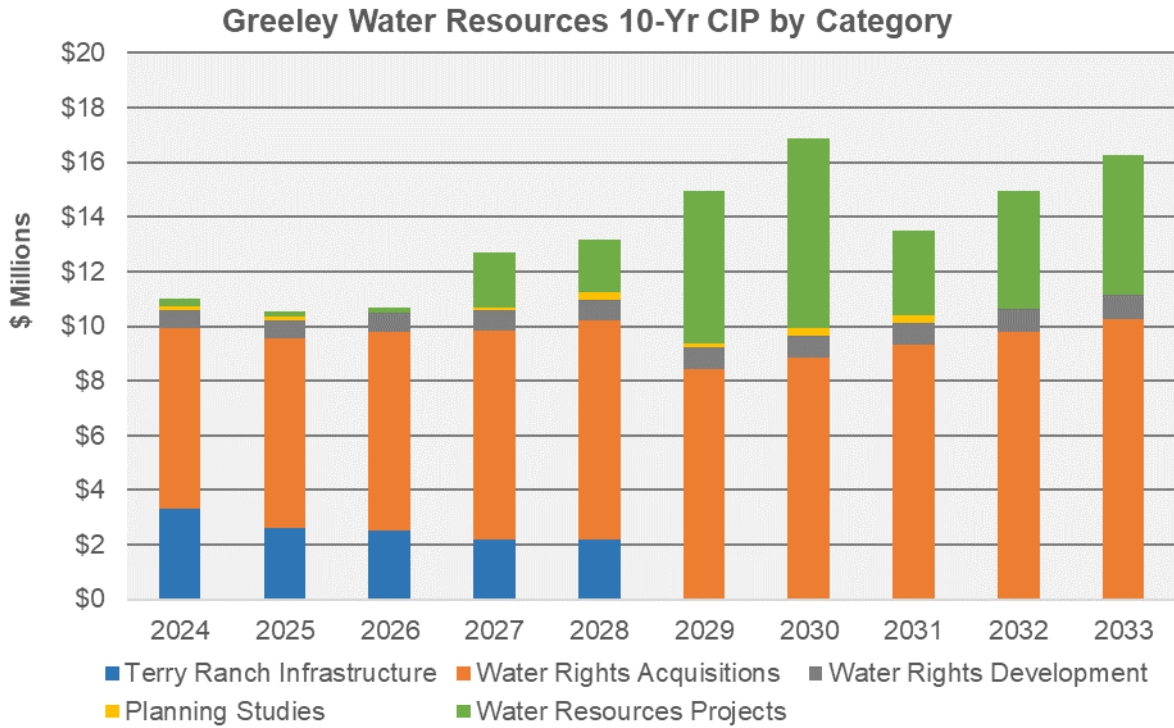


Figure 11-1. Water Resources 10-Year CIP Costs by Project Category



INTEGRATED WATER RESOURCE PLAN

10-Year Capital Improvement Plan



Table 11-1. List of Water Resources CIP Project Costs and Details

| Project Name | Start Year | Duration | Annual Project Cost | Total Project Cost | Greeley (Water Resources Dept) | Developer / Funding Partner / Greeley non-WR Contribution | Greeley - Water Resources Dept Total 2024 to 2033 |
|---|------------|------------|---------------------------------------|--------------------|--|---|---|
| Terry Ranch Infrastructure Projects | | | | | | | |
| Terry Ranch: Phase 1 - Windsor to Hwy 14 Pipeline | 2023 | 2 yrs | | \$31,250,000 | \$6,250,000 | \$25,000,000 | \$3,125,000 |
| Terry Ranch Phase 1b - Pipeline Construction 2025 to 2026 | 2025 | 2 yrs | | \$25,000,000 | \$5,000,000 | \$20,000,000 | \$5,000,000 |
| Terry Ranch Phase 1b - Pipeline Construction 2027 to 2028 | 2027 | 2 yrs | | \$21,875,000 | \$4,375,000 | \$17,500,000 | \$4,375,000 |
| Terry Ranch Phase 2 Development | 2034 | | | | TBD | | |
| State Land Board Wellfield Development | 2023 | 3 yrs | | \$1,500,000 | \$1,300,000 | \$200,000 | \$300,000 |
| Sub-Total for Terry Ranch Infrastructure Projects | | | | | | | \$12,800,000 |
| Water Right Acquisition | | | | | | | |
| Acquisition of Agricultural Water Rights | 2023 | Every year | \$6,000,000 per year w/ 5% escalation | | \$6,000,000 per year w/ 5% escalation | | \$83,202,759 |
| Sub-Total for Water Rights Acquisitions | | | | | | | \$83,202,759 |
| Water Rights Development | | | | | | | |
| Water Rights Development - Legal Fees | 2023 | | \$350,000 per year w/ 3% escalation | | \$350,000 per year w/ 3% escalation | | \$4,256,710 |
| Water Rights Development - Engineering Fees | 2023 | | \$275,000 per year w/ 3% escalation | | \$275,000 per year w/ 3% escalation | | \$3,344,558 |
| Sub-Total for Water Rights Development | | | | | | | \$7,601,268 |



INTEGRATED WATER RESOURCE PLAN

10-Year Capital Improvement Plan



| Project Name | Start Year | Duration | Annual Project Cost | Total Project Cost | Greeley (Water Resources Dept) | Developer / Funding Partner / Greeley non-WR Contribution | Greeley - Water Resources Dept Total 2024 to 2033 |
|---|------------|--|---------------------------------------|--------------------|---|---|---|
| Planning Studies | | | | | | | |
| Storage Retiming Investigation | 2024 | 2 yrs | | \$250,000 | \$250,000 | | \$250,000 |
| Poudre Basin Model Updates | 2027 | 2 yrs | | \$600,000 | \$200,000 | \$400,000 | \$200,000 |
| Update to Greeley IWRP | 2028 | 2 yrs | | \$300,000 | \$300,000 | | \$300,000 |
| Terry Ranch Integration Study | 2030 | 2 yrs | | \$550,000 | \$550,000 | | \$550,000 |
| Sub-Total for Planning Studies | | | | | | | \$1,300,000 |
| Water Resources Projects | | | | | | | |
| Life After Lawn | 2023 | Every year | \$150,000 per year w/ 3% escalation | | \$150,000 per year w/ 3% escalation | | \$1,824,304 |
| Aerial Imagery and Planimetric Data Acquisition for Update to Residential Water Budget | 2024 | Every 3 years (2024, 2027, 2030, 2033) | \$200,000 per update w/ 3% escalation | | \$68,000 per update w/ 3% escalation | \$132,000 per update w/ 3% escalation | \$327,099 |
| Rehab of Poudre River Diversion Structure | 2029 | 3 yrs | | \$8,000,000 | \$8,000,000 | Partnership Opportunities Should Be Evaluated | \$8,000,000 |
| Poudre Raw Water Intake Pipeline Expansion - Between River Diversion and Bellvue Intake | 2030 | 5 yrs total 2 yrs design and 3 yrs construction | | \$8,750,000 | \$8,750,000 | | \$8,750,000 |
| Assessment of the Raw Water Pipeline between Lake Loveland & Boyd | 2033 | 1 yr | | \$200,000 | \$200,000 | | \$200,000 |
| Lower Latham Bypass Structure for Optimization of Water Rights | 2027 | 4 yrs | | \$3,000,000 | \$1,000,000 | \$2,000,000 | \$1,000,000 |



INTEGRATED WATER RESOURCE PLAN

10-Year Capital Improvement Plan



| Project Name | Start Year | Duration | Annual Project Cost | Total Project Cost | Greeley (Water Resources Dept) | Developer / Funding Partner / Greeley non-WR Contribution | Greeley - Water Resources Dept Total 2024 to 2033 |
|---|-------------------|-----------------|----------------------------|---------------------------|---------------------------------------|--|--|
| Development of Overland Trail Gravel Pits | 2023 | 7 yrs | | \$3,210,000 | \$3,210,000 | | \$3,175,000 |
| Expansion of Gravel Pit Storage at the Poudre Ponds Complex (Martin Marietta storage) | 2027 | 4 yrs | | \$6,000,000 | \$6,000,000 | | \$6,000,000 |
| WSSC Return Flow Structures | 2033 | 5 yrs | | \$2,500,000 | \$2,500,000 | <i>Partnership Opportunities Should Be Evaluated</i> | \$500,000 |
| Sub-Total for Water Resources Projects | | | | | | | \$29,776,403 |
| TOTAL FOR ALL PROJECTS | | | | | | | \$134,680,431 |



INTEGRATED WATER RESOURCE PLAN

Recommendations and Adaptive Plan



12.0 RECOMENDATIONS AND ADAPTIVE PLAN

12.1 IWRP OUTCOMES AND RECOMMENDATIONS

Greeley's IWRP is a long-term strategic water resources master plan for Greeley that ensures sustainable and affordable water supplies for their customers. The IWRP is a comprehensive plan that integrated Greeley's water supply system (analyzed in Section 6) and projected demands (presented in Section 4) with possible future conditions around hydrology, climate change, and risks to Greeley's water supply system (shown in Section 5). The IWRP establishes a plan for triggering the Terry Ranch Project (Section 9), a process for evaluating and strategically acquiring water rights (Section 10), a 10-year CIP (Section 11), and an Adaptive Plan (Section 12.2) for Greeley to follow.

The IWRP analysis showed that Greeley is well-positioned to provide sustainable and affordable water supplies through an uncertain future if the water supply system is developed as planned. Past planning efforts and decisions have created a robust water supply system. The Terry Ranch Project, when complete, will likely be an effective drought supply source and can be operated sustainably long-term. The Terry Ranch Project is also flexible to develop, with infrastructure incrementally completed such that when it's needed it can be integrated efficiently. The IWRP process also established several important outcomes and conclusions regarding Greeley's current, near-term, and long-term water supply system, shown below.

- Greeley's current water supply system is resilient against the most likely near-term conditions, but additional water supplies are required to meet projected demands and to mitigate impacts from warmer climate conditions.
- With the Terry Ranch Project fully integrated, Greeley's water supply system is likely resilient against many possible future conditions including warmer climates, higher demands, and reduced yields. In those same future conditions, Greeley can sustainably utilize the Terry Ranch Project as a water supply source during droughts long-term when the Terry Ranch Project is coupled with some additional water resources.
- Balance implementation of the Terry Ranch Project with other water resources and non-water resources CIP needs to minimize financial risk and maintain affordable water supplies.
- If impacts from climate change are severe and tracking with the hottest projections, Greeley may need to consider additional long-term solutions (i.e., in addition to Terry Ranch and additional water supplies).
- The most impactful drivers to Greeley's water supply system – demand growth and climate change impacts – will have long lead times that Greeley can monitor and adapt to.
- Terry Ranch cannot be confidently timed until Greeley sees sustained, significant demand growth.

To ensure the IWRP outcomes hold true and continue providing sustainable and affordable water supplies, the IWRP includes the recommendations for Greeley summarized in **Table 12-1**. These recommendations were used to identify the water resources projects from the 10-year CIP in Section 11 and define the key actions of the Adaptive Plan defined in Section 12.2.



INTEGRATED WATER RESOURCE PLAN

Recommendations and Adaptive Plan



Table 12-1. Summary of IWRP Recommendations Used to Develop 10-year CIP and Adaptive Plan

| Recommendation | Action |
|---|---|
| Change Water Rights | Greeley should continue to aggressively change existing water rights to municipal use as these will improve the security and redundancy of the existing water supply system before the Terry Ranch Project is integrated. |
| Continue Strategic Acquisitions | Greeley should acquire additional water supplies and prioritize the acquisition of water supplies that can be integrated into the current system and the Terry Ranch Project. These water supplies are required to meet projected demands and mitigate climate and risk impacts to the current water supply system. These additional water supplies will also help the Terry Ranch Project operate sustainably once integrated. |
| Develop Priority Terry Ranch Infrastructure | The Terry Ranch Project needs to be efficiently integrated into Greeley's water supply system once it is required. Greeley should continue incrementally implementing project components (pipelines, right of way, water rights) to ensure this project is readily available to Greeley. |
| Study Potential Conceptual Retiming Storage Options | The IWRP identified a retiming storage project as a potentially beneficial project to improve the sustainability of Terry Ranch operations. As the IWRP only included a conceptual definition of the project, Greeley should further define this project and align the concept with real facilities. |
| Implement Adaptive Planning to Monitor Drivers and Trigger Terry Ranch | While the IWRP showed Greeley's water supply system is resilient against warmer futures and increased demands, it is still vulnerable to significantly stressful future conditions. Additionally, the IWRP could not confidently define when Terry Ranch is required due to uncertainty in demand growth. Greeley should implement an Adaptive Planning process that regularly updates IWRP outcomes and re-evaluates the Terry Ranch timing. |

To develop Priority Terry Ranch infrastructure, Greeley is implementing the approach described below, primarily consisting of a phased pipeline installation. This approach was used to develop the 10-year CIP.

- Phase 1a Pipeline is installing the first six miles of Terry Ranch conveyance pipeline from Windsor to Highway 14. This phase is ongoing and is expected complete in 2025.
- Phase 1b Pipeline will continue to install Terry Ranch conveyance pipeline from the termination point of Phase 1a along the northern alignment. This phase is expected to start in 2025.
- State Land Board Wellfield development is installing and testing monitoring wells on the 16 State Land Board-owned sections that are interspaced with the Terry Ranch Project property. The primary purpose of this effort is to secure the rights to the groundwater underlying the State Land Board parcels. This project is expected to complete by the end of 2024.



INTEGRATED WATER RESOURCE PLAN

Recomendations and Adaptive Plan

**12.2 ADAPTIVE PLAN**

An important recommendation from the IWRP is that Greeley implements an Adaptive Plan after IWRP completion. This section presents an initial definition of what is included in Greeley's Adaptive Plan and how it will be implemented.

12.2.1 Purpose and Implementation

While the IWRP showed Greeley's water supply system is likely resilient against warmer futures and increased demands, it is still vulnerable to significantly stressful future conditions. Additionally, the IWRP could not confidently define when Terry Ranch is required due to uncertainty in demand growth. Therefore, the Adaptive Plan will serve to re-evaluate the outcomes, assumptions, and recommendations from the IWRP and the potential need for the Terry Ranch Project on an annual basis. The primary goal of the Adaptive Plan is to ensure Greeley continues planning for a future water supply system that delivers sustainable and affordable supplies to its customers. This Adaptive Plan focuses on trends and longer-term changes as opposed to near-term water supply conditions and operations which Greeley already monitors. To achieve this, the Adaptive Plan takes the five actions listed below based on the major IWRP outcomes and assumptions:

1. Monitor Significant Water Resources Drivers
2. Evaluate Terry Ranch Need
3. Update 5- and 10-year Terry Ranch Implementation Plan
4. Assess Water Rights Changes and Acquisitions
5. Review Other Water Resources Opportunities

The Adaptive Plan will have both formal and informal implementation protocols. Greeley staff plan to regularly update the Adaptive Plan and present updates to the W&S Board and other identified stakeholders on at least an annual basis. The Adaptive Plan update will focus on the five actions defined above and will include the topics and types of information presented in Section 12.2.2. As needed, Greeley staff will also provide updates on Adaptive Plan actions if conditions require it or at the request of the W&S Board.

12.2.2 Adaptive Plan Actions

This section presents how Greeley staff will complete each Adaptive Plan action. The content in this section is intended as a guide to start the Adaptive Plan and can be modified and updated as the Adaptive Plan progresses.



INTEGRATED WATER RESOURCE PLAN

Recommendations and Adaptive Plan

**Action 1: Monitor Significant Water Resources Drivers**

The IWRP developed outcomes and recommendations based off assumed future drivers for Greeley's water supply system. While the IWRP utilized a robust approach to capture a variety of possible future drivers, there could be new or significantly different future drivers than what was planned for. In this first action, Greeley's Adaptive Plan will 1) compare the future drivers assumed in the IWRP Planning Scenarios to recent experiences 2) determine if new drivers have emerged that could change IWRP outcomes.

The drivers used in the IWRP Planning Scenarios were climate warming, Colorado River Basin Impacts, Water Supply System Yields, and Demands. In the Adaptive Plan, Greeley staff will characterize recent trends of each driver. If recent trends fall outside the Planning Scenarios, then Greeley may consider re-evaluating previously developed outcomes using the observed conditions as a new Planning Scenario.

There are many future conditions that could impact Greeley's water supply system that were not explicitly included as a driver in the IWRP Planning Scenarios. The Adaptive Plan will complete a table, like the one shown in **Table 12-1**, identifying major trends or events that have occurred within different geographic categories. If these trends or events are significantly different than IWRP assumptions, the Adaptive Plan could recommend a follow-up planning study to evaluate the potential changes to IWRP outcomes. The IWRP developed robust assumptions around many of these categories, and stressful events were assumed to occur – what is important is if an event is significantly different than what was assumed. For example, the IWRP developed three types of Colorado River Basin impacts that could occur because of larger Colorado River Basin issues. However, if a multi-year 100% curtailment of the CBT system is possible, the IWRP did not include that condition and Greeley could do a planning study focused on evaluating such a condition.

| Category | Example Significant Trends or Events Outside IWRP Assumption |
|--|--|
| Colorado River Basin | <ul style="list-style-type: none"> • Multi-year CBT system 100% curtailment • Northern Water eliminates carryover storage option • Chimney Hollow Reservoir construction is halted |
| State of Colorado | <ul style="list-style-type: none"> • Water court decision that retroactively applies to changed water rights • Platte River Recovery Implementation Program non-compliance by Colorado water users, threatening Federal authorization |
| Poudre/ Big Thompson River Basins | <ul style="list-style-type: none"> • A change case outcome is significantly worse than the 10% reduction assumed in the IWRP • A key source of future water supply becomes unavailable to Greeley • Glade Reservoir is constructed at largest proposed size, impacting junior water rights and operations in the Poudre Basin |
| Weld County | <ul style="list-style-type: none"> • A nearby community's water supply system at high risk of failure • Political climate around Terry Ranch becomes highly unfavorable • Large regional water project is constructed |
| City of Greeley | <ul style="list-style-type: none"> • A significant new water supply user (new residential development or industrial user) beyond the assumed growth occurs • Terry Ranch acceptance changes significantly • Water quality regulatory requirements cause Greeley to construct a new advanced water treatment facility |



INTEGRATED WATER RESOURCE PLAN

Recomendations and Adaptive Plan



Action 2: Evaluate Terry Ranch Need

Greeley’s most consequential water resources planning decision is when to begin implementation of the Terry Ranch Project and when the full project needs to be operational. When completed, this project will provide a drought-resilient supply source for Greeley. However full implementation of Terry Ranch will be expensive and completing it too soon could overburden Greeley’s customers with high rates.

Due primarily to the high uncertainty around when future demand growth resumes and the rate of growth once it does resume, the IWRP could not confidently time Terry Ranch implementation. Therefore, a key action in the Adaptive Plan will be re-evaluating the future Terry Ranch need and when the implementation of the project needs to begin. To assess this need, the Adaptive Plan will compare demand indicators to supply indicators and trigger potential actions as a result. **Figure 12-1**, which repeats Figure 9-1 shown in Section 9.2, conceptually shows why the Adaptive Plan will monitor these indicators. There is a wide spread of possible future demands as shown by the shaded area. At the same time, the demand Greeley’s water supply system can meet while meeting the planning performance criteria could gradually diminish due to the effects from climate change, water rights administration, and other factors. This is why the solid line decrease from the 2010 to 2020 value. A future with high demand growth but a resilient water supply system could require the same Terry Ranch timing as a future with low demand growth but high reductions in water supplies.

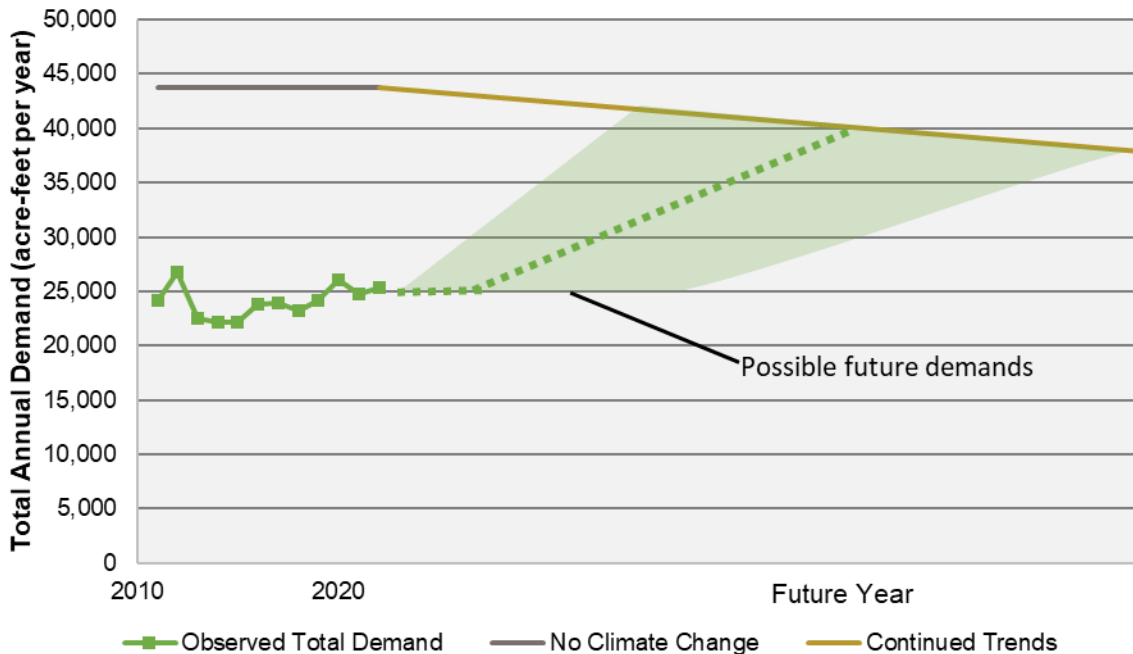


Figure 12-1. Conceptual example of timing the Terry Ranch Project showing how demands (green shaded area/dashed line) could grow while the water the supply system provides could decrease (grey and yellow line)



INTEGRATED WATER RESOURCE PLAN

Recommendations and Adaptive Plan



The purpose of the demand indicators is to establish if Greeley is experiencing significant, sustained growth in total water demand and the rate of that growth. If this demand growth is not occurring, the demand indicators will be used to anticipate if and when demand growth could resume. **Figure 12-2** is an example of how the Adaptive Plan could establish if significant and sustained demand growth is occurring. The total demand line and the year-to-year demand change bars show that since 2010 there has been minimal change in total demands. If year-to-year demand change occurs for three consecutive years and the cumulative volume of that change is greater than 2,500 acre-feet that could indicate sustained, significant demand growth. The criteria used in the Adaptive Plan may differ, but this process would establish the occurrence of sustained growth regardless of source (e.g., population, new industrial use, warming climate).

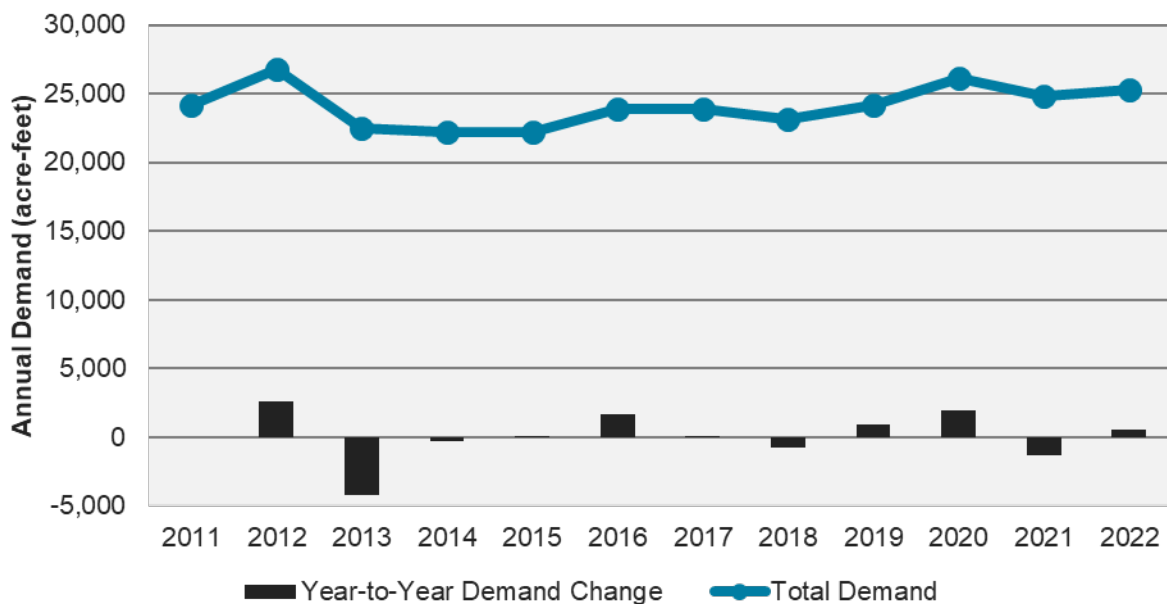


Figure 12-2. Historical Annual Total Demands and Year-to-Year Change

There are other demand indicators Greeley could use in the Adaptive Plan to monitor and assess future demands, which are described below. As the Adaptive Plan is implemented, these indicators may be updated with new indicators.

- **Residential Per Capita Demand** – This indicator will measure Greeley’s residential per capita demands and if those values are reducing, varying significantly, or stagnant year-to-year. Greeley’s future demand growth will primarily be driven by residential use. Due to improved indoor and outdoor conservation since the 2002 drought, reductions in residential per capita use have been significant enough that overall water use was flat despite population growth. Eventually reductions in residential per capita use will reach a floor after which demand growth would occur with population growth.
- **Conservation Rebate Use** – This indicator will measure how customers are utilizing rebates Greeley makes available to reduce water use. While there are many factors that affect why customers utilize rebates, multiple years with minimal rebate use despite broad community outreach and incentives could further indicate conservation measures have reached a floor.



INTEGRATED WATER RESOURCE PLAN

Recomendations and Adaptive Plan



- **Drought Restriction Use** – The IWRP used a maximum drought restriction use of 20% of years in any level and 10% of years in Level 3. If Greeley has required drought restrictions at or in excess of those assumptions (e.g., 2-in-10 years at any Level and 1-in-10 years at Level 3), that could indicate a need for the Terry Ranch Project.

In addition to the demand indicators described above, the Adaptive Plan will also monitor supply indicators to establish if the yield from Greeley’s water supply system is decreasing. These water supply indicators will emphasize the long-term trends of Greeley’s water supply system as Greeley already monitors near-term indicators such as snowpack. The Adaptive Plan will characterize the long-term health of Greeley’s Colorado system, Upper Poudre System (e.g., west of Interstate 25), and the Big Thompson System into *Resilient*, *Vulnerable*, and *Degraded* (defined below) using the visual shown in **Figure 12-3**. In this figure, the solid arrow represents the current status of each system with the arrow outline representing the previous status.

- Resilient – Yields from the system are consistent with IWRP assumptions and do not show signs of potential reduction.
- Vulnerable – Yields from this system are consistent with IWRP assumptions but do show signs of potential reduction if certain conditions emerge or persist.
- Degraded – Yields from this system are lower than IWRP assumptions.

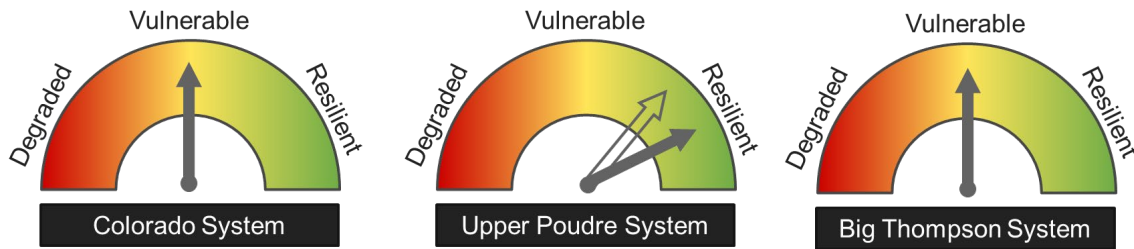


Figure 12-3. Example of how the Health of Greeley’s Water Supply Systems will be Described

The Adaptive Plan will also include a more detailed assessment of each system that justifies the overall system health characterization. **Table 12-2** lists examples of quantitative and qualitative indicators in each system that could be included in the adaptive plan.

Table 12-2. Examples of Qualitative and Quantitative Indicators to Establish System Health

| System | Quantitative Indicators | Qualitative Indicators |
|---------------------|--|---|
| Colorado | <ul style="list-style-type: none"> • CBT Quota History | <ul style="list-style-type: none"> • Political headlines and updates |
| Upper Poudre | <ul style="list-style-type: none"> • Native yields at canyon mouth • Greeley Poudre rights yield | <ul style="list-style-type: none"> • River commissioner report |
| Big Thompson | <ul style="list-style-type: none"> • GLIC allocations | <ul style="list-style-type: none"> • Natural disturbance tracking |



INTEGRATED WATER RESOURCE PLAN

Recommendations and Adaptive Plan



Action 3: Update 5- and 10-year Terry Ranch Implementation

While full implementation of the Terry Ranch Project is not defined, Greeley will continue to incrementally implement key components of the larger project. This ensures Greeley has the flexibility to fully implement the project when required by minimizing potential barriers such as right-of-way access, water rights ownership, and permits. The Adaptive Plan will update of Greeley’s 5- and 10-year Terry Ranch Implementation strategy to account for any changing conditions with the project.

Figure 12-4 shows an example of what the Adaptive Plan update of the 5- and 10-year Terry Ranch implementation could look like. In this example the planned projects within the next five years are shown by major category, which at the time of the IWRP included pipe installation, the State Land Board water court process, and future need assessment that is part of the Adaptive Plan. Greater detail about each project will be elaborated with key updates provided. The Adaptive Plan will also include regular updates on Greeley’s 10-year strategy including topics such as financial planning, partnerships, and other emerging factors. The Adaptive Plan’s Terry Ranch Implementation update will be closely tied to and aligned with any corresponding update to the CIP.

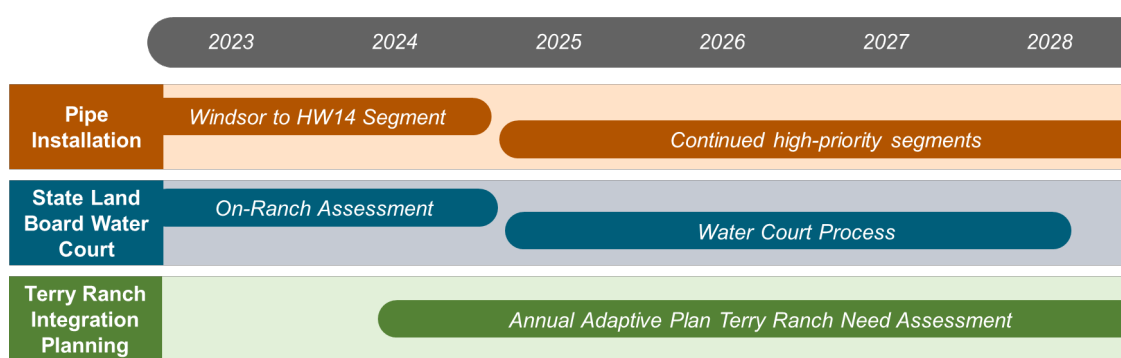


Figure 12-4. Example of 5-year Terry Ranch Implementation Plan

Action 4: Assess Water Rights Changes and Acquisitions

The IWRP recommends that Greeley changes currently owned water rights for Greeley use and continues strategically acquiring new water rights. There is significant uncertainty in the outcome of many water right changes and the competition and cost of acquiring new water rights continues to increase. The Adaptive Plan will assess how water rights changes and acquisitions are progressing compared to the IWRP goals and if changes are required.

To assess water right changes cases, the Adaptive Plan will include a figure like **Figure 12-5**. Greeley’s existing water rights portfolio will be classified into four categories: available for use, long-term leases, change in-progress, or unchanged based on acre foot estimations (e.g., the size of the wedge is an approximation of equivalent acre-foot volume as opposed to number of shares). As part of the Adaptive Plan, change case outcomes will be summarized and if those outcomes were significantly different than what was assumed.



INTEGRATED WATER RESOURCE PLAN

Recommendations and Adaptive Plan



Existing Water Rights Portfolio Status

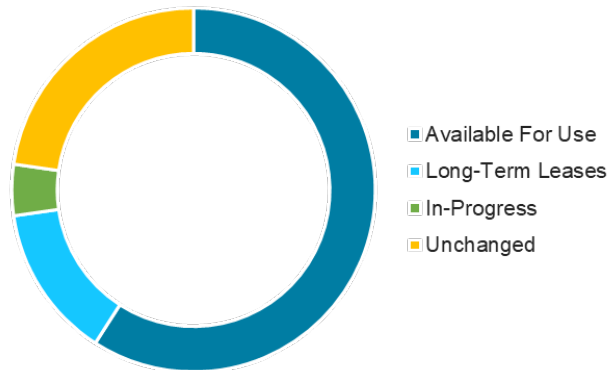


Figure 12-5. Example of How Greeley's Current Water Rights Portfolio is Characterized

Similar to the assessment of water right change case outcomes, the Adaptive Plan will also update Greeley's water rights acquisitions. Recent water right acquisitions and their purpose within Greeley's water supply system will be summarized. How water rights acquisitions are occurring compared to Greeley's water acquisition strategy will be characterized and any potential changes to that strategy discussed. The WADT will be updated as needed with new information or as acquisitions are made available to Greeley. This could include the portion of new water rights acquired for potable, non-potable, or multi-use purposes. Finally, the Adaptive Plan will include an update on the water rights landscape for the region include price changes, any major non-Greeley acquisitions, and other news that could potentially affect Greeley's acquisitions strategy.

Action 5: Review Other Water Resources Opportunities

The final action of the Adaptive Plan will be providing an update on other water resources opportunities beyond the Terry Ranch Project and water rights. Greeley will continue to invest in a variety of projects that improve the water supply system such as the non-potable system, conservation, and smaller-scale infrastructure projects. Status updates of these projects, such as function, schedule, and budget will be provided. In addition, the Adaptive Plan will provide an update on other regional projects that either could affect Greeley's water supply system or that Greeley could participate in.

An important part of this action will also be acting on new identified water resources opportunities. The Adaptive Plan will provide an update on new water resources opportunities such as decisions made, the results of any studies, and recommended next steps. For example, the IWRP identified retiming storage for Terry Ranch as a potentially effective new water resources project. Greeley is planning on evaluating in more detail retiming storage options after the IWRP. The Adaptive Plan will update what is learned from that study and any further recommendations.



INTEGRATED WATER RESOURCE PLAN

References and Supporting Documentation



13.0 REFERENCES AND SUPPORTING DOCUMENTATION

13.1 SUPPORTING DOCUMENTATION

The following supporting documentation was developed during the IWRP and is included as Appendices to this Report.

- Appendix A: Water Resources 10-year Capital Improvement Plan
- Appendix B: Demand Forecast Technical Memorandum
- Appendix C: IWRP Greeley System Model Documentation Technical Memorandum
- Appendix D: IWRP Presentation Slides

13.2 REFERENCES

BBC Research & Consulting. *City of Greeley Population and Water Demand Projections*. 2018.

CDM Smith. *Northern Integrated Supply Project Environmental Impact Statement Common Technical Platform Hydrologic Modeling Report*. 2013.

City of Fort Collins Utilities (FCU). *Water Supply Vulnerability Study*. 2019.

City of Greeley Water & Sewer Department. *Greeley System Network Model Upgrade*. 2021.

Water Research Foundation (WRF). *Joint Front Range Climate Change Vulnerability Assessment*. 2012.



Integrated Water Resources Plan (IWRP)

City of Greeley
Water and Sewer Department





Agenda

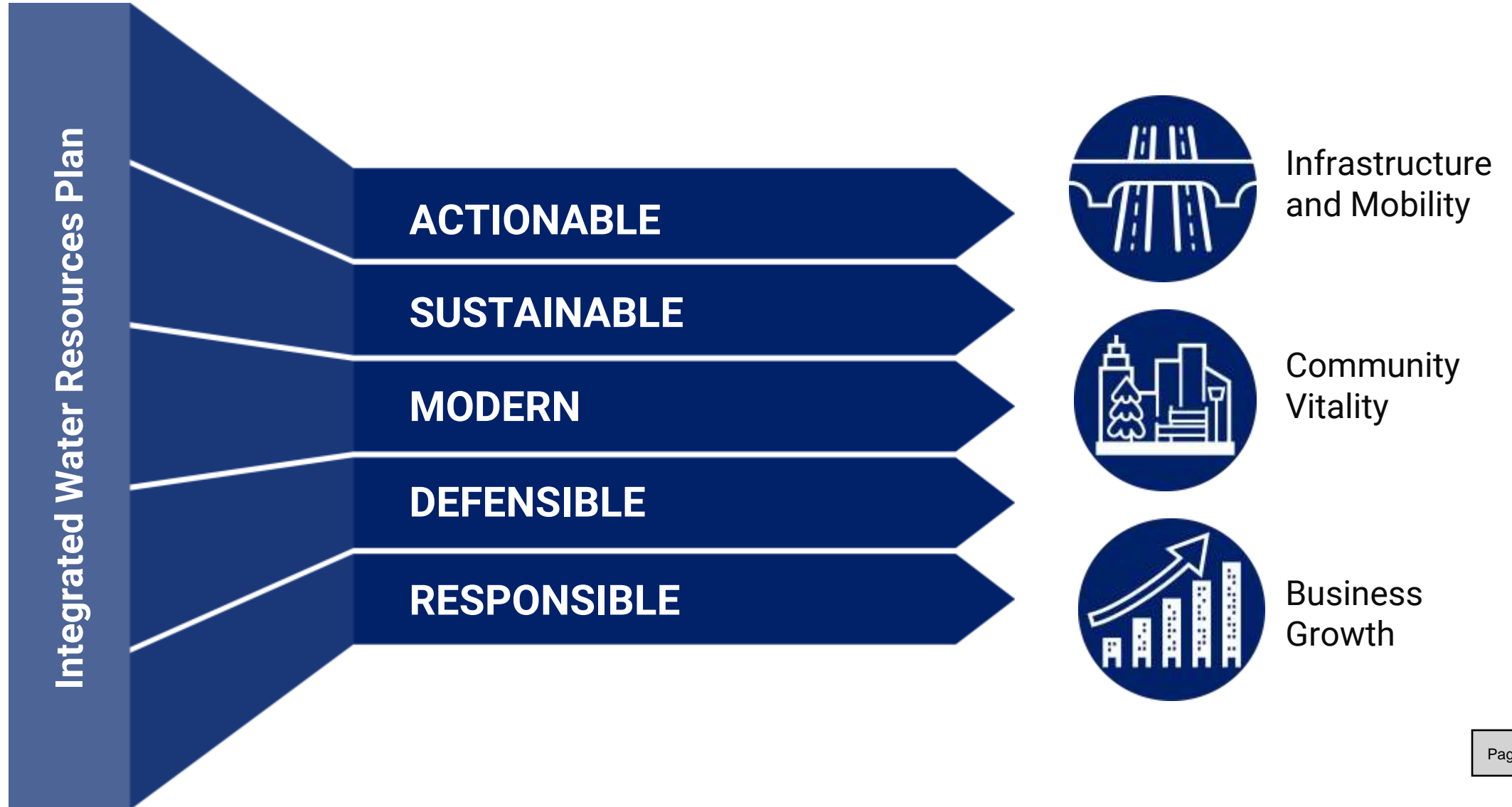
- IWRP (Master Plan) Project Team
- IWRP Plan Objectives
- Scenario Planning Overview
- IWRP Outcomes and strategic guidance
- Next Steps

TWRP Project Team

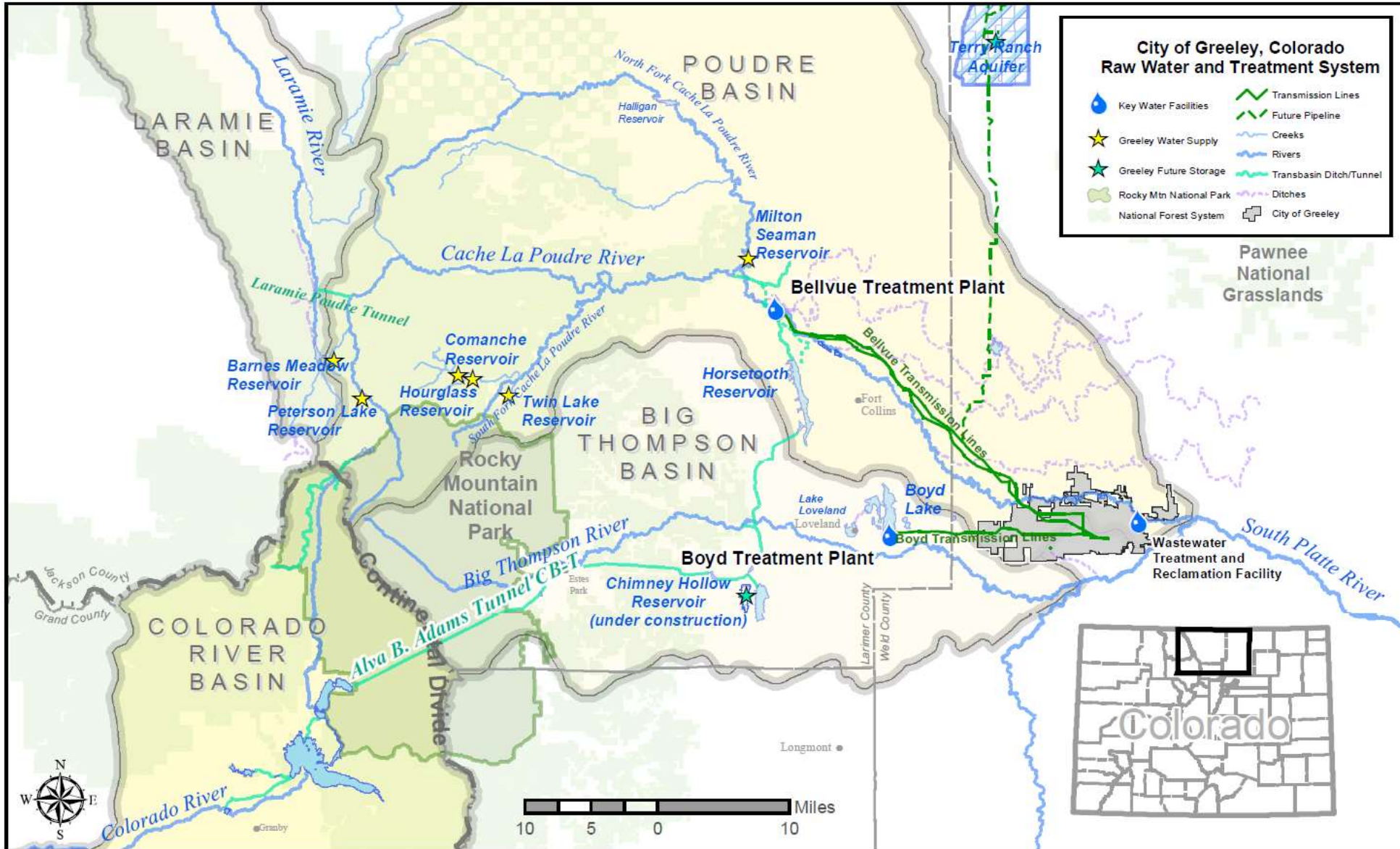
| Greeley Team Project Manager | |
|---|---|
| Kelen Dowdy | |
| Greeley Technical Team | Greeley Management Team |
| Dena Egenhoff Water Conservation Manager | Sean Chambers Water & Sewer Director |
| Erik Dial Deputy Director of Utility Finance and Customer Service | Ty Bereskie Deputy Director of Water Resources |
| Leah Hubbard Water Resource Operations Manager | Adam Prior Chief Engineer |
| Daniel Biwer Environmental & Water Resource Attorney | |

| Consultant Team Project Manager |
|---|
| Neil Stewart (Stantec) |
| Consultant Team |
| Mary Presecan (LRE Water) <i>South Platte River Basin Expert</i> |
| Cortney Brand (LRE Water) <i>Terry Ranch Groundwater Expert</i> |
| Michelle Johnson (Martin & Wood) <i>Greeley Water Rights Expert</i> |
| Adam Jokerst (West Water Research) <i>Greeley Water Resources Issues</i> |
| Paul Weiss (Williams & Weiss) <i>Greeley Water Modeling Expert</i> |

What are Greeley's IWRP objectives?

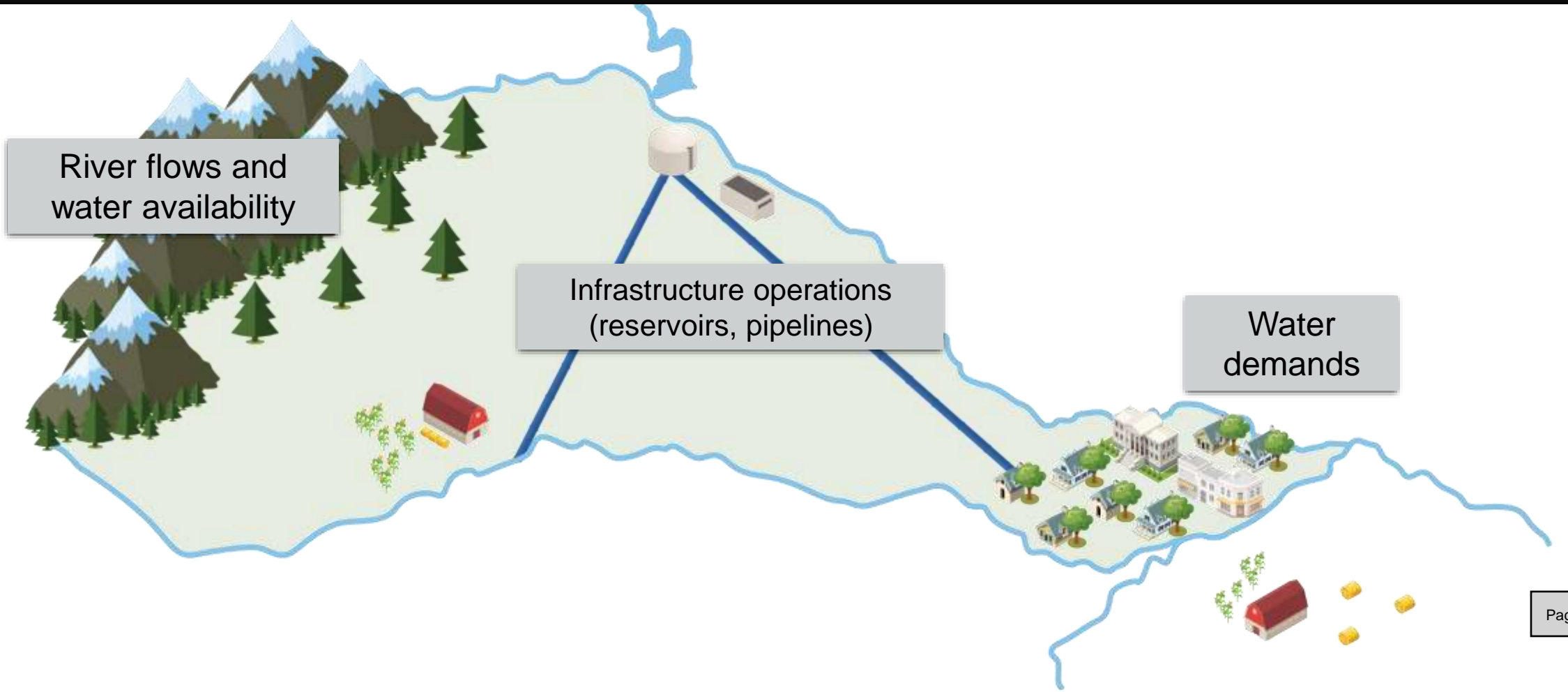


Greeley's Current Water Supply System



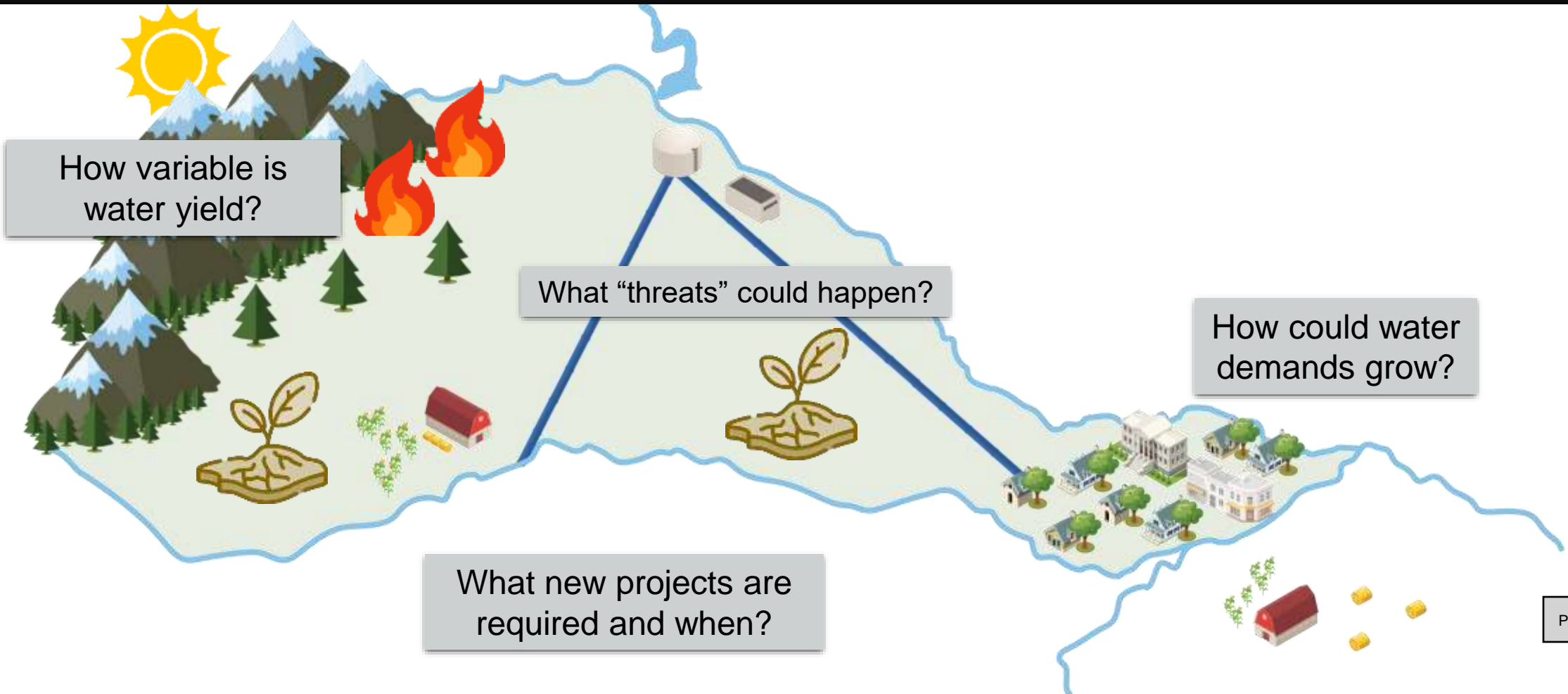
What is an IWRP?

1) Holistic, long-term evaluation of Greeley's water supply system that integrates:























What is an IWRP?

2) Evaluates how changes to future conditions impact the water supply system



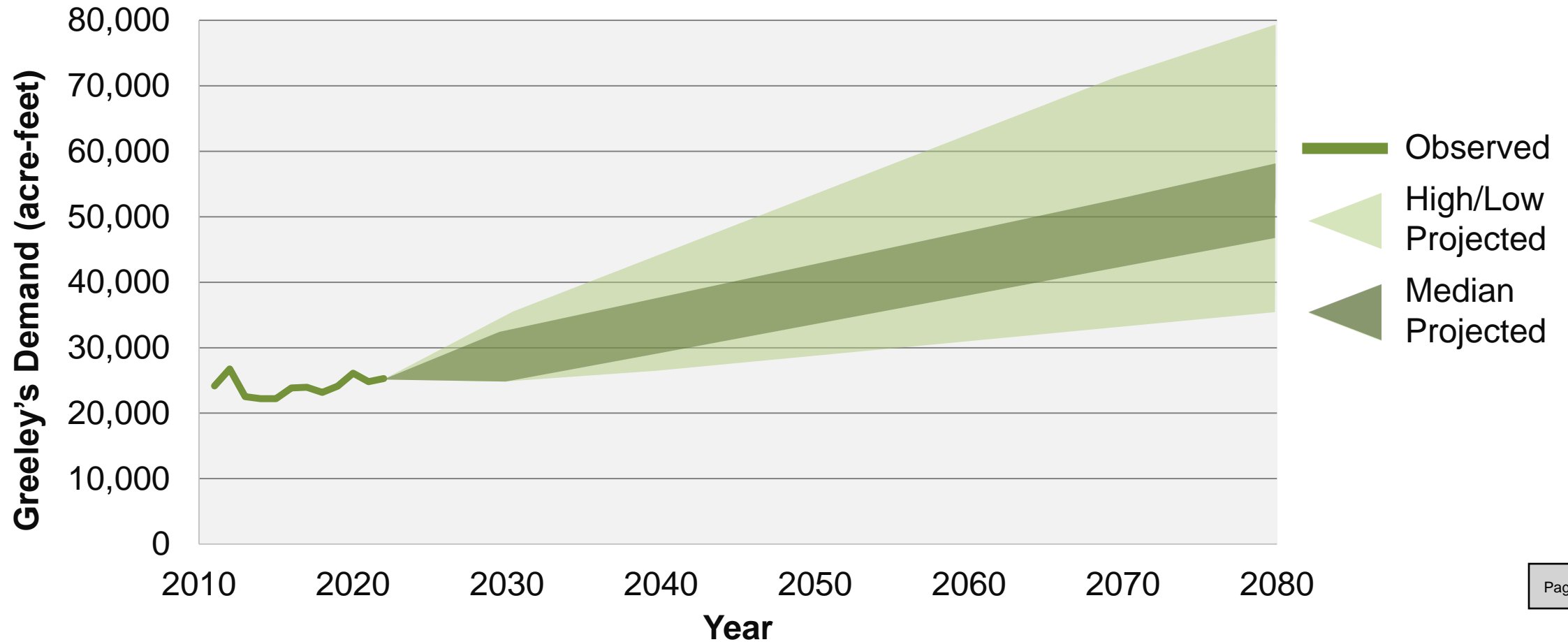
What futures did the IWRP plan for?

- “Planning Scenarios” were defined to vary future water supply conditions

| Planning Scenario Name | Climate Warming | Colorado River Basin Drought Impacts | Water Rights Administration | Demand Growth |
|------------------------|---|--|---|---|
| Unbearable |  |  High |  |  |
| Stressed |  |  Moderate |  |  |
| Continued Trends |  |  Moderate |  |  |
| Optimistic |  |  Low |  |  |
| No Climate Change |  |  Low |  |  |

What could Greeley's future water demands be?

- Unclear when demand growth will resume
- Future demands highly variable





IWRP's Strategic Plan for a Sustainable Water Supply

water supply system strategy

Build Robust Water Portfolio

- Change agricultural water rights
- Continue strategic acquisitions of surface water
- Continue investing in storage projects

Responsibly Develop Terry Ranch

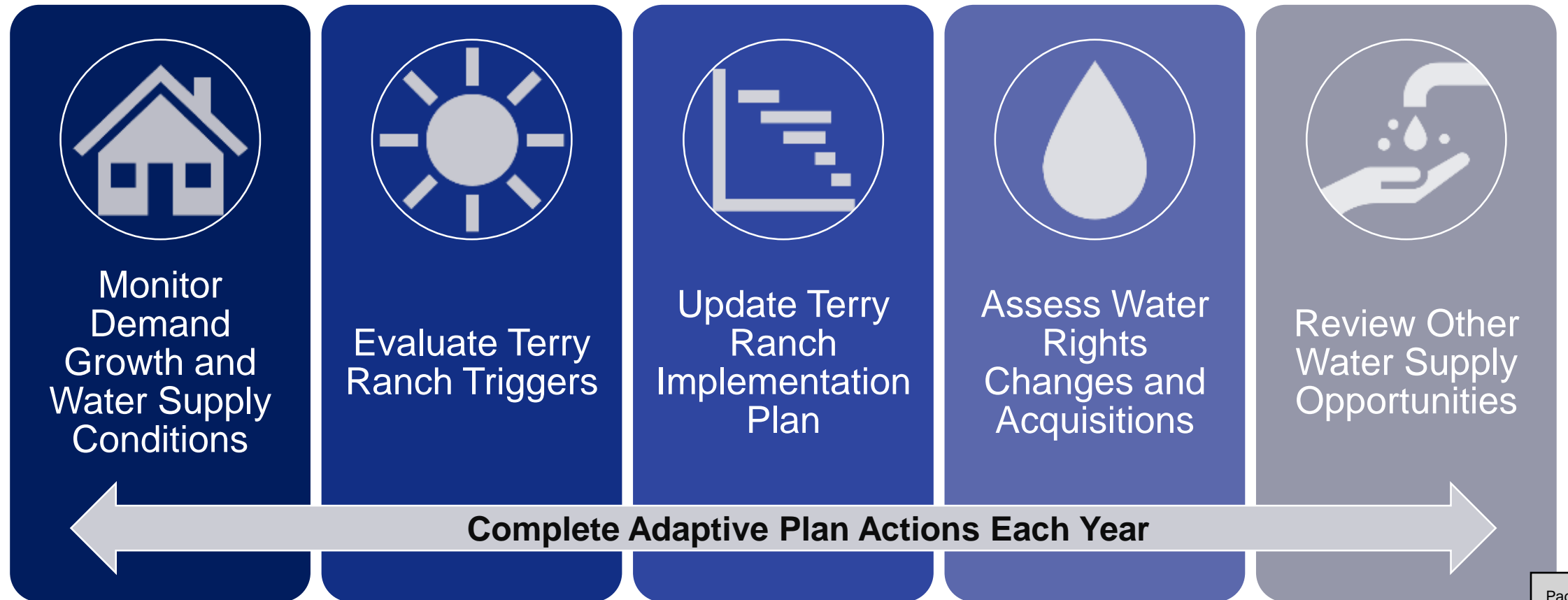
- Develop priority Terry Ranch infrastructure
- Study IWRP-recommended projects

Ensure Sustainable and Affordable Water

- Monitor demand growth and supply conditions
- Implement Adaptive Planning

Monitoring and Adaptive Management

➤ The IWRP Adaptive Plan defines actions for Greeley to take each year

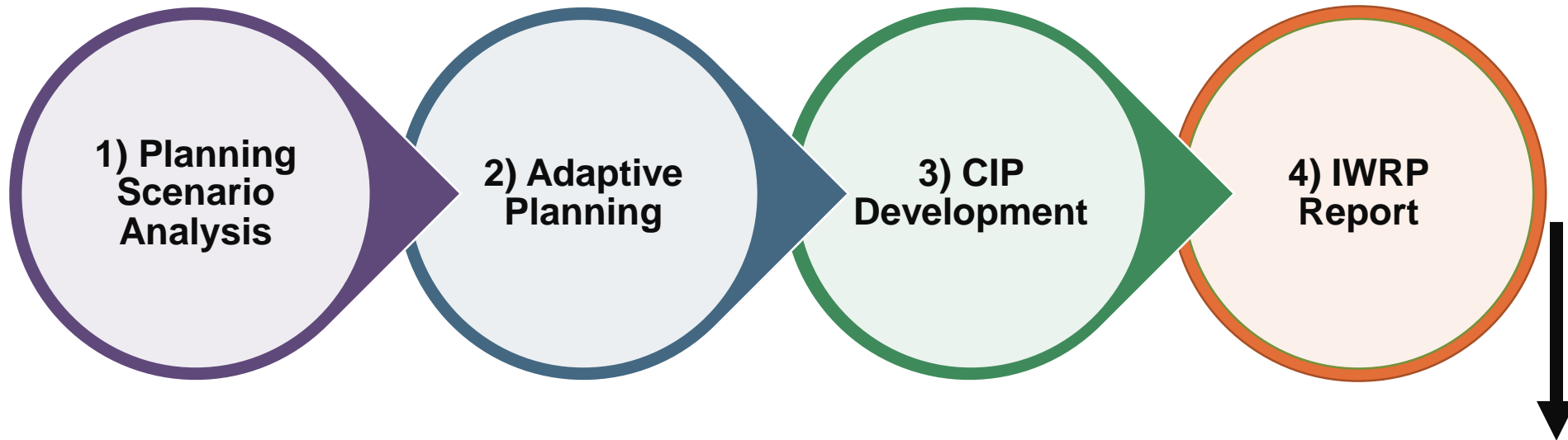


'23 IWRP Outcome Summary



- IWRP master plan will guide staff and water policy makers
- Greeley's current water supply system is robust under near-term future conditions
- The Terry Ranch Project provides drought resilient long-term water supply to Greeley's system
- Need for continued investments in infrastructure, storage and the strategic acquisition of water resources
- An annual review of trends will provide for the adaptive management of water resources, storage and infrastructure

IWRP Process and Next Steps



- City Council Work Session: 4/25
- Planning Commission: 5/9
- W&S Board Approval: 5/17
- City Council Approval: 6/6
- IWRP Plan Implementation
- Annual Performance Measurement and Analysis



Thank you





Council Agenda Summary

June 6, 2023

Key Staff Contact: Paul Trombino, Public Works Director

Title:

Consideration of a Resolution authorizing the City to enter into an intergovernmental agreement with the Colorado Department of Transportation for the Maintenance and Management of signs, markings and traffic signals within the City of Greeley

Summary:

The City has historically had an Intergovernmental Agreement (IGA) with the Colorado Department of Transportation (CDOT) to perform the maintenance of traffic control devices, such as traffic signals, signs and markings, on CDOT roadways within the City of Greeley. More specifically, CDOT reimburses the city for a portion of the maintenance and management costs associated to all traffic signals along US 34 Business (10th Street), US 34 Bypass, US 85 Business (8th Avenue) and US 85 Bypass. Additionally, as part of this IGA, CDOT makes payments to the City each year to cover the cost for the maintenance and management of the signs and markings along US 34 Business (10th Street) and US 85 Business (8th Ave).

With the current five (5) year IGA expiring this year, staff are requesting the approval of a new IGA with CDOT to continue this partnership. The new IGA will contain the same scope of work but increase reimbursement from \$300 per signal per month to \$500 per signal per month. This per signal increase will result in an annual reimbursement increase of \$89,544. This scope of work includes signal maintenance, asset management, equipment replacement (excluding signal poles) as well as all necessary signs and markings activities to ensure the safe and efficient movement of those traveling.

Fiscal Impact:

| | |
|---|--------------|
| Does this item create a fiscal impact on the City of Greeley? | Yes |
| If yes, what is the initial, or, onetime impact? | \$365,820 |
| What is the annual impact? | \$698,445 |
| What fund of the City will provide Funding? | General Fund |
| What is the source of revenue within the fund? | Sales Tax |
| Is there grant funding for this item? | No |
| If yes, does this grant require a match? | N/A |
| Is this grant onetime or ongoing? | N/A |

Legal Issues:

None.

Other Issues and Considerations:

None.

Strategic Focus Area:



Infrastructure and Mobility



Quality of Life

Decision Options:

- 1) Adopt the resolution as presented; or
- 2) Amend the resolution and adopt as amended; or
- 3) Deny the resolution; or
- 4) Continue consideration of the resolution to a date certain.

Council's Recommended Action:

A motion to adopt the Resolution.

Attachments:

Resolution

Intergovernmental Agreement

**CITY OF GREELEY, COLORADO
RESOLUTION 18, 2023**

**RESOLUTION AUTHORIZING THE CITY TO ENTER INTO
AN INTERGOVERNMENTAL AGREEMENT WITH
THE COLORADO DEPARTMENT OF TRANSPORTATION FOR
THE MAINTENANCE AND MANAGEMENT OF SIGNS, MARKINGS AND
TRAFFIC SIGNALS WITHIN THE CITY OF GREELEY**

WHEREAS, the City currently has an existing Intergovernmental Agreement (“IGA”) with the Colorado Department of Transportation (“CDOT”) authorizing the City to perform maintenance of traffic infrastructure on US Highway 34 Business, US Highway 34 Bypass, US Highway 85 Business and US Highway 85 Bypass;

WHEREAS, the IGA is set to expire and staff seeks Council approval to enter into a new IGA in order to continue this long-standing partnership;

WHEREAS, the new IGA has the same scope of work as the existing IGA; and

WHEREAS, the new IGA provides that CDOT will pay the City \$500 per month annually during the term of the agreement for signal management and maintenance, and \$300 per mile for signs and markings maintenance; and

WHEREAS, the new IGA provides for total revenue to the City of \$1,829,100 (\$365,820 per year x 5 years) for the signal management and maintenance, and signs and markings maintenance performed on US Highway 34 Business, US Highway 34 Bypass, US Highway 85 Business and US Highway 85 Bypass by the City; and

WHEREAS, IGAs are authorized by C.R.S. §§43-2-103, and 43-2-144; and

WHEREAS, the City and CDOT have agreed to the terms and conditions of the new IGA, which is attached hereto and incorporated herein as Exhibit A;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GREELEY,
COLORADO:**

Section 1. The City is hereby authorized to enter into an IGA with CDOT, wherein CDOT will pay the City for the management and maintenance of traffic signals and signs and markings on US HIGHWAY 34 Business, US HIGHWAY 34 Bypass, US HIGHWAY 85 Business and US HIGHWAY 85 Bypass.

Section 2. City staff is hereby authorized to make changes and modifications to the IGA, so long as the substance of the IGA remains unchanged.

Section 3. This Resolution shall become effective immediately upon its passage.

PASSED, AND ADOPTED, SIGNED AND APPROVED this ____ day of _____, 2023.

ATTEST:

**THE CITY OF GREELEY,
COLORADO**

By: _____
City Clerk

By: _____
Mayor

(State \$Traffic Mtce)
CITY OF GREELEY

Rev 10/03
Region: 4 (TCH)

CONTRACT

THIS AGREEMENT is entered into by and between the CITY OF GREELEY (hereinafter called the “Local Agency”), and the STATE OF COLORADO acting by and through the Department of Transportation (hereinafter called the “State” or “CDOT”).

RECITALS:

1. Authority exists in the law and funds have been budgeted, appropriated and otherwise made available and a sufficient uncommitted balance thereof remains available for payment of project and Local Agency costs. Total Contract Amount: \$1,829,100.00.
2. Required approval, clearance and coordination have been accomplished from and with appropriate agencies.
3. Section 43-2-102 and 103, C.R.S., require the State to maintain State highways (including where such highways extend through a city or an incorporated town), and Section 43-2-135(1)(i), C.R.S., as amended, requires the State to install, operate, maintain and control, at State expense, all traffic control devices on the State highway system within cities and incorporated towns.
4. The parties desire to enter this contract for the Local Agency to provide some or all of the certain Highway maintenance services on State highways that are the responsibility of the State under applicable law, and for the State to pay the Local Agency a reasonable negotiated fixed rate for such services.
5. The parties also intend that the Local Agency shall remain responsible to perform any services and duties on State highways that are the responsibility of the Local Agency under applicable law, at its own cost.
6. The State and the Local Agency have the authority, as provided in Sections 29-1-203, 43-1-106, 43-2-103, 43-2-104, and 43-2-144, C.R.S., as amended, and if applicable, in an ordinance or resolution duly passed and adopted by the Local Agency, to enter into contract with the Local Agency for the purpose of maintenance of traffic control devices on the State highway system as hereinafter set forth.
7. The Local Agency has adequate facilities to perform the desired maintenance services on State highways within its jurisdiction.

THE PARTIES NOW AGREE THAT:

Section 1. Scope of Work

The Local Agency shall perform all maintenance services for the specified locations located within the Local Agency's jurisdiction and described in **Exhibit A**. Such services and highways are further detailed in Section 5.

Section 2. Order of Precedence

In the event of conflicts or inconsistencies between this contract and its exhibits, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

1. Special Provisions contained in section 22 of this contract
2. This contract
3. **Exhibit A** (Scope of Work)
4. **Exhibit C** (Option Letter)
5. **Exhibit D** (Encumbrance Letter)
6. **Exhibit E** (PII Certification)
7. **Exhibit B** (Local Agency Resolution).

Section 3. Term

This contract shall be effective upon the date signed/approved by the State Controller, or designee, or on July 1, 2023, whichever is later. The term of this contract shall terminate on June 30, 2028. Provided, however, that the State's financial obligation for each subsequent, consecutive fiscal year of that term after the first fiscal year shall be subject to and contingent upon funds for each subsequent year being appropriated, budgeted, and otherwise made available therefor.

Section 4. Project Funding and Payment Provisions

- A. The Local Agency has estimated the total cost of the work and is prepared to accept the State funding for the work, as may be evidenced by an appropriate ordinance or resolution duly passed and adopted by the authorized

representatives of the Local Agency, which expressly authorizes the Local Agency to enter into this contract and to complete the work under the project. A copy of any such ordinance or resolution is attached hereto and incorporated herein as **Exhibit B**.

- B. Subject to the terms of this contract, for the satisfactory performance of the maintenance services on the Highways, as described in Section 5, the State shall pay the Local Agency on a lump sum basis, payable in monthly installments, upon receipt of the Local Agency's Statements, as provided herein.
- C. The State shall pay the Local Agency for the satisfactory operation and maintenance of traffic control devices under this agreement at the rates described in **Exhibit A**.
- D. The Local Agency will provide maintenance services as described in **Exhibit A**, for a **total maximum amount of \$365,820.00 per State fiscal year, and a maximum contract total shall not exceed the cumulative five-year total of \$1,829,100.00**. The negotiated rate per location shall remain fixed for the full five-year term of the contract, unless this rate is renegotiated in accord with the procedure set forth herein in Section 17. The total payments to the Local Agency during the term of this contract shall not exceed that maximum amount, unless this contract is amended. The Local Agency will bill the State monthly and the State will pay such bills within 45 days.
- E. The Statements submitted by the Local Agency for which payment is requested shall contain an adequate description of the type(s) and the quantity(ies) of the maintenance services performed, the date(s) of that performance, and on which specific sections of the highways such services were performed, in accord with standard Local Agency billing standards.
- F. If the Local Agency fails to satisfactorily perform the maintenance services or if the Statement submitted by the Local Agency does not adequately document the payment requested, after notice thereof from the State, the State may deduct and retain a proportionate amount from the monthly payment, based on the above rate, for that segment or portion.

Section 5: State & Local Agency Commitments:

- A. The Local Agency shall perform the maintenance services for the certain State highway system locations described herein. Such services and locations are detailed in **Exhibit A**.
- B. The Local Agency shall operate and maintain the specific traffic control devices, and at the particular locations, all as listed on **Exhibit A**, in a manner that is consistent with current public safety standards on State highways within its jurisdictional limits, and in conformance with applicable portions of the "Manual on Uniform Traffic Control Devices" and the "Colorado Supplement" thereto, which are referred to collectively as the "Manual" and which are incorporated herein by reference as terms and conditions of this agreement. The Local Agency shall provide all personnel, equipment, and other services necessary to satisfactorily perform such operation and maintenance.
- C. The Parties shall have the option to add or delete, at any time during the term of this agreement and subject to §17 of this agreement, one or more specific traffic control devices to the list shown in **Exhibit A** and therefore amend the maintenance services to be performed by the Local Agency under this agreement. The State may amend **Exhibit A** by written notice to the Local Agency using an Option Letter substantially equivalent to **Exhibit C**.
- D. The Local Agency may propose, in writing, other potential specific traffic control devices to be operated and maintained by the Local Agency during the term of this agreement, based on the same rates that had been initially agreed to by the Local Agency in **Exhibit A**. If the State determines in writing that operation and maintenance of those other devices by the Local Agency is appropriate, and is desirable to the State, and if the State agrees to add such devices to this agreement, then the State shall, by written Option Letter issued to the Local Agency in a form substantially equivalent to **Exhibit C**, add such devices to this contract.
- E. The Local Agency shall perform all maintenance services on an annual basis. The Local Agency's performance of such services shall comply with the same standards that are currently used by the State for the State's performance of such services, for similar type highways with similar use, in that year, as determined by the State. The State's Regional Transportation Director, or his representative, shall determine the then current applicable maintenance standards for the maintenance services. Any standards/directions provided by the State's representative to the Local Agency concerning the maintenance services shall be in writing. The Local Agency shall contact the State Region office and obtain those standards before the Local Agency performs such services.

Section 6. Record Keeping

The Local Agency shall maintain a complete file of all records, documents, communications, and other written materials that pertain to the costs incurred under this contract. The Local Agency shall maintain such records for a period of three (3) years after the date of termination of this contract or final payment hereunder, whichever is later, or for such further period as may be necessary to resolve any matters which may be pending. The Local Agency shall

make such materials available for inspection at all reasonable times and shall permit duly authorized agents and employees of the State and, if applicable, FHWA to inspect the project and to inspect, review and audit the project records.

Section 7. Termination Provisions

This contract may be terminated as follows:

- A. This contract may be terminated by either party, but only at the end of the State fiscal year (June 30), and only upon written notice thereof sent by registered, prepaid mail and received by the non-terminating party, not later than 30 calendar days before the end of that fiscal year. In that event, the State shall be responsible to pay the Local Agency only for that portion of the highway maintenance services actually and satisfactorily performed up to the effective date of that termination, and the Local Agency shall be responsible to provide such services up to that date, and the parties shall have no other obligations or liabilities resulting from that termination.

Notwithstanding subparagraph A above, this contract may also be terminated as follows:

- B. Termination for Convenience. The State may terminate this contract at any time the State determines that the purposes of the distribution of moneys under the contract would no longer be served by completion of the project. The State shall effect such termination by giving written notice of termination to the Local Agency and specifying the effective date thereof, at least twenty (20) days before the effective date of such termination.
- C. Termination for Cause. If, through any cause, the Local Agency shall fail to fulfill, in a timely and proper manner, its obligations under this contract, or if the Local Agency shall violate any of the covenants, agreements, or stipulations of this contract, the State shall thereupon have the right to terminate this contract for cause by giving written notice to the Local Agency of its intent to terminate and at least ten (10) days opportunity to cure the default or show cause why termination is otherwise not appropriate. In the event of termination, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports or other material prepared by the Local Agency under this contract shall, at the option of the State, become its property, and the Local Agency shall be entitled to receive just and equitable compensation for any services and supplies delivered and accepted. The Local Agency shall be obligated to return any payments advanced under the provisions of this contract.

Notwithstanding the above, the Local Agency shall not be relieved of liability to the State for any damages sustained by the State by virtue of any breach of the contract by the Local Agency, and the State may withhold payment to the Local Agency for the purposes of mitigating its damages until such time as the exact amount of damages due to the State from the Local Agency is determined.

If after such termination it is determined, for any reason, that the Local Agency was not in default or that the Local Agency's action/inaction was excusable, such termination shall be treated as a termination for convenience, and the rights and obligations of the parties shall be the same as if the contract had been terminated for convenience, as described herein.

- D. Termination Due to Loss of Funding. The parties hereto expressly recognize that the Local Agency is to be paid, reimbursed, or otherwise compensated with federal and/or State funds which are available to the State for the purposes of contracting for the project provided for herein, and therefore, the Local Agency expressly understands and agrees that all its rights, demands and claims to compensation arising under this contract are contingent upon availability of such funds to the State. In the event that such funds or any part thereof are not available to the State, the State may immediately terminate or amend this contract.

Section 8. Legal Authority

The Local Agency warrants that it possesses the legal authority to enter into this contract and that it has taken all actions required by its procedures, by-laws, and/or applicable law to exercise that authority, and to lawfully authorize its undersigned signatory to execute this contract and to bind the Local Agency to its terms. The person(s) executing this contract on behalf of the Local Agency warrants that such person(s) has full authorization to execute this contract.

Section 9. Representatives and Notice

The State will provide liaison with the Local Agency through the State's Region Director, Region 4, 10601 West 10th Street, Greeley, CO 80634. Said Region Director will also be responsible for coordinating the State's activities under this contract and will also issue a "Notice to Proceed" to the Local Agency for commencement of the work. All communications relating to the day-to-day activities for the work shall be exchanged between representatives of the State's Transportation Region 4 and the Local Agency. All communication, notices, and correspondence shall be addressed to the individuals identified below. Either party may from time to time designate in writing new or substitute representatives.

If to State

CDOT Region: 4
Jonathan Woodworth
Project Manager
10601 West 10th Street
Greeley, CO 80634
970-350-2166
jonathan.woodworth@state.co.us

If to the Local Agency

City of Greeley
Will Jones
Public Works Deputy Director
1300 A Street Building G
Greeley, CO 80631
970-350-9751
will.jones@greeleygov.com

Section 10. Successors

Except as herein otherwise provided, this contract shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

Section 11. Third Party Beneficiaries

It is expressly understood and agreed that the enforcement of the terms and conditions of this contract and all rights of action relating to such enforcement, shall be strictly reserved to the State and the Local Agency. Nothing contained in this contract shall give or allow any claim or right of action whatsoever by any other third person. It is the express intention of the State and the Local Agency that any such person or entity, other than the State or the Local Agency receiving services or benefits under this contract shall be deemed an incidental beneficiary only.

Section 12. Governmental Immunity

Notwithstanding any other provision of this contract to the contrary, no term or condition of this contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, § 24-10-101, et seq., C.R.S., as now or hereafter amended. The parties understand and agree that liability for claims for injuries to persons or property arising out of negligence of the State of Colorado, its departments, institutions, agencies, boards, officials and employees is controlled and limited by the provisions of § 24-10-101, et seq., C.R.S., as now or hereafter amended and the risk management statutes, §§ 24-30-1501, et seq., C.R.S., as now or hereafter amended.

Section 13. Severability

To the extent that this contract may be executed and performance of the obligations of the parties may be accomplished within the intent of the contract, the terms of this contract are severable, and should any term or provision hereof be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other term or provision hereof.

Section 14. Waiver

The waiver of any breach of a term, provision, or requirement of this contract shall not be construed or deemed as a waiver of any subsequent breach of such term, provision, or requirement, or of any other term, provision or requirement.

Section 15. Entire Understanding

This contract is intended as the complete integration of all understandings between the parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein by writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a writing executed by the parties and approved pursuant to the State Fiscal Rules.

Section 16. Survival of contract Terms

Notwithstanding anything herein to the contrary, the parties understand and agree that all terms and conditions of this contract and the exhibits and attachments hereto which may require continued performance, compliance or effect beyond the termination date of the contract shall survive such termination date and shall be enforceable by the State as provided herein in the event of such failure to perform or comply by the Local Agency.

Section 17. Modification and Amendment

This contract is subject to such modifications as may be required by changes in federal or State law, or their implementing regulations. Any such required modification shall automatically be incorporated into and be part of this

contract on the effective date of such change as if fully set forth herein. Except as provided above, no modification of this contract shall be effective unless agreed to in writing by both parties in an amendment to this contract that is properly executed and approved in accordance with applicable law.

A. Amendment

Either party may suggest renegotiation of the terms of this contract, provided that the contract shall not be subject to renegotiation more often than annually, and that neither party shall be required to renegotiate. If the parties agree to change the provisions of this contract, the renegotiated terms shall not be effective until this contract is amended/modified accordingly in writing. Provided, however, that the rates will be modified in accordance with applicable cost accounting principles and standards (including sections 24-107-101, et seq., C.R.S. and implementing regulations), and be based on an increase/decrease in the "allowable costs" of performing the Work. Any such proposed renegotiation shall not be effective unless agreed to in writing by both parties in an amendment to this contract that is properly executed and approved by the State Controller or delegee. Any such rate change will go into effect on the first day of the first month following the amendment execution date.

B. Option Letter

- a. The State may increase/decrease the quantity of goods/services described in **Exhibit A** at the same unit prices (rates) originally established in the contract. The State may exercise the option by written notice to the Local Agency in a form substantially equivalent to **Exhibit C**.
- b. As a result of increasing/decreasing the locations, the State may also unilaterally increase/decrease the maximum amount payable under this contract based upon the unit prices (rates) originally established in the contract and the schedule of services required, as set by the terms of this contract. The State may exercise the option by providing a fully executed option to the Local Agency, in a form substantially equivalent to **Exhibit C**, immediately upon signature of the State Controller or an authorized delegate. The Option Letter shall not be deemed valid until signed by the State Controller or an authorized delegate. Any such rate change will go into effect on the first day of the first month following the option letter execution date.

C. State Encumbrance Letter

The State may encumber the funds up to the maximum amount allowed during a given fiscal year by unilateral execution of an encumbrance letter in a form substantially equivalent to **Exhibit D**. The State shall provide a fully executed encumbrance letter to the Local Agency after execution. Delivery/performance of the goods/services shall continue at the same rate and under the same terms as established in the contract.

Section 18. Disputes

Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract, which is not disposed of by agreement, will be decided by the Chief Engineer of the Department of Transportation. The decision of the Chief Engineer will be final and conclusive unless, within 30 calendar days after the date of receipt of a copy of such written decision, the Local Agency mails or otherwise furnishes to the State a written appeal addressed to the Executive Director of the Department of Transportation. In connection with any appeal proceeding under this clause, the Local Agency shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Local Agency shall proceed diligently with the performance of the contract in accordance with the Chief Engineer's decision. The decision of the Executive Director or his duly authorized representative for the determination of such appeals will be final and conclusive and serve as final agency action. This dispute clause does not preclude consideration of questions of law in connection with decisions provided for herein. Nothing in this contract, however, shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

Section 19. Does not supersede other agreements

This contract is not intended to supersede or affect in any way any other agreement (if any) that is currently in effect between the State and the Local Agency for other "maintenance services" on State Highway rights-of-way within the jurisdiction of the Local Agency. Also, the Local Agency shall also continue to perform, at its own expense, all such activities/duties (if any) on such State Highway rights-of-ways that the Local Agency is required by applicable law to perform.

Section 20. Subcontractors

The Local Agency may subcontract for any part of the performance required under this contract, subject to the Local Agency first obtaining approval from the State for any particular subcontractor. The State understands that the Local Agency may intend to perform some or all of the services required under this contract through a subcontractor. The Local Agency agrees not to assign rights or delegate duties under this contract [or subcontract any part of the performance required under the contract] without the express, written consent of the State, which shall not be

unreasonably withheld. Except as herein otherwise provided, this agreement shall inure to the benefit of and be binding only upon the parties hereto and their respective successors and assigns.

Section 21. COLORADO SPECIAL PROVISIONS (COLORADO FISCAL RULE 3-3)

These Special Provisions apply to all contracts. Contractor refers to Local Agency.

A. STATUTORY APPROVAL. §24-30-202(1), C.R.S.

This Contract shall not be valid until it has been approved by the Colorado State Controller or designee. If this Contract is for a Major Information Technology Project, as defined in §24-37.5-102(2.6), then this Contract shall not be valid until it has been approved by the State's Chief Information Officer or designee.

B. FUND AVAILABILITY. §24-30-202(5.5), C.R.S.

Financial obligations of the State payable after the current State Fiscal Year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. GOVERNMENTAL IMMUNITY.

Liability for claims for injuries to persons or property arising from the negligence of the Parties, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

D. INDEPENDENT CONTRACTOR

Contractor shall perform its duties hereunder as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of the State. Contractor shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. **Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (ii) provide proof thereof when requested by the State, and (iii) be solely responsible for its acts and those of its employees and agents.**

E. COMPLIANCE WITH LAW.

Contractor shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. CHOICE OF LAW, JURISDICTION, AND VENUE.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. PROHIBITED TERMS.

Any term included in this Contract that requires the State to indemnify or hold Contractor harmless; requires the State to agree to binding arbitration; limits Contractor's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Nothing in this Contract shall be construed as a waiver of any provision of §24-106-109 C.R.S. Any term included in this Contract that limits Contractor's liability that is not void under this section shall apply only in excess of any insurance to be maintained under this Contract, and no insurance policy shall be interpreted as being subject to any limitations of liability of this Contract.

H. SOFTWARE PIRACY PROHIBITION.

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of this Contract and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Contractor is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. §§24-18-201 and 24-50-507, C.R.S.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Contract. Contractor has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Contractor's services and Contractor shall not employ any person having such known interests.

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Section 22. SIGNATURE PAGE

THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT

* Persons signing for the Local Agency hereby swear and affirm that they are authorized to act on the Local Agency's behalf and acknowledge that the State is relying on their representations to that effect.

| | |
|--|--|
| <p align="center">THE LOCAL AGENCY CITY OF GREELEY</p> <p>Name: _____ (print name)</p> <p>Title: _____ (print title)</p> <p>_____</p> <p align="center">*Signature</p> <p>Date: _____</p> | <p align="center">STATE OF COLORADO Jared S. Polis Department of Transportation</p> <p>By _____</p> <p align="center">Keith Stefanik, P.E., Chief Engineer (For) Shoshana M. Lew, Executive Director</p> <p>Date: _____</p> |
| <p>2nd Local Agency Signature if needed</p> <p>Name: _____ (print name)</p> <p>Title: _____ (print title)</p> <p>_____</p> <p align="center">*Signature</p> <p>Date: _____</p> | <p align="center">STATE OF COLORADO LEGAL REVIEW Philip J. Weiser, Attorney General</p> <p>By _____</p> <p align="center">Signature – Assistant Attorney General</p> <p>Date: _____</p> |

ALL AGREEMENTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State agreements. This agreement is not valid until signed and dated below by the State Controller or delegate. The Local Agency is not authorized to begin performance until such time. If the Local Agency begins performing prior thereto, the State of Colorado is not obligated to pay the Local Agency for such performance or for any goods and/or services provided hereunder.

| |
|--|
| <p align="center">STATE OF COLORADO STATE CONTROLLER Robert Jaros, CPA, MBA, JD</p> <p>By: _____</p> <p align="center">Colorado Department of Transportation</p> <p>Date: _____</p> |
|--|

EXHIBIT A - SCOPE OF WORK**City of Greeley****Traffic Signals, Traffic Stencil Markings, Traffic Long Line Markings and
Traffic Control Devices Maintenance Scope of Work****I. General**

The city shall operate and maintain as described below, the traffic signals, all crosswalk markings, stop bar markings, symbol markings, lane striping and traffic control devices under the responsibility of the State in accordance with CRS 43-2-135. All other traffic control devices in the State Right of Way that are not the State's responsibility shall also be maintained by the city in accordance with CRS 43-2-135.

1. Operation and maintenance of identified infrastructure will include items and activities as listed under Section IV and Section V below.
2. CDOT may conduct periodic, random inspections at any time of any device to ensure compliance with this contract. CDOT shall notify the city of the date and locations of inspections along with any findings.

II. Documentation and Record-Keeping

1. In accordance with Sections IV and V of this contract, all maintenance, operations, and inspections as required by this contract shall be documented and submitted by April 10th annually to CDOT. All inspections shall occur in the corresponding CDOT fiscal year. City shall use the required CDOT form or method agreed upon between the city and CDOT for inspection documentation.

III. Control of Work in the ROW

All work as required by this contract shall meet all current CDOT and/or local requirements, standards, laws, guidelines whichever is more stringent as agreed upon between the city and CDOT for the design, construction, maintenance, operation, and repair.

Either agency making changes to traffic control devices, other than routine maintenance or upgrades to current standards, affected by this contract, or new installations of traffic control devices, shall provide adequate notification via email, (4 weeks minimum) of the changes or additions to the other agency to allow analysis, review, and approval. The CDOT Traffic Engineer shall have final approval.

CDOT and the city shall be given minimum three-day (3-day) advance notice of scheduled work related to the Intergovernmental Agreement (IGA) that may affect the traveled way of the highways. CDOT may request copies of traffic control plans, method of handling traffic, or other traffic control engineering as applicable.

The city is responsible for all traffic control for all work related to this IGA. For CDOT projects, in CDOT right-of-way, within the city limits, CDOT shall share the approved traffic controls plans for the project with the city.

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IV. Traffic Signals

A. Location Listing

The following list of signalized intersections are to be maintained by the city.

Table 4-A

| | Highway | Location | At Milepost |
|----|---------------------------------------|----------------------------|------------------|
| 1 | US 34 (Bypass) | 8 th Ave | 034A - MP 112.59 |
| 2 | US 34 (Bypass) | 11 th Ave | 034A - MP 112.23 |
| 3 | US 34 (Bypass) | 17 th Ave | 034A - MP 111.74 |
| 4 | US 34 (Bypass) | 23 rd Ave Ramps | 034A - MP 111.23 |
| 5 | US 34 (Bypass) | 35 th Ave | 034A - MP 110.23 |
| 6 | US 34 (Bypass) | 47 th Ave | 034A - MP 109.11 |
| 7 | US 34 (Bypass) | 65 th Ave | 034A - MP 107.61 |
| 8 | US 34 (Bypass) | 83 rd Ave | 034A - MP 105.91 |
| 9 | US 34 (Bypass) | Promontory Pkwy | 034A - MP 103.80 |
| 10 | US 34 (Business)(10 th St) | 9 th Ave | 034D - MP 10.10 |
| 11 | US 34 (Business)(10 th St) | 10 th Ave | 034D - MP 10.00 |
| 12 | US 34 (Business)(10 th St) | 11 th Ave | 034D - MP 9.82 |
| 13 | US 34 (Business)(10 th St) | 14 th Ave | 034D - MP 9.54 |
| 14 | US 34 (Business)(10 th St) | 23 rd Ave | 034D - MP 8.77 |
| 15 | US 34 (Business)(10 th St) | 26 th Ave | 034D - MP 8.42 |
| 16 | US 34 (Business)(10 th St) | 28 th Ave | 034D - MP 8.25 |
| 17 | US 34 (Business)(10 th St) | 35 th Ave | 034D - MP 7.85 |
| 18 | US 34 (Business)(10 th St) | 37 th Ave | 034D - MP 7.57 |
| 19 | US 34 (Business)(10 th St) | 39 th Ave | 034D - MP 7.32 |
| 20 | US 34 (Business)(10 th St) | 43 rd Ave | 034D - MP 7.15 |
| 21 | US 34 (Business)(10 th St) | 45 th Ave | 034D - MP 7.00 |
| 22 | US 34 (Business)(10 th St) | 47 th Ave | 034D - MP 6.62 |
| 23 | US 34 (Business)(10 th St) | 54 th Ave | 034D - MP 5.91 |
| 24 | US 34 (Business)(10 th St) | 59 th Ave | 034D - MP 5.61 |
| 25 | US 34 (Business)(10 th St) | 6600 Fire Station | 034D - MP 5.10 |
| 26 | US 34 (Business)(10 th St) | 69 th Ave | 034D - MP 4.89 |
| 27 | US 34 (Business)(10 th St) | 71 st Ave | 034D - MP 4.67 |
| 28 | US 34 (Business)(10 th St) | 83 rd Ave | 034D - MP 3.59 |
| 29 | US 34 (Business)(10 th St) | Promontory Circle | 034D - MP 1.29 |
| 30 | US 34 (Business)(9 th St) | 10 th Ave | 034Z - MP 0.00 |
| 31 | US 34 (Business)(9 th St) | 11 th Ave | 034Z - MP 0.19 |
| 32 | US 34 (Business)(9 th St) | 14 th Ave | 034Z - MP 0.47 |
| 33 | US 34 (Business)(9 th St) | 23 rd Ave | 034Z - MP 1.24 |
| 34 | US 34 (Business)(18 th St) | 1 st Ave | 034D- MP 11.75 |
| 35 | US 85 (Bypass)(CanAm) | 5 th Street | 085L – MP 268.49 |
| 36 | US 85 (Bypass)(CanAm) | 8 th Street | 085L – MP 268.23 |
| 37 | US 85 (Bypass)(CanAm) | 13 th Street | 085L – MP 267.77 |
| 38 | US 85 (Bypass)(CanAm) | 16 th Street | 085L – MP 267.44 |

| | | | |
|----|---------------------------------------|-------------------------|------------------|
| 39 | US 85 (Bypass)(CanAm) | 18 th Street | 085L – MP 267.18 |
| 40 | US 85 (Bypass)(CanAm) | 22 nd Street | 085L – MP 266.65 |
| 41 | US 85 (Business)(8 th Ave) | 5 th Street | 085H – MP 0.42 |
| 42 | US 85 (Business)(8 th Ave) | 7 th Street | 085H – MP 0.23 |
| 43 | US 85 (Business)(8 th Ave) | 8 th Street | 085H – MP 0.16 |
| 44 | US 85 (Business)(8 th Ave) | 9 th Street | 085H – MP 0.09 |
| 45 | US 34 (Business)(8 th Ave) | 10 th Street | 034D – MP 10.19 |
| 46 | US 34 (Business)(8 th Ave) | 13 th Street | 034D – MP 10.48 |
| 47 | US 85 (Business)(8 th Ave) | 16 th Street | 034D – MP 10.80 |
| 48 | US 85 (Business)(8 th Ave) | 17 th Street | 034D – MP 10.94 |
| 49 | US 85 (Business)(8 th Ave) | 18 th Street | 034D – MP 11.06 |
| 50 | US 85 (Business)(8 th Ave) | 20 th Street | 085G – MP 1.36 |
| 51 | US 85 (Business)(8 th Ave) | 22 nd Street | 085G – MP 1.13 |
| 52 | US 85 (Business)(8 th Ave) | 25 th Street | 085G – MP 0.72 |
| | | | |

The city shall be responsible for all routine maintenance, periodic inspection and/or testing, and replacement of all non-structural components which includes, but is not limited to, cabinet components, controllers, wiring, signal indications, detection equipment, pedestrian push buttons, pole mounted signs, software, licenses, firmware, and communication devices to keep the signal operational as described herein. The city shall be responsible for all required training as may be required for operation of all associated equipment. The city should adhere to the following requirements regarding certifications:

- 1) Work inside the traffic signal cabinet - Minimum IMSA Level II certification is required or a minimum of 4 years' experience in traffic signals
- 2) Work external to the traffic signal cabinet - Minimum IMSA Level I Traffic Signal Field Technician / Electrician, or Traffic Signal Bench Technician / Signal Technician is required or a minimum of 2 years' experience in traffic signals

The city shall maintain the associated stop lines and crosswalks at each signal listed in Table 4-A. The cost for these markings is included in the cost of maintaining the signal and will not be accounted for in the pavement marking section.

B. Periodic Preventative Maintenance Checks

The following items shall be visually inspected and/or tested on every signal under this contract at least annually:

1. Conflict Monitor is tested and operating correctly
2. Each signal head is in good condition and the backplate is attached and in good condition
3. Each signal lens is operating and visible
4. Detection is working and is detecting vehicles, motorcycles, bicycles, and pedestrians – where applicable
5. Structure is in good conditions – free from cracks and rust

6. Visible portions of the caissons are free from cracks
7. Signal Timing is operating as programmed
8. Controller and Cabinet are clean and in good repair
9. Communication to signal is connected and operating – where applicable
10. Backup power is tested for proper operation– where applicable
11. All luminaries attached to the signal are operating – where applicable
12. Stencil markings at each intersection

Any defects found in the signal inspection shall be remedied within 30 days of discovery. If the signal is not remedied within 30 working days of discovery, then the city shall incur a price reduction to the monthly compensation of (intersection monthly rate) \$500.00/month until the city has sent CDOT documentation and photos of the defective device being remedied.

C. Signal Timing

Signal timing should be based upon current traffic volumes and updated when significant traffic volumes impact the intersection. This may include development, change of use for a property, a new school, or any other traffic generator. Timing should meet CDOT's State Highway Access Code for progression, CRS 42-4-602, and CDOT and industry practices for performance. City shall provide CDOT the traffic signal timing upon request.

D. Emergency Maintenance and Repair

The city shall be responsible for emergency response, emergency signal operation, and repair/replace of damage to all non-structural equipment. If an unforeseen event (lightning strike, extreme power surge, vehicle crash, etc.) destroys any part of the signal pole, mast arm or cabinet and renders the signal and its components damaged beyond repair, the city shall contact CDOT immediately. The city shall partner with CDOT to get the damaged signal components replaced and the signal fully operational as quickly as possible.

The city shall provide an estimated quote (within 48 hours of the incident) using the CDOT provided form, or method agreed upon between the city and CDOT, to CDOT for the repair. CDOT shall respond to the quote (NTP, additional information needed) for the cost of repair or replacement of the damaged non-structural equipment.

All invoices shall be submitted to CDOT within 60 calendar days of completed construction or determination of no insurance claim or other reimbursement to receive payment. Failure to comply with this procedure may result in the city funding the repair entirely.

The city shall respond to traffic signal failures and malfunctions within the following timelines:

- a) Signal power outage - immediate response and appropriate emergency operation, repair as soon as practicable.
- b) Malfunctioning signal - immediate response and interim operation repair as soon as practicable.
- c) Protected phases and red head outage - immediate repair, if redundant indication

is not present and operating.

- d) Pedestrian heads - repair within two days.
- e) Permitted phase and non-red head outage - repair within three days.

For the purposes of this section, “immediate” shall mean as soon as possible, but in no case more than two (2) hours after receipt of notification, or as soon as reasonably practicable in the case of a civil emergency or natural disaster.

E. Signal Modifications

The city shall be responsible for the maintenance of any signals that are reconstructed, modified, or improved by the city pursuant to a city project.

The State shall be solely responsible for the cost of any reconstruction, modification, or improvement to a signal initiated by the State or performed because of a State project.

New signal installations on any state highway within city limits shall be reviewed and approved by CDOT and shall meet all applicable CDOT and city standards and guidelines. CDOT, at its discretion, may incorporate the city standards for color and specialized equipment, but is not obligated to these additions. A determination of who will provide labor, material, and equipment for the installation will be made on a case-by-case basis between the aforementioned contract representatives. Should the representatives not agree, the CDOT Region 4 Traffic Engineer shall have final authority.

Additional signals or changes needed as a result of development, traffic volume growth, crash activity, or other safety or operational analysis or concerns along with any upgrades of the signals or its systems due to new technologies shall be submitted to CDOT via the State Highway Access permit process. The CDOT Region 4 Traffic Engineer shall have final authority.

V. Highway Signs and Markings

All signs and markings in the highway Right of Way segments listed in Table 5-A shall be maintained by the city unless otherwise noted in this contract.

Table 5-A

| Highway | Street Name | Begin | MP | End | MP | Length (Miles) |
|---------|-------------------------|-------------------------|-------|-------------------------|-------------|----------------|
| 085H | 8 th Ave | 10 th Street | 0.00 | O Street Overpass | 2.0 | 2.00 |
| 034D | 8 th Ave | 10 th Street | 10.00 | 18 th Street | 11.06 | 1.06 |
| 085G | 8 th Ave | 26 th Street | 0.62 | 18 th Street | 1.63 | 1.01 |
| 034D | 18 th Street | 8 th Ave | 11.06 | 1 st Ave | 11.75 | 0.69 |
| 034Z | 9 th Street | 10 th Ave | 0.00 | 23 rd Ave | 1.30 | 1.30 |
| 034D | 10 th Street | Promontory Circle | 1.30 | 8 th Ave | 10.19 | 8.89 |
| | | | | | | |
| | | | | | Total Miles | 14.95 |

A. Signs

The city shall maintain all regulatory and warning signs that can be mounted on perforated steel posts, all delineator posts, all object markers, and all guide signs installed and owned by the city.

1. The State shall maintain all regulatory and warning signs too large to be mounted on city standard posts, all guide signs not installed and owned by the city, and all other signs not maintained by the city.
2. Intersection right-of-way control signs, at city roadways intersecting State highways, shall be maintained by the agency maintaining the intersection.
3. Either agency making changes to signs or markings at the locations listed in Table 5-A shall provide notification using the CDOT provided form or method agreed upon between the city and CDOT, of the changes to the other agency. Notification of changes to regulatory signing shall be made in writing.
4. CDOT reserves the right to install, remove or modify CDOT signage within CDOT right-of-way at its sole cost and expense. This action shall not impact the annual maintenance cost to the city. CDOT will notify the city of changes prior implementation. Approved traffic control plans should be shared between CDOT and the city.
5. The city shall be responsible for all repairs, routine maintenance, periodic inspection and/or testing, and needed replacement as described herein. Highway signs shall be replaced as necessary to ensure each sign has a minimum retroreflectivity reading as

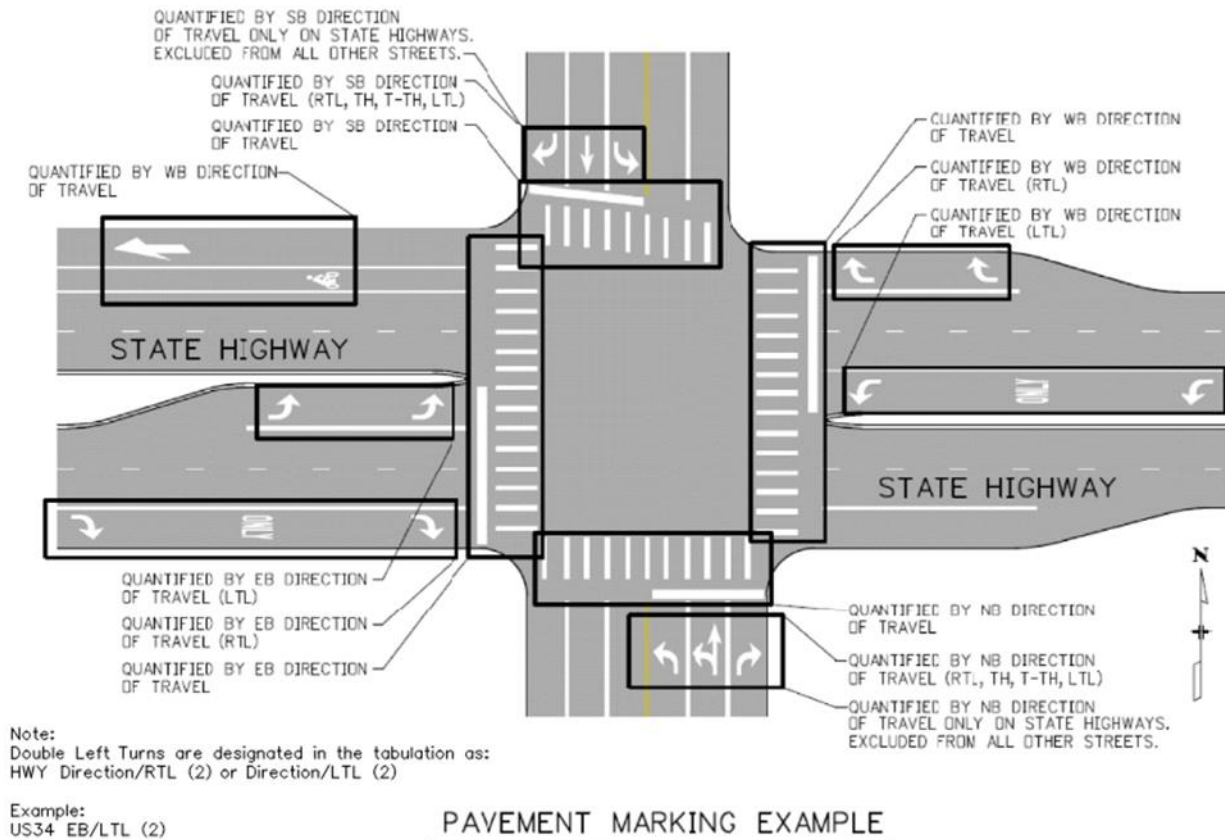
stated in the current Manual on Uniform Traffic Control Devices (MUTCD) or the most recent Federal Highway Administration (FHWA) requirement. The city shall list the replaced signs in tabulation on the CDOT provided form or method agreed upon between the city and CDOT.

6. New installations shall meet all applicable CDOT and city standards and guidelines. A determination of who will provide labor, material, and equipment for the installation will be made on a case-by-case basis between the aforementioned contract representatives. The CDOT Region 4 Traffic Engineer shall have final authority.
7. For all rectangular rapid flashing beacons (RRFB) and all signs with attached power (flashing beacon, internally illumination, or external illumination) the city shall be responsible for all maintenance and associated operational costs. For all new sign installations needing power, the city shall request approval from CDOT using the CDOT State Highway Access permit process.
8. A once per year random visual inspection of 5% of inventory may be done jointly between CDOT and the city to ensure compliance.
9. The city shall use a retroreflector to acquire readings at a minimum of 100 randomly selected sign inspection locations and submit these readings to CDOT. CDOT reserves the right to specify the locations for testing.
10. Sign Inspections shall include, but are not limited to:
 - (a) Retroreflective readings
 - (b) Physical condition of the sign
 - (c) Condition of post (damaged, plumb)
 - (d) Fastening hardware checked for tightness
11. Reflectometer readings shall be in compliance with the Federal Register 87 FR 47921.
12. Any defects in signs or markings that are the responsibility of the city, under the terms of this agreement, not remedied within 30 working days of discovery shall incur a price reduction to the monthly compensation of (monthly cost per mile) \$300.00/month until the city has sent CDOT documentation and photos of the defective device being remedied.

B. State Highway Stencil Pavement Markings

All Stencil markings on the highway and on the road approaching the highway shall be maintained by the city in locations listed in Table 5-A. Typical intersection stencil markings are shown in Figure 5-1. Should the city not have markings shown, maintenance of the city's typical intersection markings shall be required.

Figure 5-1



1. The city shall be responsible for all repairs, routine maintenance, periodic inspection and/or testing, and needed replacement as described herein. Stencil markings shall be replaced depending on the percent of material (50% minimum) remaining in place and its retroreflectivity. These markings shall maintain an acceptable level of daytime appearance and/or a minimum retroreflectivity as stated in the current MUTCD or the most recent FHWA requirement.
2. New installations shall meet all applicable CDOT, and city standards and guidelines as specified in Section III – Control of Work in the ROW.
3. A once per year random visual inspection of 5% of inventory may be done jointly between CDOT and the city to ensure compliance.

4. The city shall use a retroreflectometer to acquire readings at a minimum of 50 randomly selected stencil locations and submit these readings to CDOT. CDOT reserves the right to specify the locations for testing. CDOT shall provide the city with the selected locations 4 weeks in advance of the testing.
5. Pavement marking inspection shall include, but are not limited to:
 - a. Retroreflectometer readings
 - b. Physical appearance
 - c. Percent of marking in place

These markings shall maintain an acceptable level of daytime appearance and a minimum retroreflectivity listed in the current MUTCD or the latest FHWA requirements.

All stop lines and crosswalks at each signalized intersection are to be paid for as specified in Section IV.A of this agreement.

C. Lane Striping

All lane striping in the highway listed Table 5-A shall be maintained as follows:

The city shall be responsible for all repair, routine maintenance, periodic inspection and/or testing, and cyclical replacement as described herein. Highway lane striping shall be repainted to ensure that the marking has an acceptable level of daytime appearance and meets the minimum retroreflectivity listed in the current MUTCD or the latest FHWA requirement.

New installations shall meet the current CDOT standard (S-627-1) and all city standards and guidelines.

Any pavement marking material used above CDOT specifications (i.e., tape) shall be at no additional cost to CDOT.

The use of any experimental material will be at the city expense with no reimbursement from CDOT.

A once per year random visual inspection of 5% of inventory may be done jointly between CDOT and the city to ensure compliance.

The city shall use a retroreflectometer to acquire readings at a minimum of 50 randomly selected lane locations and submit these readings to CDOT. CDOT reserves the right to specify the locations for testing. CDOT shall provide the city with the selected locations 4 weeks in advance of the testing.

- Pavement marking inspection shall include, but are not limited to:
- a. Retroreflectometer readings
 - b. Physical appearance
 - c. Percent of marking in place

These markings shall maintain an acceptable level of daytime appearance and a minimum retroreflectivity listed in the current MUTCD or the latest FHWA requirements.

VI. RATE/PAYMENT SCHEDULE**Traffic Control Device Rate Schedule**

| | | |
|---|-----------|---------------------|
| 14.95 Miles of signs and markings at \$300.00 per mile = \$4,485.00 x 12 mos. | \$ | 53,820.00 |
| 52 Signals at \$500.00/month = \$26,000.00 x 12 mos. | \$ | 312,000.00 |
| Total Maximum Annual Cost | \$ | 365,820.00 |
| Total Contract Cost: \$365,820.00 x 5 years = | \$ | 1,829,100.00 |

EXHIBIT B – LOCAL AGENCY RESOLUTION

**LOCAL AGENCY
ORDINANCE
or
RESOLUTION
(if applicable)**

EXHIBIT C - SAMPLE OPTION LETTER

SAMPLE IGA OPTION LETTER

Highway or Traffic Maintenance

(This option has been created by the Office of the State Controller for CDOT use only)

| | | | |
|--------------------|---------------------------------|--------------------------------|------------------------|
| Date: _____ | State Fiscal Year: _____ | Option Letter No. _____ | Routing # _____ |
|--------------------|---------------------------------|--------------------------------|------------------------|

Vendor name: _____

1) SUBJECT:

Change in the amount of goods within current term.

2) REQUIRED PROVISIONS:

In accordance with Section 17 of contract routing number insert FY, agency code & routing #, between the State of Colorado, Department of Transportation, and insert Local Agency name the state hereby exercises the option to an increase/decrease in the amount of goods/services at the same rate(s) specified in Exhibit A.

The amount of the current Fiscal Year contract value (encumbrance) is increased/decreased by \$ amount of change to satisfy services/goods ordered under the contract for the current fiscal year insert fiscal year. The Contract Encumbrance Amount in Recital 1 is hereby modified to \$amount of new annual encumbrance, and Section 4, B, 1 shall also be modified to show the annual not to exceed amount to \$amount of new annual encumbrance and the Contract (five-year term) not to exceed amount shall be modified to \$amount of the new five-year maximum.

The total contract value to include all previous amendments, option letters, etc. is \$insert accumulated/total encumbrance amount.

3) EFFECTIVE DATE:

The effective date of this Option Letter is upon approval of the State Controller or delegate, whichever is later.

APPROVALS:

State of Colorado:

JARED S. POLIS, GOVERNOR

By: _____ Date: _____
Keith Stefanik, P.E., Chief Engineer, Colorado Department of Transportation

ALL CONTRACTS MUST BE APPROVED BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Local Agency is not authorized to begin performance until such time. If Local Agency begins performing prior thereto, the State of Colorado is not obligated to pay Local Agency for such performance or for any goods and/or services provided hereunder.

**State Controller
Robert Jaros, CPA, MBA, JD**

By: _____

Date: _____

Form date: August 16, 2013

EXHIBIT D – SAMPLE ENCUMBRANCE LETTER

ENCUMBRANCE LETTER

| | | | |
|-----------|------------------------|----------------------------|----------------|
| Date: [] | State Fiscal Year: [] | Encumbrance Letter No. [] | Routing #: [] |
| | | Orig. IGA: [] | PO: [] |

1) **Encumber fiscal year funding in the contract.**

2) **PROVISIONS:** In accordance with Section 4 and Exhibit C of the original Contract routing number Orig Routing # between the State of Colorado, Department of Transportation, and Contractor's Name, covering the term July 1, Year through June 30, Year, the State hereby encumbers funds for the goods/services specified in the contract for fiscal year [] .

The amount to be encumbered by this Encumbrance Letter is \$amount of change. The Total contract (encumbrance) amount, including all previous amendments, option letters, etc. is \$Insert New \$ Amt.

3) **EFFECTIVE DATE.** The effective date of this Encumbrance Letter is upon approval of the State Controller.

STATE OF COLORADO
Jared S. Polis, GOVERNOR
 Department of Transportation

By: _____
 Keith Stefanik, P.E., Chief Engineer
 (For) Shoshana M. Lew, Executive Director

Date: _____

ALL CONTRACTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If Contractor begins performing prior thereto, the State of Colorado is not obligated to pay Contractor for such performance or for any goods and/or services provided hereunder.

STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

By: _____
 Department of Transportation

Date: _____

EXHIBIT E

PII Certification

STATE OF COLORADO

**LOCAL AGENCY CERTIFICATION FOR ACCESS TO PII THROUGH A
DATABASE OR AUTOMATED NETWORK**

Pursuant to § 24-74-105, C.R.S., I, _____, on behalf of _____ (legal name of Local Agency) (the “Local Agency”), hereby certify under the penalty of perjury that the Local Agency has not and will not use or disclose any Personal Identifying Information, as defined by § 24-74-102(1), C.R.S., for the purpose of investigating for, participating in, cooperating with, or assisting Federal Immigration Enforcement, including the enforcement of civil immigration laws, and the Illegal Immigration and Immigrant Responsibility Act, which is codified at 8 U.S.C. §§ 1325 and 1326, unless required to do so to comply with Federal or State law, or to comply with a court-issued subpoena, warrant or order.

I hereby represent and certify that I have full legal authority to execute this certification on behalf of the Local Agency.

Signature: _____

Printed Name: _____

Title: _____

Date: _____



Council Agenda Summary

June 6, 2023

Key Staff Contact: Noel Mink, Human Resources Director

Title:

Introduction and first reading of an Ordinance ratifying and adopting the Collective Bargaining Agreement between the Greeley Fire Fighters Union, International Association of Fire Fighters Local 888 and the City of Greeley, which agreement by its terms is for a period commencing January 1, 2024 through December 31, 2026

Summary:

The City of Greeley and the Greeley Fire Fighters Union International Association of Firefighters Local 888 have negotiated a tentative agreement for a three-year contract for the period of January 1, 2024 to December 31, 2026. The terms and duration of the contract were developed collaboratively and took into account fiscal sustainability, market competitiveness, and equity of the city's entire employee workforce. On May 16, 2023, the Greeley Fire Fighters Union local membership ratified the tentative agreement, which was approved by a vote of 64 in favor and 12 opposed amongst a total eligible membership of 121.

The highlights of the tentative agreement are summarized below:

ARTICLE XII – LEAVES

- Amended to include Juneteenth as a recognized holiday for shift personnel and those working a 40-hour work week.

ARTICLE XIII – WAGES

- Wages: Year 1 (2024) – 11%, Year 2 (2025) – 4%, Year 3 (2026) – 5%
- Basis pay established for Firefighter I at 100% with grade pay for all positions calculated off of basis
- Incremental reduction of pay steps for firefighters from six (6) pay steps to four (4) pay steps in years 2025 and 2026
- Elimination of minimum pay step for Engineer, Lieutenant, and Battalion Chief positions
- Advanced Life Support qualification pay adjustment - Paramedics will receive 8.5% of base pay of position and those holding EMT-Intermediate qualification will receive 4.0% of base pay of position
- Specialist pay for positions of Firefighter, Engineer, Lieutenant, and Battalion Chief will be 4% of base pay of position

ARTICLE XIV – ACTING PAY

- Amended to include one (1) additional unit of pay for hours worked beyond 12 hours in a 24-hour shift for a maximum amount of 2 hours of acting pay per 24-hour shift

ARTICLE XXIII - DURATION

- Three-year contract – January 1, 2024 through December 31, 2026

Fiscal Impact:

| | |
|---|--|
| Does this item create a fiscal impact on the City of Greeley? | Yes |
| If yes, what is the initial, or, onetime impact? | N/A |
| What is the annual impact? | Annual Increase in Cost: 2024 - \$1,934,669 (11%) 2025 - \$950,431 (4.0%) 2026 - \$973,976 (5.0%) Total Cost - \$8,678,845 |
| What fund of the City will provide Funding? | General Fund |
| What is the source of revenue within the fund? | Sales Tax |
| Is there grant funding for this item? | No |
| If yes, does this grant require a match? | N/A |
| Is this grant onetime or ongoing? | N/A |
| Additional Comments: | |

Legal Issues:

Per Article XIII of the Greeley Municipal Code, the firefighters shall have the right to collective bargaining. Additionally, the municipal code obligates both the City and the Firefighters to meet and negotiate in good faith. This obligation further includes the duty to cause any agreements to be reduced to a written contract and signed by both parties.

Other Issues and Considerations:

N/A

Strategic Focus Area:



High-Performance Government



Quality of Life



Safe and Secure Communities

Decision Options:

- 1) Introduce the ordinance as presented; or
- 2) Amend the ordinance and introduce as amended; or
- 3) Deny the ordinance; or
- 4) Continue consideration of the ordinance to a date certain.

Council's Recommended Action:

A motion to introduce the ordinance and schedule the public hearing and second reading for June 20, 2023.

Attachments:

Draft Ordinance

Fire Union Collective Bargaining Agreement 2024-2026

PowerPoint

**THE CITY OF GREELEY, COLORADO
ORDINANCE NO. 21, 2023**

**AN ORDINANCE RATIFYING AND ADOPTING THE COLLECTIVE
BARGAINING AGREEMENT BETWEEN THE GREELEY FIREFIGHTERS
UNION AND THE CITY OF GREELEY, COLORADO, WHICH AGREEMENT BY
ITS TERMS IS FOR A PERIOD COMMENCING JANUARY 1, 2024 THROUGH
DECEMBER 31, 2026.**

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF
GREELEY, COLORADO:**

Section 1. The City Council ratifies and adopts the Collective Bargaining Agreement between the City of Greeley and the Greeley Firefighters Union which agreement by its terms is for the period commencing January 1, 2024 through and including December 31, 2026. A copy of the contract is attached hereto and incorporated herein as Appendix A.

Section 2. The ordinance shall become effective five (5) days after its final publication.

**PASSED AND ADOPTED, SIGNED AND APPROVED THIS _____ DAY OF JUNE,
2023.**

ATTEST:

THE CITY OF GREELEY, COLORADO

**By: _____
CITY CLERK**

**By: _____
MAYOR**

COLLECTIVE BARGAINING AGREEMENT BETWEEN
GREELEY FIRE FIGHTERS UNION INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS
LOCAL 888 AND
CITY OF GREELEY
JANUARY 1, 2024 - DECEMBER 31, 2026

TABLE OF CONTENTS

ARTICLE I - PREAMBLE 3

ARTICLE II - RECOGNITION 3

ARTICLE III - NONDISCRIMINATION 3

ARTICLE IV - RIGHTS OF MANAGEMENT 3

ARTICLE V - LABOR MANAGEMENT COMMITTEE 5

ARTICLE VI - UNION ACTIVITY AND COLLECTION OF DUES OR FEES..... 5

ARTICLE VII - NO STRIKE CLAUSE 7

ARTICLE VIII - LAYOFF AND RECALL PROCEDURES 7

ARTICLE IX - GRIEVANCE PROCEDURE FOR AGREEMENT VIOLATIONS..... 9

ARTICLE X - PROMOTION..... 11

ARTICLE XI - WORK HOURS..... 14

ARTICLE XII - LEAVES..... 15

ARTICLE XIII - WAGES..... 23

ARTICLE XIV - ACTING PAY 25

ARTICLE XV - POST EMPLOYMENT HEALTH PLAN 26

ARTICLE XVI - EMERGENCY CALL BACK 26

ARTICLE XVII - HOLIDAY/VACATION SELL BACK 27

ARTICLE XVIII - HEALTH AND WELFARE 27

ARTICLE XIX - PENSION 30

ARTICLE XX - DEATH AND DISABILITY 30

ARTICLE XXI - STAFFING 31

ARTICLE XXII - SAVINGS CLAUSE 31

ARTICLE XXIII - DURATION 32

SIGNATURE PAGE 33

APPENDIX A – WAGE TABLE 2024..... 34

APPENDIX B – WAGE TABLE 2025 35

APPENDIX C – WAGE TABLE 2026 36

ARTICLE I
PREAMBLE

The purpose of this Agreement is to promote and ensure harmonious relations, cooperation, and understanding between the City of Greeley and members of the Greeley Fire Department who are represented by Local 888 of the International Association of Firefighters; and to provide a workable process for equitable and peaceful adjustments of differences which may arise concerning compensation, hours, working conditions, grievance procedures, collection of dues or fees, and other terms and conditions of employment.

ARTICLE II
RECOGNITION

The City of Greeley, hereinafter referred to as "City", recognizes Local 888, International Association of Fire Fighters, hereinafter referred to as "Union", as the exclusive bargaining agent for purposes of this Agreement. All sworn Fire Fighters of the Greeley Fire Department, except the ranks of Fire Chief, Deputy Chief, and Assistant Chief, shall be covered by this Agreement.

Whenever the term "shift personnel" is used, the reference applies to Fire Fighters assigned to work twenty four-hour shifts. Whenever the term "day personnel" is used, the reference applies to Fire Fighters assigned to work forty-hour work weeks.

ARTICLE III
NONDISCRIMINATION

There shall be no coercion, intimidation, or discrimination on the part of either the City, the Union, or their respective agents against any employee covered by this Agreement which would violate applicable laws because of age, race, creed, color, sex, ancestry, religion, national origin, or disability.

ARTICLE IV
RIGHTS OF MANAGEMENT

SECTION 1. Except as otherwise specifically provided in this Agreement, the City has the sole and exclusive right to exercise all the rights or functions of management, and that exercise of any such rights or functions shall not be subject to any grievance procedure, except as to resolution of whether or not a specific matter is a management right. The exercise of the rights of management will be consistent with the overall goals and objectives of City of Greeley and of the Fire Department administration. The below enumerated rights of management are not all-inclusive but indicate the type of matters or rights which belong or are inherent to management. Any of the rights, powers and authority the City had prior to entering into this Agreement are retained by the City, and nothing in this Agreement shall be construed as delegating to others the authority vested by law in the

corporate authority of the City and its duly elected or appointed officers or in any way abridging or reducing such authority or infringing upon the responsibility thereof to the people of this City, except as expressly provided for in this Agreement. Without limiting the generality of the foregoing, as used herein, the term "Rights of Management" includes:

- a) the determination of Fire Department mission and policy including the right to manage the affairs of the Fire Department in all respects;
- b) the right to assign working hours including overtime;
- c) the right to establish, modify, or change work schedules, staffing of equipment, amount of equipment in the main or reserve fleet, and number of personnel to carry out its mission, etc.;
- d) the right to assign Fire Fighters to other duties within the Fire Department when their equipment is out of service;
- e) the right to direct the members of the Fire Department, including the right to hire, promote, transfer, discipline, and discharge any Fire Fighter for just cause;
- f) the organizational structure of the Fire Department including the right to organize and reorganize the Fire Department in any manner it chooses, including the size of the Fire Department and the determination of the job classifications and ranks based upon duties assigned;
- g) the determination of the safety, health, and property protection measures for the Fire Department;
- h) the allocation and assignment of work to Fire Fighters within the Fire Department;
- I) the determination of policy affecting the selection or training of new employees;
- j) the determination of policy affecting the on-going training and certification of Fire Fighters;
- k) the scheduling of operations;
- l) the establishment, amendment and enforcement of Fire Department rules, regulations, and orders;
- m) the transfer of work from one position to another within the sworn Fire Fighter positions of the Greeley Fire Department;

- n) the introduction of new, improved or different methods and techniques of operation of the Fire Department or a change in existing methods and techniques;
- o) the placing of service, maintenance or other work with outside contractors or other agencies of the City;
- p) the determination of the number of ranks and number of Fire Fighters within each rank;
- q) the determination of the amount of supervision necessary;
- r) the transfer of Fire Fighters from one division, shift or station to another.

SECTION 2. The provisions of this Agreement do not prohibit the City from directing any person not covered by this Agreement from performing any task.

SECTION 3. The City of Greeley has the authority to determine the purpose and mission of the Greeley Fire Department and the amount of budget adopted thereto.

ARTICLE V

LABOR MANAGEMENT COMMITTEE

SECTION 1. The City and the Union agree to establish a Labor Management Committee. The committee will consist of at least one and no more than four (4) representatives of the Union, as elected by Union members, with the same number of management representatives, as designated by the Fire Chief. The purpose of these meetings will be to discuss matters and objectives of mutual concern not involving grievances or specific employee disciplinary matters.

SECTION 2. Meetings will be scheduled every other month at times mutually agreed upon. By mutual consent meetings can be scheduled more frequently. If meetings are scheduled when a representative(s) is on duty, arrangements will be made to allow all such representative(s) to attend such meetings on duty time. Attendance at meetings scheduled when a representative(s) is not on duty is voluntary.

ARTICLE VI

UNION ACTIVITY AND COLLECTION OF DUES OR FEES

SECTION 1. The parties agree that membership in the Union will be on a voluntary basis on the part of each Fire Fighter. No Fire Fighter shall be required to become or remain a member of the Union as a condition of employment.

SECTION 2. Neither the City nor the Union, its officers, agents, representatives, or members will intimidate, interfere with, or coerce either Union or Non-Union Fire Fighters. Union activity or Union business of any kind can only be carried on during working hours with the written permission

in advance from the Fire Chief. Failure of the City to enforce any of the provisions of this section, for any reason, on any one or more instances shall not be considered a waiver of any of its provisions.

SECTION 3. The City will accept a signed dues or fees deduction authorization, by any member of the bargaining unit covered by this Agreement as equivalent to a continuing voucher by such member of the bargaining unit in the amount of established monthly dues or fees required by the Union (certified by the Treasurer of the Local Union as the proper amount). Such authorization shall remain in effect unless revoked by the Fire Fighter in writing by sending written notification by certified mail to the City with a copy of such notification sent by certified mail to the Union.

SECTION 4. The deduction of Union dues or fees shall be made on each paycheck following the pay period in which the authorization was received. The deductions provided herein shall be remitted to the Treasurer of the Union no later than five working days following the payment date in which deductions were made and shall include all deductions made in that period. The City shall furnish, upon request of the Union Treasurer, a deduction listing.

SECTION 5. The City agrees to grant time off to one of the two principle officers, Union President or Union Secretary, to attend the monthly meetings of the Local. The Union agrees to give a minimum of seven (7) calendar days advance notice to the Fire Chief or the Chief's designee. This provision will only be allowed if the Department is not at the minimum staffing level at the time of the absence of the individual.

SECTION 6. The Union shall indemnify the City and hold it harmless against all claims, demands, suits, or any other forms of liability that shall arise out of or by reason of, any action taken by the City for the purpose of complying with the provisions of this Agreement unless such loss or damage is intentionally caused or contributed to by the action of the City.

SECTION 7. The Union expressly herein agrees that it will not institute or participate in, except as a co-defendant or a co-plaintiff with the City, any claim, lawsuit, or other legal proceeding, challenging the language of this Agreement as being violated or void under law.

The Union further expressly herein agrees that in the event that any claim, lawsuit or legal proceeding is filed or commenced by any member or members of the Bargaining Unit, acting on their own personal behalf and not on behalf of the Union, challenging the language of this Article as being violative or void under law, the Union shall join with the City in defending, as a party defendant, the provisions and language of this Article. The City and the Union will pay their own defense costs in such a litigation.

ARTICLE VII
NO STRIKE CLAUSE

SECTION 1. During the life of this Agreement or any written extension hereof, the Union, on behalf of its officers, agents and members agree that so long as this Agreement or any written extension hereof is in effect, neither the bargaining representative nor the Fire Fighters nor any person acting in concert with them will cause, sanction, promote, or take part in any strike (economic, sympathy, unfair labor practice, or otherwise), walkout, sitdown, slowdown, stoppage of work, abnormal absenteeism, or withholding of services.

SECTION 2. Any employee who violates this provision shall be subject to disciplinary action, including discharge, and such action shall not be raised as a grievance or be subject to the arbitration provision of this Agreement.

SECTION 3. In the event of a strike in violation of this Agreement, the City shall have the right to permanently replace any employee on strike. In the event an employee is continued in employment

after the termination of a strike in violation of this Agreement, such employee shall neither be entitled to any fringe benefit contained in this Agreement nor any accrual thereof during the period of such strike, nor shall the Fire Fighter, for the duration of the strike, accumulate seniority or length of service for any purpose under this Agreement.

SECTION 4. Claims or suits for damages filed by either party resulting from a violation of this Article shall not be subject to the mandatory arbitration provisions set forth in this agreement.

SECTION 5. In the event of violation of this Article by an official action of the Union, the City has the exclusive option to rescind this entire Agreement or any part thereof.

ARTICLE VIII
LAYOFF AND RECALL PROCEDURES

SECTION 1. For purposes of this Agreement, "continuous service" shall mean the period of continuous employment in the Fire Department from the most recent date of hire without a break or interruption; provided that any suspension for disciplinary purposes or absences on authorized leave without pay shall not constitute a break or interruption of service so long as it does not exceed 30 calendar days. A list of Fire Fighters arranged in order of continuous service shall be made available for examination at the end of each calendar year. Where two or more Fire Fighters were appointed on the same date, their continuous service standing shall be determined in the order of their rank on the eligibility list from which they were hired.

SECTION 2. The City in its sole discretion shall determine whether layoffs are necessary. Although not limited to the following, layoffs shall ordinarily be for lack of work and/or lack of funds. If it is determined that layoffs are necessary, Fire Fighters will be laid off in accordance with their continuous service. Fire Fighter(s) with the least continuous service will be laid off first.

SECTION 3. No later than thirty (30) calendar days prior to the effective date of such a layoff, the City shall provide the Union a statement of the reasons necessitating the layoff. The individuals selected for layoff will be notified fourteen (14) calendar days before the actual layoff. The notice periods referenced by this section may run concurrently.

SECTION 4. In the event that positions with a higher classification than Firefighter are reduced in force, employees in such reduced classifications with the least continuous service in that classification shall be allowed to displace (bump) Fire Fighters in a lower classification. The salary for the Fire Fighter who has exercised bumping rights shall be reduced to the respective salary schedule. Fire Fighters shall be eligible to exercise bumping rights in reverse order of their length of service in the classification. The Fire Fighter exercising bumping rights shall maintain and continue to accrue seniority as though the reduction in force had not occurred.

SECTION 5. Fire Fighters who are laid off shall be placed on a recall list for a period of three (3) years. If there is a recall, Fire Fighters who are still on the recall list shall be recalled, in the inverse order of their layoff, provided they are presently qualified to perform the work in the job classification to which they are recalled.

Fire Fighters recalled under this section shall not be required to take a written examination or participate in an oral interview but will be required to maintain certifications and may be required to successfully complete the medical screening and background portions of the screening process.

SECTION 6. Notice of recall for a Fire Fighter who is eligible for recall shall be sent to the Fire Fighter and the local president by registered mail. Fire Fighters must notify the Fire Chief of their intention to return to work within seven (7) calendar days after the notice of recall is mailed by the City. If the Fire Fighter fails to be available to return to work within fourteen (14) calendar days after notifying the Fire Chief of intent to return to work, the Fire Fighter shall be deemed to have resigned.

The City shall be deemed to have fulfilled its obligations by mailing the recall notice by registered mail, return receipt requested, to the mailing address provided by the Fire Fighter. It is the responsibility of the Fire Fighter to provide the Fire Chief with a current mailing address.

No new employees shall be hired into a classification until all employees who are on a lay-off status from that classification have been offered recall.

ARTICLE IX
GRIEVANCE PROCEDURE FOR AGREEMENT VIOLATIONS

SECTION 1. A grievance under this Agreement shall be confined to an alleged violation of any express provision of this Agreement except that a grievance of the provisions relating to promotions shall follow the grievance process under Article X. Any Fire Fighter or group of Fire Fighters may discuss any matter informally with their supervisor without invoking the formal grievance procedure provided for in this Article and are encouraged to resolve matters at the lowest level of supervision. No resolution reached via informal discussion may conflict with a term of the contract. Informal resolutions are not binding on the City or the Union.

SECTION 2. Except as otherwise stipulated, a grievant may, upon request, be represented at any level of the grievance procedure by a representative of the grievant, or by legal counsel. The time limit set forth for the processing of grievances shall be strictly adhered to. In the event that a grievance is not appealed to the next step of the grievance procedure within the time limits provided at any step, such grievance shall be declared closed and settled on the basis of the most recent City decision.

In the event of failure to answer a grievance within the time limit provided, it shall be considered a denial and the grievant may appeal the grievance to the next step of the procedure in accordance with the time limitation specified. Extensions of time may be requested by either party, and must be mutually agreed upon by both parties. To be effective, any extension of time must be set forth in writing.

SECTION 3. A grievance must be initiated only by a grievant, it must be signed by all aggrieved Fire Fighters who are to be included in any resolution thereof. The grievant must reduce the entire grievance and all the reasons thereof to writing along with the provisions of this Agreement which are alleged to have been violated. The written grievance must be dated and signed by the grievant and submitted to the Deputy Chief, or the Deputy Chief's designee with a copy to the Fire Chief or the Chief's designee, the City's Attorney, and the City of Greeley Human Resources Director, and the local president within seven (7) calendar days of the date the grievant knew or should have known the facts which gave rise to the grievance.

SECTION 4. The Deputy Chief or the Deputy Chief's designee shall meet with the grievant in an effort to resolve the grievance within seven (7) calendar days after being presented with the written grievance. The Deputy Chief or the Deputy Chief's designee must respond in writing to the grievant within seven (7) calendar days following the meeting with the grievant.

SECTION 5. If the grievance has not been satisfactorily resolved with the Deputy Chief, the grievant may appeal the decision to the Fire Chief or the Chief's designee in writing within seven (7) calendar days of receipt of the response of the Deputy Chief or the Deputy Chief's designee. Within seven (7) calendar days of receipt of the appeal of the grievance, the Fire Chief or Chief's designee

shall discuss the grievance with the grievant. The Fire Chief or Chief's designee must give the grievant an answer in writing within seven (7) calendar days of the holding of such meeting.

SECTION 6. If the grievance is not mutually resolved with the Fire Chief or the Chief's designee, the grievant may appeal the grievance in writing to the City Manager or the City Manager's designee in writing within seven (7) calendar days of receipt of the response from the Fire Chief or the Chief's designee. Within seven (7) calendar days of receipt of the appeal of the grievance, the City Manager or the City Manager's designee shall discuss the grievance with the grievant. The City Manager or the City Manager's designee must give the grievant an answer in writing within seven (7) calendar days of the holding of such meeting.

SECTION 7. If the grievance is not mutually resolved with the City Manager, the Union president must give written notice of intent to seek final and binding arbitration to the City Manager within fourteen (14) calendar days. Within seven (7) calendar days of the written notice of intent to arbitrate, the parties shall attempt to select a neutral arbitrator to hear and determine the dispute. In the event the parties are unable to agree upon a neutral arbitrator, either party or its representative may refer the matter to the American Arbitration Association or the Federal Mediation and Conciliation Service to request a panel of seven (7) arbitrators and the parties shall choose the arbitrator in accordance with the rules of the respective association. The findings of the arbitrator shall be final and binding on all parties concerned.

SECTION 8. The Arbitrator will have the authority to hold hearings and make procedural rules.

SECTION 9. The findings of the Arbitrator shall be consistent with law and the terms of this Agreement. The Arbitrator shall have no right to amend, modify, nullify, ignore, add to, or subtract from the provisions of this Agreement, nor shall the Arbitrator have jurisdiction to determine that the parties by practice or implication have amended or supplemented this Agreement. The Arbitrator shall consider and decide only the question of fact as to whether there has been a violation, misinterpretation, or misapplication of the specific provisions of this Agreement. The Arbitrator shall be in power to determine only the issue raised by the grievance as submitted in writing by the grievant. The Arbitrator shall have no authority to make a recommendation on any issue not so submitted or raised. The Arbitrator shall be without power to make recommendations contrary to or inconsistent with, in any way, applicable laws or rules and regulations of the administrative bodies that have the force and effect of law. The Arbitrator shall not in any way limit or interfere with the powers, duties, and responsibilities of the City under law or applicable court decisions.

SECTION 10. The cost of any arbitration as well as the Arbitrator's fee shall be borne equally by the parties to the Agreement. Any legal representation or costs incurred by each party in preparing or presenting their case in arbitration shall be borne by the party incurring the expense.

SECTION 11. Either party may request a Certified Court Reporter to take a stenographic report of the evidence taken at an arbitration hearing. If such stenographic record is taken, a copy of the transcript shall be provided to the Arbitrator. The party requesting a stenographic record shall pay

the cost thereof, except that if the other parties shall request a copy of any transcript, the parties shall share equally the entire cost of making the stenographic report.

SECTION 12. The number of days indicated at each level of the grievance procedure shall be considered as a maximum unless mutually extended by the parties.

SECTION 13. Anything in this Agreement to the contrary notwithstanding, the following matters are not subject to the grievance procedures of this Agreement:

- a) Any grievance which is not filed in accordance with the provisions of this Article or does not meet the definition of a grievance as set forth in this Article; or
- b) Any matter reserved solely to the Rights of Management or to the discretion of the City or the Fire Chief by the terms of this Agreement, except as to the resolution of whether or not a matter is a specific Right of Management; or
- c) Any matter which would require a change from the wages, rates of pay, hours, grievance procedure, working conditions, and all other terms and conditions of employment as set forth in this Agreement; or
- d) Any matter which is not covered by this Agreement; or
- e) Any matter covered by the City of Greeley Employee Handbook, the official Standard Operating Procedures of the Greeley Fire Department, State and Federal Statutes and Constitutional Provisions except to the extent that any such matter is addressed in the Agreement and the grievance alleges that the City has violated an express provision of this Agreement.

ARTICLE X

PROMOTION

A. PROMOTION

SECTION 1. Promotional Committee.

- a) Purpose - It shall be the purpose of the Promotional Committee to establish, monitor and approve each testing procedure according to the guidelines of this Article.
- b) Composition - The committee shall consist of an appointee of the Fire Chief, and an appointee of the Union. Appointees must be at least equal to the rank/grade for

the position being tested for. The committee may use any other person agreed to by the committee members as necessary to carry out its purpose.

- c) Functions of Committee - The committee is charged with preparing and finalizing specific tests and procedures for establishing a list of qualified candidates.

SECTION 2. Testing and Administration. Testing for promotions, shall be practical and adapted to determine the ability of applicants to perform the essential functions and duties of a particular position. Testing for promotions will always include a Chief panel interview (except for engineer positions). The composition of the panel will be determined by the Fire Chief. All applicants passing the written test (if administered) will be eligible for an interview and all interviews will be scored. The interview score will constitute 45% of the candidate's total aggregate promotional score.

- a) All approved components of the testing process shall be scored with the final score of applicants being an aggregate of all components.
- b) All approved applicants shall be subjected to the same testing.
- c) Any part or all of the testing or administration of any tests may be delegated or contracted by the Promotional Committee to appropriate parties other than the Promotional Committee.

SECTION 3. Notice. Notice of testing shall be posted at least ninety (90) days preceding the date of the first test for the position and shall include a description of the position, reference lists, testing components and procedures, feedback, and such other information as the Promotional Committee may deem pertinent. Notice of selection procedures will be included in the posting. All applications for testing shall be in writing on an approved form.

SECTION 4. Eligibility. Candidates for promotional examination must have the following qualifications:

- a) For promotion to the rank of Fire Engineer, the candidate must have had a minimum of three (3) years' experience as a Firefighter at time of application deadline with the Greeley Fire Department.
- b) For promotion to the rank of Fire Lieutenant, the candidate must have had a minimum of five (5) years' experience as a Firefighter and/or Engineer at time of application deadline with the Greeley Fire Department.
- c) For promotion to the rank of Fire Battalion Chief, the candidate must have had a minimum of two (2) years' experience as a Fire Lieutenant at time of application deadline with the Greeley Fire Department.

SECTION 5. Test Results. The results of tests shall be placed in order of finish from highest to lowest of applicants and approved by the Promotional Committee for transmittal to the appointing authority. Candidates shall be ranked by the order of their aggregate test scores. Candidates with the same score shall be placed in the order of their seniority on the Greeley Fire Department.

SECTION 6. Selection. Applicant test results shall be posted (as described in Section 5 above) and promotional appointments covered under this agreement will be made in order of appearance on the posted promotional results.

SECTION 7. Feedback. Feedback will be provided to candidates following the promotional process in a format agreed upon by the Promotional Committee.

SECTION 8. Promotional Process for Ranks Not Listed in the Contract. For promotion to any rank not listed in this contract, input from the bargaining agent may be considered by the Fire Chief or the Fire Chief's designee.

B. GRIEVANCE PROCEDURE FOR PROMOTION

SECTION 1. A grievance under this Article shall be confined to an alleged violation of any express provision of this Article regarding promotional processes. Any Fire Fighter or group of Fire Fighters may discuss any matter with their supervisor without invoking the formal grievance procedure provided for in this Article and are encouraged to resolve matters at the lowest level of supervision.

SECTION 2. A grievant may, upon request, be represented at any level of the grievance procedure by a representative of the grievant, or by legal counsel. The time limit set forth for the processing of grievances shall be strictly adhered to. In the event that a grievance is not appealed to the next step of the grievance procedure within the time limits provided at any step, such grievance shall be declared closed and settled on the basis of the most recent City decision.

In the event of failure to answer a grievance within the time limit provided, it shall be considered a denial and the grievant may appeal the grievance to the next step of the procedure in accordance with the time limitation specified. Extensions of time may be requested by either party, and must be mutually agreed upon by both parties. To be effective, any extension of time must be set forth in writing.

SECTION 3. A grievance must be initiated only by a grievant, it must be signed by all aggrieved Fire Fighters who are to be included in any resolution thereof. The grievant must reduce the entire grievance and all the reasons thereof to writing along with the promotional issue which the grievant wishes to grieve. The written grievance must be dated and signed by the grievant and submitted to the Deputy Chief, or the Deputy Chief's designee with a copy to the Fire Chief or the Chief's designee within seven (7) calendar days of the date the grievant knew or should have known the facts which gave rise to the grievance.

SECTION 4. The Deputy Chief or the Deputy Chief's designee shall meet with the grievant in an effort to resolve the grievance within seven (7) calendar days after being presented with the written grievance. The Deputy Chief or the Deputy Chief's designee must respond in writing to the grievant within seven (7) calendar days following the meeting with the grievant.

SECTION 5. If the grievance has not been satisfactorily resolved with the Deputy Chief, the grievant may appeal the decision to the Fire Chief or the Chief's designee in writing within seven (7) calendar days of receipt of the response of the Deputy Chief or the Deputy Chief's designee. Within seven (7) calendar days of receipt of the appeal of the grievance, the Fire Chief or Chief's designee shall discuss the grievance with the grievant. The Fire Chief or Chief's designee must give the grievant an answer in writing within seven (7) calendar days of the holding of such meeting.

SECTION 6. If the grievance is not mutually resolved with the Fire Chief or the Chief's designee, the grievant may appeal the grievance to the City Manager or the City Manager's designee in writing within seven (7) calendar days of receipt of the response from the Fire Chief or the Chief's designee. Within seven (7) calendar days of receipt of the appeal of the grievance, the City Manager or the City Manager's designee shall discuss the grievance with the grievant. The City Manager or the City Manager's designee must give the grievant an answer in writing within seven (7) calendar days of the holding of such meeting.

SECTION 7. If the grievance is not mutually resolved with the City Manager or the City Manager's designee, the grievant may file an appeal to the Civil Service Commission, with a copy to the Fire Chief and to the Human Resources Director, within seven (7) calendar days of receipt of the response from the City Manager or the City Manager's designee. The Commission shall, within fourteen (14) calendar days of receipt of the written appeal, schedule a hearing on the matter and within seven (7) calendar days of the hearing shall render its decision in writing to the appellant, which decision shall be final.

SECTION 8. The number of days indicated at each level of the grievance procedure shall be considered as a maximum unless mutually extended by the parties.

ARTICLE XI

WORKHOURS

SECTION 1. Shift personnel assigned to twenty-four (24) hour shifts shall continue to work in the three- platoon, twenty-four-hour shift. For the term of this agreement shift personnel assigned to a 28-day work cycle shall work nine or ten 24-hour shifts or a total of 216 or 240 hours per cycle. A shift will be considered 24 hours. A rotation shall be two consecutive shifts equaling 48-hours on duty, followed by four consecutive shifts equaling 96 hours off-duty.

SECTION 2. Shift personnel who work twenty-four-hour shifts shall commence work at 7:00 a.m. and continue through to 7:00 a.m. the following day.

SECTION 3. Day personnel who are assigned by the Fire Chief will work 40 hours per seven-day work week. The work week begins after midnight Wednesday and continues to and includes the second following Wednesday midnight.

SECTION 4. The pay dates will be bi-weekly.

SECTION 5. This Article is intended to identify the normal hours of work. It will not be construed as a guarantee of hours of work per day, per shift or of days of work per week or work cycle as it relates to time for training, emergency call back, transfers, light duty, Fire Department operations and/or other unusual circumstances that may arise.

ARTICLE XII

LEAVES

A. LEAVE ADMINISTRATION

SECTION 1. Fire Fighters will be paid at their regular base rate of pay for paid leave granted but in no case more than twenty-four (24) hours per shift for shift personnel or regularly scheduled hours missed for day personnel but in no case more than 80 hours in a two week period for day personnel. The rate for paid leave will be the Fire Fighter's regular, straight time rate of pay in effect for the Fire Fighter's regular job at the time the leave is taken.

SECTION 2. Time spent on any type of paid or unpaid leave will not be considered as hours worked for purposes of overtime calculation.

SECTION 3. Vacation, holiday, personal leave, and compensatory leave must be requested in advance and be approved before it can be taken. Vacation, holiday, personal leave, and compensatory leave will be scheduled at the discretion of the Fire Chief or the Chief's designee in accordance with departmental policy.

SECTION 4. Fire Fighters will not accrue vacation or holiday for any month during which they are on layoff, leave of absence, or other forms of unpaid status.

SECTION 5. A Fire Fighter who terminates for any reason will receive vacation, holiday, and compensatory pay for the actual amount accrued at the time of the separation from employment except that leave accruals are not prorated. The amount of payment for said vacation, holiday and compensatory leave will be calculated based on the Fire Fighter's regular, straight time hourly rate of pay in effect for the Fire Fighter's regular job on the Fire Fighter's last day of work.

SECTION 6. Seniority for Fire Fighters shall determine priority in selecting scheduled leave. Fire Fighters who were hired on the same date, will have their seniority determined by their hiring ranking.

SECTION 7. Shift Battalion Chiefs will be granted 10 hours of Administrative Leave per full calendar month to a maximum of 120 hours per year. A newly promoted Battalion Chief will be granted 10 hours of Administrative Leave pro-rated for the remaining full months of the current calendar year. The Administrative Leave hours granted will be available to use immediately and will not roll over to subsequent years.

Battalion Chiefs assigned to days will be granted 3.33 hours of Administrative Leave per full calendar month to a maximum of 40 hours per year. A newly promoted Battalion Chief will be granted 3.33 hours of Administrative Leave pro-rated for the remaining full months of the current calendar year. The Administrative Leave hours granted will be available to use immediately and will not roll over to subsequent years.

Shift Battalion Chiefs and Battalion Chiefs assigned to day assignments will have their Administrative Leave adjusted when moving from one assignment to the other. The conversion ratio will be 1 to 0.33 hours of Administrative Leave when converting from Shift to day assignment. The conversion ratio will be 1 to 3 when converting from day to Shift assignment.

B. VACATION

SECTION 1. Fire Fighters who have been in the continuous service of the Greeley Fire Department for more than six (6) months will accumulate vacation at the end of each pay cycle based on the following schedules:

| | <u>Shift Personnel</u> | |
|------------------------|----------------------------|------------------------------|
| <u>Time In Service</u> | <u>Hours per Pay Cycle</u> | <u>Annual Accrual Amount</u> |
| 7 months to 2 years | 4.6 | 120 hours |
| 3 to 5 years | 5.5 | 144 hours |
| 6 to 10 years | 6.5 | 168 hours |
| 11 to 15 years | 7.4 | 192 hours |
| 16 to 20 years | 8.3 | 216 hours |
| 21 years and over | 9.2 | 240 hours |

| | <u>Day Personnel</u> | |
|------------------------|----------------------------|------------------------------|
| <u>Time In Service</u> | <u>Hours per Pay Cycle</u> | <u>Annual Accrual Amount</u> |
| 7 months to 2 years | 3.1 | 80 hours |
| 3 to 5 years | 3.7 | 96 hours |
| 6 to 10 years | 4.6 | 120 hours |
| 11 to 15 years | 5.5 | 144 hours |
| 16 to 20 years | 6.2 | 160 hours |
| 21 years and over | 6.5 | 168 hours |

SECTION 2. Fire Fighters will not earn any vacation during the first six (6) months of employment. Shift personnel will be credited with 60 hours of vacation after completing six (6) full months. Day personnel will be credited with 40 hours of vacation after completing six (6) full months.

SECTION 3. The maximum vacation accrual for Shift personnel is 396 hours. The maximum vacation accrual for Day personnel is 280 hours. The City recognizes on occasion the Fire Fighter might not be able to use scheduled leave due to a Fire Department directed deployment or special assignment. At the discretion of the Fire Chief the Fire Fighter will be allowed to exceed the maximum vacation leave accrual for a reasonable period of time.

C. HOLIDAYS

SECTION 1. Shift personnel will accrue six (6) shifts (144 hours) of holiday leave each year in lieu of taking the actual holiday off. Fire Fighters who are placed in shift positions mid- year will accrue holiday leave on a pro-rated basis of twelve (12) hours per full calendar month worked. Accrual of the 12 holiday leave hours per month will begin in 2023 for 2024. The holiday leave may not be used during the year in which it was earned, but must be used in the following year.

SECTION 2. Day personnel will be granted 8 hours of holiday leave for each of the following holidays:

| | |
|-----------------------------|---|
| New Year's Day | January 1 |
| Martin Luther King, Jr. Day | 3rd Monday in January |
| President's Day | 3rd Monday in February |
| Memorial Day | Last Monday in May |
| Juneteenth | June 19 |
| Independence Day | July 4 |
| Labor Day | First Monday in September |
| Veteran's Day | November 11 |
| Thanksgiving Day | Fourth Thursday in November |
| Day After Thanksgiving | Fourth Friday in November |
| Christmas Eve | December 24 |
| Christmas Day | December 25 |
| Floating Holiday | Granted January 1 of each year to be taken off at any time during the calendar year |

If a holiday falls on a Fire Fighter's regularly scheduled workday which is greater than 8 hours, the difference can be taken in other available holiday, vacation leave or compensatory leave.

When an observed holiday falls on a Saturday, the preceding Friday will be taken as the holiday. When the holiday falls on Sunday, the next Monday will be taken as the holiday. When Christmas falls on Monday, that Monday and the following Tuesday will be observed as holidays. Day

personnel may not elect to be paid for holiday hours in lieu of time off. A Fire Fighter may not take a holiday before it is earned.

SECTION 3. If day personnel are on some type of approved paid leave that encompasses an observed holiday, the holiday will count as a day of holiday leave, rather than as a day of vacation leave, sick leave, etc. If day personnel are on approved leave without pay that encompasses a holiday there is no holiday accrual.

SECTION 4. Firefighters cannot carry over unused holiday leave from one year to the next. Holiday leave time accrued for years 2024, 2025, and 2026 from the previous years 2023, 2024, and 2025, respectively, must be used by December 31st of each year. Any holiday leave time not used by December 31st of each year will be forfeited.

D. SICK LEAVE

SECTION 1. Shift personnel will accrue sick leave at the rate of 5.5 hours per pay cycle. Day personnel will accrue sick leave at the rate of 3.7 hours per pay cycle. Accruals will occur after each full pay cycle in which the Fire Fighter is in pay status. Shift personnel may accumulate a maximum 57 shifts (1368 hours) of sick leave. Day personnel may accumulate a maximum of 960 hours of sick leave.

SECTION 2. When Fire Fighters are absent due to an incapacitating illness or injury, or required medical, dental or optical examination for themselves, they will notify their supervisor as soon as they know they will not be able to report to work. Appointments for non-emergency doctor, dental, or optical appointments must be scheduled on off-duty time unless approved in advance. The Fire Fighter will be paid at the regular straight time rate for each hour missed because of said absence to the extent the Fire Fighter has available sick leave.

SECTION 3. Sick leave may also be used by shift and day Personnel used for any reason found in C.R.S. §§ 8-13.3-404 and 8-13.3-405, as they may be amended from time to time. Routine childcare does not meet the requirements of this provision. The need for such leave will be subject to verification if so required by the Fire Chief or the Chief's designee.

SECTION 4. Fire Fighters whose illness requires sick leave in excess of their accumulated amount may be granted leave without pay, or be allowed to use accrued vacation, holiday leave, etc.

SECTION 5. A doctor's certificate or examination by a physician designated by the City may be required by the City as verification of illness. Any abuse of sick leave may be subject to disciplinary action. Fire Fighters returning to work after a major or potentially incapacitating illness must submit a doctor's written release before returning to duty.

E. PERSONAL LEAVE DAY

Once each year shift personnel may convert up to 24 hours of accrued sick leave to Personal Leave (Personal Leave Day). Once each year day personnel may convert up to 8 hours of accrued sick leave to Personal Leave (Personal Leave Day). Personal leave hours are to be scheduled in advance of the date to be taken. If a Fire Fighter chooses not to take Personal Leave, the Fire Fighter may carry the hours from one year to the next as sick leave up to the maximum accrual. Firefighters must request and use converted time in a calendar year prior to the end of the final pay period of the calendar year.

F. MATERNITY LEAVE

SECTION 1. When a Fire Fighter determines that she is pregnant, she will discuss with her doctor the continuance of her line firefighting position. The City reserves the right to require that the Fire Fighter consult a physician designated by the City to determine her physical ability to continue line firefighting duties. If it is determined by the City physician that the Fire Fighter is physically unable to perform line firefighter duties, but is determined to be capable of performing limited work assignments, the Fire Fighter will be scheduled to work under the conditions set forth by the physician, if such work is available and approved. The Fire Fighter may work in the limited work assignment until the birth of the child.

SECTION 2. A pregnant Fire Fighter must make a written request to her supervisor and the Fire Chief for maternity leave approximately thirty calendar days in advance of the anticipated leave. A pregnant Fire Fighter will be expected to work as long as her doctor certifies that she is physically capable of performing line firefighting duties or limited work assignments.

SECTION 3. Accrued sick leave may be taken only for the length of time certified by her physician as medically necessary for the health of the Fire Fighter. Upon returning to work, the Fire Fighter will submit a doctor's slip to verify the requested number of sick leave days taken to be medically necessary. Sick leave days not certified by her physician for medical necessity will be charged to another type of leave.

SECTION 4. The City reserves the right to require a letter from the Fire Fighter's doctor at any time certifying the Fire Fighter's capability or incapability of physically performing job duties. When a Fire Fighter returns to work, she will be reinstated in her previous assigned position or a limited work assignment, if such limited work assignment is available and approved, at her previous wage rate or at the rate she would have received except for her leave.

G. INJURY LEAVE

SECTION 1. If a Fire Fighter has been disabled due to an on-the-job injury and is entitled to receive benefits under the Worker's Compensation Law of the State of Colorado for temporary partial disability or temporary total disability, work time missed will be charged as injury leave, upon approval of the designated Worker's Compensation Administrator.

SECTION 2. Injury leave will terminate after 90 calendar days or as it applies below:

- 1) On the date a ruling of permanent disability is made;
- 2) when the appointed physician releases the Fire Fighter to return to work;
- 3) at such time as the Fire Fighter is declared capable of performing normal duties by a physician appointed by the City;
- 4) when the Fire Fighter reaches maximum medical improvement (MMI).

SECTION 3. If prior to release for normal duties, it is determined by a physician that the Fire Fighter is capable of performing limited work assignments, the Fire Fighter will return immediately to work under the conditions set forth by the physician, if such work is available and approved by the Fire Chief or the Chief's designee.

SECTION 4. Any limited assignment of duty will be reviewed at least every fourteen calendar days to determine if the Fire Fighter is capable of resuming normal unlimited duties. If the Fire Fighter is not released to return to normal duties by the expiration of the injury leave period, the Fire Fighter will be considered for placement to an available position for which the Fire Fighter possesses the necessary qualifications. If such a placement is not available, the Fire Fighter will be terminated.

SECTION 5. A Fire Fighter who is injured while not on duty with the Greeley Fire Department will not be entitled to injury leave. Fire Fighters traveling to and from work and on unpaid meal breaks are not covered by Worker's Compensation if injured during those times.

H. MILITARY LEAVE

SECTION 1. A leave of absence of a maximum of fifteen calendar days per year shall be granted to Fire Fighters who are active in the National Guard or a branch of the Armed Forces Reserves for the purpose of fulfilling their annual field training obligations. Written application for a military leave of absence must be made as soon as possible after receiving the military order. Fire Fighters will not be entitled to receive their regular wages while absent on military leave of absence. Upon the Fire Fighter's return to work, the appropriate paperwork detailing the pay received from the armed forces must be submitted. If the Fire Fighter's salary from the armed forces, exclusive of travel allowance, is less than the gross pay from the employer, the Fire Fighter will receive the difference for a period not to exceed fifteen days of training.

SECTION 2. If their work schedules are such that they conflict with the once a month weekend duty, Fire Fighters may use vacation leave or leave without pay to attend such duty. Normally, Fire Fighters will be able to schedule their monthly duty so that they can take it on their regular days off.

SECTION 3. Fire Fighters who enter the military service by draft, shall be granted a leave of absence without pay for that purpose, after the receipt of a written notice of such leave.

SECTION 4. Within 90 calendar days after the Fire Fighter's military service ends, the Fire Fighter will be reinstated in accordance with applicable provisions of the Selective Service and Training Act and any other applicable laws. The 90-day period may be extended upon approval of the Fire Chief and the City.

SECTION 5. To return to Greeley Fire Department employment, the Fire Fighter must make a written application within 90 calendar days of the Fire Fighter's discharge from military service. Failure to do so will result in resignation. The Fire Fighter will be subject to reexamination for fitness and may be required to successfully complete the medical screening and background portions of the screening process.

SECTION 6. If the Fire Fighter is found to be physically and mentally qualified to do so, the Fire Fighter may return to the classification previously held, at a wage rate the Fire Fighter would have been earning except for the military service. If the Fire Fighter is not found to be able to perform the duties of the previous classification, the Fire Fighter may be placed in a different classification at an appropriate pay rate if such position is available, or terminated.

I. JURY DUTY

SECTION 1. When a Fire Fighter is called for jury duty at a time which conflicts with the regular work schedule, the Fire Fighter will be compensated for time lost from the job at the Fire Fighter's regular straight time rate. Jury duty may not be used in any instance when the Fire Fighter is a party in any fashion to the court action in question, unless the Fire Fighter's involvement arises as a result of the Fire Fighter's job duties or responsibilities.

SECTION 2. If scheduled for work, the Fire Fighter will be expected to report back to work within thirty minutes from the time the Fire Fighter is excused from jury duty.

SECTION 3. If a Fire Fighter is excused and does not serve on the jury, the Fire Fighter will be required to work the regular assigned shift.

SECTION 4. A Fire Fighter will be required to show evidence of jury duty upon request by the Fire Chief or the Fire Chief's designee.

J. ELECTION LEAVE

Fire Fighters are encouraged to vote in all elections. If Fire Fighters can vote before or after work, during their lunch hours, or through the absentee ballot alternative, they are encouraged to do so. If Fire Fighters cannot vote during these times, they will be given up to a maximum of two hours of election leave for the purpose of voting.

K. EMERGENCY LEAVE

The Fire Chief or the Chief's designee may grant up to forty (40) hours for day personnel and up to four (4) shifts for shift personnel for unforeseen emergency reasons which are beyond the employee's control to pre-plan. Such leave will be charged to vacation, holiday or compensatory leave accruals.

L. BEREAVEMENT LEAVE

SECTION 1. In the event of the death of a family member, the firefighter may take up to two consecutive scheduled work shifts (48 hours) (three consecutive scheduled work days for day personnel) off with pay.

SECTION 2. For the purpose of bereavement leave, "family" is defined as spouse, civil union partner, child, parent, grandparent, grandchildren, brother, sister (this includes step, half and in-law relationships), aunt, uncle, niece, nephew, and first cousin.

SECTION 3. The Fire Chief may approve an additional two scheduled work shifts consecutive with the initial two shifts if the firefighter needs more than two shifts off or the firefighter may use other accrued leave or leave without pay, subject to the Fire Chief's approval. For day personnel, the Fire Chief may approve an additional two scheduled work days consecutive with the initial three days if the firefighter needs more than three days off or the firefighter may use other accrued leave or leave without pay, subject to the Fire Chief's approval.

M. LEAVE WITHOUT PAY

SECTION 1. Fire Fighters covered by this Agreement may request in writing a leave of absence from the Fire Chief, who may grant a leave of absence to the Fire Fighter, not to exceed ninety (90) calendar days. Upon written request, an extension of such leave of absence may be granted by the Fire Chief. Said extension shall not exceed an additional ninety (90) calendar days. An additional extended period of leave without pay cannot be requested until the Fire Fighter has been back at work for not less than twelve (12) months.

SECTION 2. Leave without pay will not be granted to allow the Fire Fighter to seek other employment or to accept remunerative employment elsewhere.

SECTION 3. As a condition to an extension of leave in excess of ninety (90) days being granted, the Fire Fighter may be required to waive all rights to immediate reinstatement to the same position the Fire Fighter had before the leave of absence was granted. The Fire Fighter will retain only the right to be appointed to the first vacancy for the position in which the Fire Fighter had been employed upon the termination of the leave.

SECTION 4. A Fire Fighter granted a leave of absence will continue to accrue leave and be eligible for benefits for only the first thirty (30) calendar days of leave without pay. A Fire Fighter must pay in advance to the City the full cost of insurance or other benefits requiring the payment of a cash premium, if the Fire Fighter wishes to retain such benefits after the thirty-day period. In the event the Fire Fighter does not desire to retain such benefits, a waiver releasing the City from any and all liability resulting from the discontinuance of such benefits must be signed by the Fire Fighter. The Fire Fighter must agree in writing to pay for any costs associated with resuming such benefit coverage and will be subject to the terms and conditions of benefit plans as they exist at the date of reinstatement.

N. FAMILY/MEDICAL LEAVE

All provisions of FMLA will be administered in accordance with the Family and Medical Leave City policy with detailed information available through the Human Resources Department.

**ARTICLE XIII
WAGES**

A. SALARY

SECTION 1. All firefighter annual base pay will be established by adding together the following types of pay:

- Grade Pay
- ALS Pay (if applicable)
- Specialist Pay (if applicable)

SECTION 2. All types of pay will be calculated as a percentage of the **Basis**. The Basis is the Firefighter I annual Grade Pay. Firefighter I Grade pay will be the following:

- 2024 – \$100,384
- 2025 – \$104,399
- 2026 – \$109,619

SECTION 3. All other Grade Pay percentages will be calculated as defined below:

- Engineer – 111%
- Lieutenant – 122%
- Battalion Chief – 145%

SECTION 4. ALS Pay is for positions of Firefighter, Engineer, and Lieutenant that carry an EMT-Paramedic or EMT-Intermediate certification. Battalion Chiefs are not eligible for ALS pay. The ALS Pay is defined below:

- Paramedic – 8.5%
- EMT-Intermediate – 4.0%

SECTION 5. Specialist Pay is for positions of Firefighter, Engineer, Lieutenant, and Battalion Chief that are assigned as day personnel. Firefighters that are selected for the Firefighter Staff Specialist position will be moved to Firefighter I plus Specialist Pay during their assignment. When a Firefighter returns to a shift assignment, their pay will be adjusted to the grade based on their years of service minus Specialist Pay. The Specialist Pay is defined below:

- Specialist Pay – 4.0%

SECTION 6. Full base salaries for Firefighters covered by the Agreement for calendar year 2024 shall be set forth in Appendix A to this Agreement. Full base salaries for Firefighters covered by the Agreement for calendar year 2025 shall be set forth in Appendix B to this Agreement. Full base salaries for Firefighters covered by the Agreement for calendar year 2026 shall be set forth in Appendix C to this Agreement.

SECTION 7. Fire Engineers returning to 24 hour shifts from Engineer Staff Specialist positions shall displace the least senior Engineer (time in grade). The displaced Fire Engineer shall return to Firefighter I classification and will be placed at the number one position on the most current eligibility list for Fire Engineer. The displaced individual will remain at that position on any subsequent list until promoted.

SECTION 8. For Fire Recruit, Fire Fighter, Fire Engineer, and Fire Lieutenant, the rate of pay will be determined by dividing the annual salary by 2,920 hours. For day personnel eligible for overtime the hourly rate of pay will be determined by dividing the annual salary by 2,080 hours. The pay period rate for all Battalion Chiefs will be determined by dividing the annual salary by 26.

SECTION 9. All new hire Fire Fighters will serve a probationary period of 12 months in which there is an opportunity for the supervisor to train, observe, and evaluate the employee. Probationary Fire Fighters do not have any appeal rights and may be demoted, laid off or terminated without cause at the discretion of the City.

SECTION 10. Fire Fighters will be eligible for a step increase every twelve (12) months upon satisfactorily completing all requirements. The time for performance appraisal will be based on the Fire Fighter's anniversary date.

B. OVERTIME PAY

SECTION 1. For Fire Recruits, Firefighters, Fire Engineers, and Fire Lieutenants who work twenty four-hour shifts, time actually worked over 212 hours in the twenty-eight day cycle will be paid as overtime. Calculation of the regular rate will be based on 2920 hours per year. For Fire Recruits, Firefighters, Fire Engineers and Fire Lieutenants who work days, time actually worked over forty (40) hours in a work week will be paid as overtime. Calculation of the regular rate will be based on 2080 hours per year. Overtime will be calculated at one and one-half times the regular rate. Battalion Chiefs are exempt and not eligible for overtime.

SECTION 2. This Article is intended to divide the normal hours of work and to provide the basis for the calculation of payment of overtime. It will not be construed as a guarantee of hours of work per day, per shift or of days of work per week or work cycle.

C. COMPENSATORY TIME

SECTION 1. At the request of the Fire Fighter, compensatory time will be given in lieu of pay when compensable hours exceed 216 during a scheduled 9 shift pay cycle or 240 during a scheduled 10 shift pay cycle. Such compensatory time will only be allowed for pro-rated hours spent in training assignments. If the Fire Fighter has actually worked over 212 hours in the work cycle, such compensatory time will be given at a time and one-half rate for each hour spent in training. If the Fire Fighter has worked less than 212 hours in the work cycle, such compensatory time will be given at a straight time rate for each pro-rated hour spent in training.

SECTION 2. The total number of compensatory time hours will not exceed 72 and can be carried over from one year to the next. The Fire Fighter will be allowed to take the compensatory time off within a reasonable period of time.

ARTICLE XIV
ACTING PAY

SECTION 1. Shift personnel who are assigned to an acting position (Engineer, Lieutenant, or Battalion Chief) will receive one hour of their existing straight time rate for serving in an acting position for 1-12 hours. If shift personnel work beyond 12 hours in a 24 hour shift, they will receive two hours of their existing straight time rate for serving in an acting position. The maximum amount of acting pay will be 2 hours per 24 hour shift.

SECTION 2. Fire Fighters who are assigned to acting Day Staff positions (Firefighter Staff Specialist, Engineer Staff Specialist, Fire Lieutenant Specialist, or Battalion Chief Specialist) will receive

one half hour (0.5) at time and one-half of their existing day shift straight time rate for every day spent in an acting position.

SECTION 3. After completing six consecutive months (60 shifts) in a temporary acting position (Engineer, Lieutenant or Battalion Chief) the Fire Fighters who are assigned by the Fire Chief or the Chief's designee, to an acting position will receive pay at the current entry level pay of the position being filled.

ARTICLE XV **POST EMPLOYMENT HEALTH PLAN**

Firefighters shall be required to contribute annually to a Post Employment Health Plan (PEHP) or similar retirement savings plan in accordance with the terms and conditions of the plan's participation agreement as approved by the membership. The City agrees to deduct the contribution from the biweekly paycheck of each Fire Fighter. The Union agrees that the City will not be responsible for administrative or other fees or costs associated with administration of the plan.

ARTICLE XVI **EMERGENCY CALL BACK**

SECTION 1. In an emergency situation, Greeley Fire Department personnel may be called back to duty at any time. During a non-emergency situation, personnel may be called back to duty to relieve personnel who need to respond on a special detail such as hazardous materials responses, dive-rescue requests, arson investigations, and the like.

SECTION 2. While an employee may decline the request for call back, if the situation becomes urgent, the employee may be required to accept the assignment.

SECTION 3. The Fire Fighter in Command during situations requiring call back shall be responsible for selecting the qualified employees; e.g. dive rescue team member, hazardous materials team member, arson investigator, etc. When Command has the option, employees to be called back will be chosen so they are not on duty on the next shift.

SECTION 4. All employees except Battalion Chiefs called back to duty shall begin earning compensation at the time they report in at their regular assigned station. Employees will be paid at the rate of one and one half times their regular hourly rate, for a minimum of one hour, and for all time worked over one hour until released from duty by Command.

SECTION 5. Battalion Chiefs are eligible to receive additional compensation for State or Federal reimbursable deployments. Additional compensation will be subject to the State and/or Federal guidelines established for such deployments.

ARTICLE XVII
HOLIDAY/VACATION SELL BACK

SECTION 1. Two times each calendar year shift personnel may elect to sell back to the City up to a combined maximum of 2 ½ shifts (60 hours) per year of holiday and/or vacation leave. Fire Fighters must have at least two (2) years of service and a balance of 7 ½ shifts (180 hours) of holiday and/or vacation in order to qualify for holiday/vacation sell back. Increments of ½ shifts (12 hours) must be used. The holiday and/or vacation leave will be paid by the City at the Fire Fighter's regular rate of pay.

SECTION 2. Two times each calendar year day personnel may elect to sell back to the City up to a combined maximum of five (5) days (40 hours) per year of vacation leave. Fire Fighters must have at least two (2) years of service and a balance of ten (10) days (80 hours) of vacation leave in order to qualify for vacation sell back. Increments of four (4) hours must be used. The vacation leave will be paid by the City at the Fire Fighter's regular rate of pay.

SECTION 3. Firefighters must submit their request in the payroll system prior to the last payroll period of the calendar year.

ARTICLE XVIII
HEALTH AND WELFARE

A. Health Insurance Contribution.

The City agrees to provide Fire Fighters with a health insurance plan substantially equivalent to that provided to City of Greeley employees. The City contribution for health coverage will be 80% for family coverage and 80% for single coverage. The City reserves the right to provide this insurance through a self-insured plan or under a group insurance policy or policies issued by an insurance company or companies selected by the City on the plan document.

B. Dental Assistance Contribution.

The City agrees to provide the Fire Fighters with a dental assistance plan substantially equivalent to that provided to City of Greeley employees. The City reserves the right to provide this dental insurance through a self-insured plan or under a group insurance policy or policies issued by an insurance company or companies selected by the City. It is understood that the plan is subject to the rules and regulations of the insurance carrier on the plan document.

C. Retirement Health, Dental, and Vision

Firefighters that retire from the City of Greeley are eligible to continue to participate in the City of Greeley health, dental, and vision insurance plans until the age of 65 or retiree reaches age of eligibility for Medicare. Enrollment in the health, dental, and vision plans is required at the time of retirement and the employee will be responsible for paying the full cost of the benefits. Details about continuation of benefits upon retirement are available from the Human Resources Department. The Firefighter must meet one of the following requirements to be eligible for this benefit as outlined below.

- Between the ages of 55 and 65 (or age of Medicare eligibility) with 10 or more continuous years of service
- Meets the FPPA 'Rule of 80' for retirement eligibility

D. Life Insurance Contribution.

The City agrees to provide Fire Fighters with one and one half (1 ½) times annual salary life insurance with Accidental Death and Dismemberment. The City will continue to provide the current level of coverage for dependents. The City reserves the right to provide this life insurance through a self-insured plan or under a group insurance policy or policies issued by an insurance company or companies selected by the City. It is understood that the life insurance plan is subject to the rules and regulations of the insurance carrier.

E. Physical Examination.

Any physical examination or fitness-for-duty examination required of Fire Fighters by the City shall be at City's expense and the results thereof shall be submitted to the City. Upon request, Fire Fighters shall be afforded an opportunity to review the results. The above shall not be construed to include examinations for work-related injuries or illnesses covered by the worker's compensation program.

F. Return to Regular Duty Certification.

SECTION 1. In order to protect the public and department personnel, the City has the responsibility of determining the safety, health and property protection measures for Fire Department personnel.

SECTION 2. Prior to returning to regular duty following leave or an alternate duty assignment resulting from the firefighter's off-duty serious health condition requiring leave or alternate duty assignment of more than four consecutive shifts (shift personnel) or more than 40 consecutive hours (day personnel), the firefighter will be required to obtain and present certification from the firefighter's physician stating that the firefighter is able to return to regular duty and perform the essential functions of the position. The certification completed by the firefighter's physician will be on a form approved by the Labor Management Committee. The fitness-for-duty certification will relate only to the particular health condition that resulted in the firefighter's need for leave or alternate duty assignment.

SECTION 3. Prior to returning to regular duty following leave or an alternate duty assignment resulting from the firefighter's off-duty serious health condition requiring leave or alternate duty

assignment of more than six consecutive shifts (shift personnel) or more than 80 consecutive hours (day personnel), the firefighter will be required to obtain and present certification from the firefighter's physician as well as certification from the City-designated physician(s) stating that the firefighter is able to return to regular duty and perform the essential functions of the position. The certification completed by the firefighter's physician will be on a form approved by the Labor Management Committee. The fitness-for-duty certifications will relate only to the particular health condition that resulted in the firefighter's need for leave or alternate duty assignment.

SECTION 4. In cases where the firefighter's physician certifies that the firefighter is able to return to regular duty and perform the essential functions of the position and the physician(s) designated by the City does not certify the firefighter to return to regular duty and perform the essential functions of the position, the firefighter can choose one of the following:

- 1) Follow the limitations and restrictions, if any, of the City-designated physician and return to regular duty or available alternate duty assignment when certified by the City designated physician and within the time frames and limitations for authorized leave;
- 2) Obtain a second opinion from any one of the three or more different physicians on a pre-established list that has been approved by the Fire Chief. The City will reimburse the firefighter for one-half the cost of the second opinion that the firefighter is responsible for paying that is not paid by insurance. When this option is selected, the firefighter must abide by the City-designated physician's decision until the second opinion is obtained. Leave time taken must be charged to approved and available leave. The recommendation of the selected physician will be submitted to the Fire Chief for a final determination on the firefighter's return to regular duty status.
- 3) Request an alternate duty assignment or extension of an alternate duty assignment. In cases where the firefighter requests an alternate duty assignment or extension of an alternate duty assignment, if such alternate duty assignment is available, the City will make such assignment or extension of the assignment available for up to two months (20 shifts or 320 hours if assigned to days) or the day the firefighter is released by the City-designated physician(s) to return to regular duty. Doctor's appointments scheduled during the alternate duty assignment must be requested and approved and leave time will be charged to sick leave, if available, other available leave or leave without pay. The firefighter's participation in rehabilitation activities during scheduled work hours will be at the discretion of the Fire Chief.

SECTION 5. In no case shall approved leave, alternate duty assignment or a combination of approved leave and alternate duty exceed 6 continuous months unless approved by the City.

G. Line of Duty Death.

If a firefighter is killed in the line of duty, the City shall pay for the actual funeral expenses incurred by the survivors up to a maximum of ten thousand dollars (\$10,000.00). This payment shall be made to the firefighter's estate.

If a firefighter is killed in the line of duty, the City shall pay the health insurance premium for the twelve (12) months of COBRA coverage for a surviving spouse and eligible dependents of the firefighter enrolled in the city's health insurance plan at the time of the line of duty death.

H. Tuition Assistance.

The City agrees to provide firefighters with a tuition assistance plan substantially equivalent to that provided to City of Greeley employees.

I. Uniforms and Equipment.

SECTION 1. Upon employment the City shall provide the initial issue of uniforms to each Fire Fighter as designated by the Fire Chief. All primary and back-up protective clothing or protective devices required of employees in the judgment of the Fire Chief, in the performance of their duties, shall be furnished without cost to Fire Fighters. Every attempt will be made to provide gear that has been sized to the Fire Fighter.

SECTION 2. The City shall replace, as needed, and shall provide facilities or programs to maintain, repair and clean uniforms issued by the Fire Department.

SECTION 3. All uniforms, protective clothing and protective devices damaged in the line of duty, shall be replaced by the City without cost to the employee, when necessary in the judgment of the Fire Chief and his/her designee.

SECTION 4. All uniform, clothing, protective gear and devices damaged or lost through neglect or employee carelessness shall be replaced at the expense of the employee.

ARTICLE XIX

PENSION

The City will deduct appropriate contributions from the wages of each Fire Fighter, and will make contributions to the pension plan of each Fire Fighter, as required by the Colorado Fire and Police Pension Association.

ARTICLE XX

DEATH AND DISABILITY

The City will pay the full amount of the premiums charged for the statewide death and disability plan for Firefighters hired on or after January 1, 1997.

ARTICLE XXI
STAFFING

SECTION 1. The City and the Union recognize the goal of the Greeley Fire Department is to provide the citizens a high level of service while maintaining the safety of its firefighters. Without abrogating or limiting the management rights set forth in Article IV it is the Parties' goal to staff as follows:

- A. Each Engine Company should have an assignment of four (4) with a minimum of three (3) line personnel.
- B. Each Ladder/Truck Company should have a minimum of four (4) line personnel; and
- C. Each Battalion should have a minimum of two (2) Battalion Chiefs per shift.

SECTION 2. The City will engage in good faith efforts to meet these levels for the term of the 2024-2026 Collective Bargaining Agreement between the Parties. However, the City retains discretion to change staffing to meet City needs. When the City decides that a change to the staffing levels identified above is necessary, the City will meet with the Union to discuss why those changes are necessary and receive feedback from Union representatives prior to making those changes. When the conditions that cause a reduction in staffing are financial in nature, an evaluation of how and if staffing levels can be restored to the levels identified above shall be performed in conjunction with the Union.

ARTICLE XXII
SAVINGS CLAUSE

SECTION 1. If any provision of this Agreement is subsequently declared by legislative or judicial authority to be unlawful, unenforceable, or not in accordance with applicable laws, statutes, and regulations of the United States of America and the State of Colorado, all other provisions of this Agreement shall remain in full force and effect for the duration of this Agreement and the parties shall meet as soon as possible to agree on a substitute provision. However, if parties are unable to agree within thirty (30) days following commencement of the initial meeting then the matter shall be postponed until contract negotiations are reopened. This thirty (30) day time period may be extended at the mutual Agreement of the City and the Union.

SECTION 2. In addition to the provisions of Section 1 of this article, the parties recognize that Article X, Section 20 of the Colorado Constitution presents unknown and inexact requirements and limitations upon the economic decisions and budgetary requirements of the City.

Rather than force a legislative or judicial declaration of invalidity of any of the terms and conditions of this Agreement for violation of the limitations of Article X, Section 20, the parties agree to open further collective bargaining for any and all of the terms of this Agreement that may prospectively violate Article X, Section 20 of the Colorado Constitution.

Determination of whether or not any of the terms and conditions of this Agreement exceed the limitations imposed by Article X, Section 20 of the Colorado Constitution, shall be determined by the appropriate officials of the City. The determination shall be reduced to writing, specifically citing the nature and extent of the prospective violation by any existing term or condition of this Agreement.

ARTICLE XXIII

DURATION

SECTION 1. This agreement shall be effective January 1, 2024 and shall continue to and include December 31, 2026. This contract is subject to appropriation and availability of City funds on an annual basis.

SECTION 2. Agreement shall continue for the duration of the contract. This Agreement shall then automatically continue from year to year for successive terms of one (1) year each unless the City or the Union shall give to the other written notice of request for collective bargaining no later than March 1 of the year the contract expires stating its desire to modify or terminate this Agreement.

SECTION 3. When changes in the Agreement are proposed and subsequently agreed upon, they shall be reduced to writing and signed by both parties.

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CITY OF GREELEY, COLORADO

**GREELEY FIRE FIGHTERS UNION
IAFF LOCAL 888**

By: _____
Raymond Lee
City Manager

By: _____
Mike Medhurst
President

APPROVED AS TO AVAILABILITY OF FUNDS:

By _____
John Karner
Director of Finance

APPROVED AS TO LEGAL FORM:

By: _____
Douglas Marek
City Attorney

Appendix A

Wage Table - 2024

| Increase from 2023 | 11.00% | 2024 | | |
|--|--------|-----------|--------------|------------|
| Grade Pay | Basis | Annual | Shift Hourly | Day Hourly |
| Firefighter Recruit | 70.0% | \$70,269 | \$24.06 | \$33.78 |
| Firefighter V (Apprentice Firefighter I) | 76.0% | \$76,292 | \$26.13 | \$36.68 |
| Firefighter IV (Apprentice Firefighter II) | 82.0% | \$82,315 | \$28.19 | \$39.57 |
| Firefighter III (Journey Firefighter I) | 88.0% | \$88,338 | \$30.25 | \$42.47 |
| Firefighter II (Journey Firefighter II) | 94.0% | \$94,361 | \$32.32 | \$45.37 |
| Firefighter I (Basis) (Master Firefighter) | 100.0% | \$100,384 | \$34.38 | \$48.26 |
| Engineer | 111.0% | \$111,426 | \$38.16 | \$53.57 |
| Lieutenant | 122.0% | \$122,468 | \$41.94 | \$58.88 |
| Battalion Chief | 145.0% | \$145,557 | | |
| ALS & Specialist Pay | Basis | Annual | Shift Hourly | Day Hourly |
| EMT-Intermediate | 4.0% | \$4,015 | \$1.38 | \$1.93 |
| EMT-Paramedic | 8.5% | \$8,533 | \$2.92 | \$4.10 |
| Specialist | 4.0% | \$4,015 | | \$1.93 |

Firefighter Grade Pay Steps

| | |
|---|------------------------|
| Firefighter Recruit: | 0 – 12 months service |
| Firefighter V (Apprentice Firefighter I): | 13 – 24 months service |
| Firefighter IV (Apprentice Firefighter II): | 25 – 36 months service |
| Firefighter III (Journey Firefighter I): | 37 – 48 months service |
| Firefighter II (Journey Firefighter II): | 49 - 60 months service |
| Firefighter I (Master Firefighter): | 61+ months service |

*Exhibit A Wage Schedule will go into effect January 4, 2024

Appendix B**Wage Table - 2025**

| Increase from 2024 | 4.00% | 2025 | | |
|---------------------------------|--------------|---------------|---------------------|-------------------|
| Grade Pay | Basis | Annual | Shift Hourly | Day Hourly |
| Firefighter Recruit | 70.0% | \$73,080 | \$25.03 | \$35.13 |
| Firefighter IV | 77.5% | \$80,909 | \$27.71 | \$38.90 |
| Firefighter III | 85.0% | \$88,739 | \$30.39 | \$42.66 |
| Firefighter II | 92.5% | \$96,569 | \$33.07 | \$46.43 |
| Firefighter I (Basis) | 100.0% | \$104,399 | \$35.75 | \$50.19 |
| Engineer | 111.0% | \$115,883 | \$39.69 | \$55.71 |
| Lieutenant | 122.0% | \$127,367 | \$43.62 | \$61.23 |
| Battalion Chief | 145.0% | \$151,379 | | |
| ALS & Specialist Pay | Basis | Annual | Shift Hourly | Day Hourly |
| EMT-Intermediate | 4.0% | \$4,176 | \$1.43 | \$2.01 |
| EMT-Paramedic | 8.5% | \$8,874 | \$3.04 | \$4.27 |
| Specialist | 4.0% | \$4,176 | | \$2.01 |

Firefighter Grade Pay Steps

| | |
|----------------------|------------------------|
| Firefighter Recruit: | 0 – 12 months service |
| Firefighter IV: | 13 – 24 months service |
| Firefighter III: | 25 – 36 months service |
| Firefighter II: | 37 – 48 months service |
| Firefighter I: | 49+ months service |

*Exhibit B Wage Schedule will go into effect January 2, 2025

Appendix C**Wage Table - 2026**

| Increase from 2025 | 5.00% | 2026 | | |
|---------------------------------|--------------|---------------|---------------------|-------------------|
| Grade Pay | Basis | Annual | Shift Hourly | Day Hourly |
| Firefighter Recruit | 70% | \$76,733 | \$26.28 | \$36.89 |
| Firefighter III | 80% | \$87,695 | \$30.03 | \$42.16 |
| Firefighter II | 90% | \$98,657 | \$33.79 | \$47.43 |
| Firefighter I (Basis) | 100% | \$109,619 | \$37.54 | \$52.70 |
| Engineer | 111% | \$121,677 | \$41.67 | \$58.50 |
| Lieutenant | 122% | \$133,736 | \$45.80 | \$64.30 |
| Battalion Chief | 145% | \$158,948 | | |
| ALS & Specialist Pay | Basis | Annual | Shift Hourly | Day Hourly |
| EMT-Intermediate | 4.0% | \$4,385 | \$1.50 | \$2.11 |
| EMT-Paramedic | 8.5% | \$9,318 | \$3.19 | \$4.48 |
| Specialist | 4.0% | \$4,385 | | \$2.11 |

Firefighter Grade Pay Steps

Firefighter Recruit: 0 – 12 months service
 Firefighter III: 13 – 24 months service
 Firefighter II: 25 – 36 months service
 Firefighter I: 37+ months service

*Exhibit C Wage Schedule will go into effect January 1st, 2026

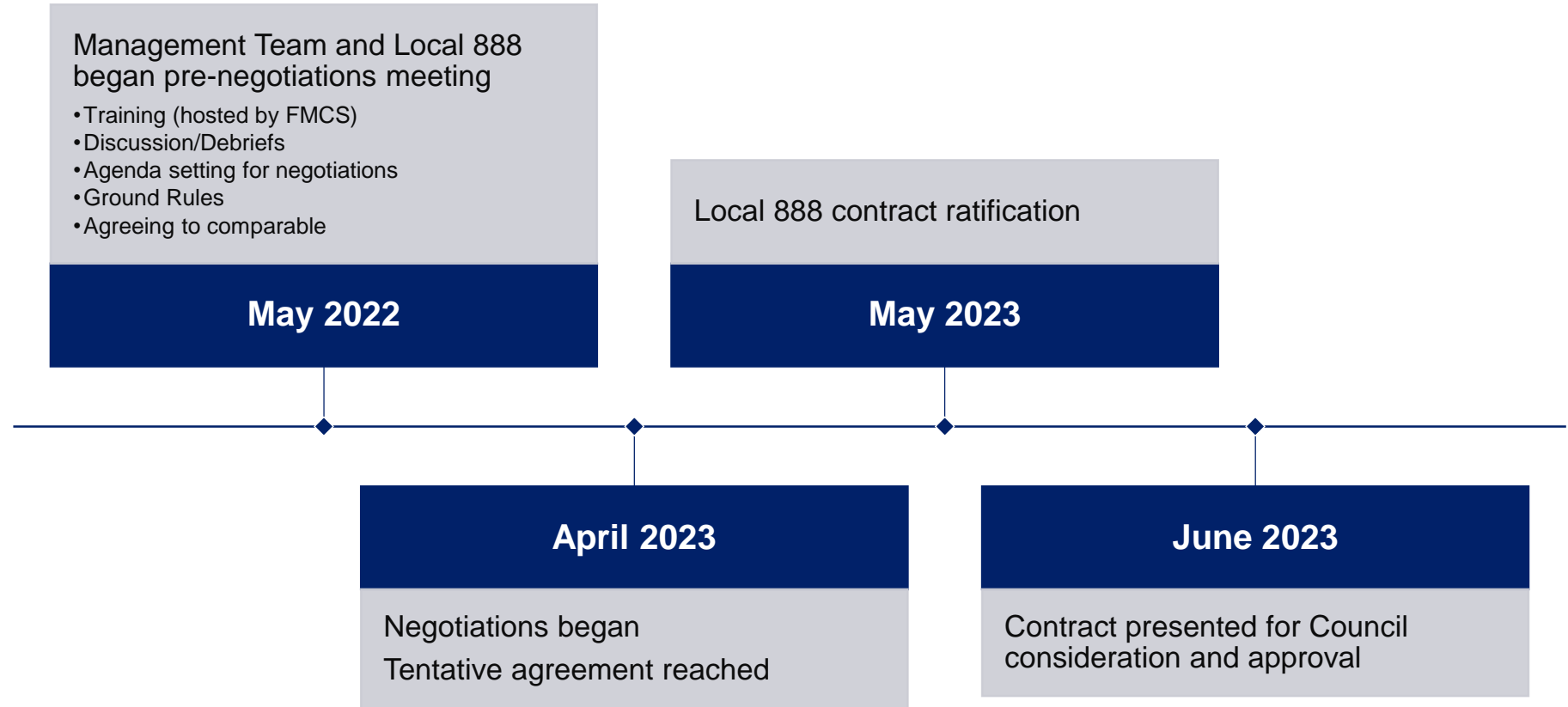
Collective Bargaining Agreement

City of Greeley & Local IAFF 888

Wednesday, June 20, 2023



12 Month Snapshot



Collaboration to Achieve Success

Item No. 13.

Mike Medhurst, Local 888 President



Creativity



Teamwork



Partnership



Development



Solution



Communication

Summary of Changes

- The terms and duration of the contract were developed collaboratively and considered fiscal sustainability, market competitiveness, and equity of the city's entire employee workforce.
- On May 16, 2023, the Greeley Fire Fighters Union local membership ratified the tentative agreement, which was approved by a vote of 64 in favor and 12 opposed amongst a total membership of 120.
- ARTICLE XII – LEAVES: Amended to include Juneteenth as a recognized holiday for shift personnel and those working a 40-hour work week.
- ARTICLE XIII – WAGES
 - Wages: Year 1 (2024) – 11%, Year 2 (2025) – 4%, Year 3 (2026) – 5%
 - Basis pay established for Firefighter I at 100% with grade pay for all positions calculated off of basis
 - Incremental reduction of pay steps for firefighters from six (6) pay steps to four (4) pay steps in years 2025 and 2026
 - Elimination of minimum pay step for Engineer, Lieutenant, and Battalion Chief positions
 - Advanced Life Support qualification pay adjustment - Paramedics will receive 8.5% of base pay of position and those holding EMT-Intermediate qualification will receive 4.0% of base pay of position
 - Specialist pay for positions of Firefighter, Engineer, Lieutenant, and Battalion Chief will be 4% of base pay of position

Summary of Changes

- ARTICLE XIV – ACTING PAY
 - Amended to include one (1) additional unit of pay for hours worked beyond 12 hours in a 24-hour shift for a maximum amount of 2 hours of acting pay per 24-hour shift
- ARTICLE XXIII - DURATION
 - Three-year contract – January 1, 2024 through December 31, 2026



Fiscal Impact

Annual Increase in Cost:

- 2024 - \$1,934,669 (11%)
- 2025 - \$950,431 (4.0%)
- 2026 - \$973,976 (5.0%)
- Total Three-Year Contract Cost \$8,678,845

Strategic Focus Areas



High-Performance Government



Quality of Life



Safe and Secure Communities



Any Question?

Questions?



Council Agenda Summary

June 6, 2023

Key Staff Contact: Heidi Leatherwood, City Clerk

Title:

Consideration of a Motion for Appointment to the Greeley/Weld Housing Authority

Summary:

On February 1, 2000, City Council adopted a Resolution authorizing that the local Housing Authority shall be composed of seven commissioners appointed by the Mayor pursuant to the newly enacted Sections of C.R.S. 29-4-205. On June 16, 2020, City Council adopted a resolution expanding the membership to 9 commissioners by adding two additional seats that are recommended by the Board of County Commissioners of Weld County for appointment by the Mayor. This item is asking City Council’s consideration to fill one of the two County representative seats.

Fiscal Impact:

| | |
|---|-----|
| Does this item create a fiscal impact on the City of Greeley? | No |
| What is the source of revenue within the fund? | N/A |
| Is there grant funding for this item? | No |

Legal Issues:

None.

Other Issues and Considerations:

None.

Strategic Focus Area:



Community Vitality

Decision Options:

- 1) Approve the appointment of Kim Longworth; or
- 2) Deny the appointment

Council's Recommended Action:

A motion to approve the appointment of Kim Longworth to the Greeley/Weld Housing Authority.

Attachments:

Letter from Board of County Commissioners
Resolution of the Board of County Commissioners



OFFICE OF THE BOARD OF COMMISSIONERS

PHONE: 970-400-4200
FAX: 970-336-7233
1150 O STREET
P.O. BOX 758
GREELEY, CO 80632

April 17, 2023

The Honorable John Gates
Mayor of Greeley
1001 11th Avenue
Greeley, Colorado 80631

RE: Housing Authority of City of Greeley

Dear Mayor Gates,

In accordance with the City of Greeley resolution dated June 16, 2020, regarding membership of the Greeley Housing Authority, the Board of Commissioners passed a resolution recommending the appointment of Kim Longworth as a Weld County Representative.

Enclosed is a copy of our resolution stating we recommend appointment. Please advise our office of your decision.

Sincerely,

BOARD OF COUNTY COMMISSIONERS

A handwritten signature in blue ink that reads 'Mike Freeman'. The signature is written in a cursive style.

Mike Freeman, Chair

C: Tom Teixeira

RESOLUTION

RE: APPROVE APPOINTMENT TO GREELEY HOUSING AUTHORITY

WHEREAS, the Board of County Commissioners of Weld County, Colorado, pursuant to Colorado statute and the Weld County Home Rule Charter, is vested with the authority of administering the affairs of Weld County, Colorado, and

WHEREAS, a vacancy currently exists on the Greeley Housing Authority, and

WHEREAS, the Weld County Board of Commissioners recommends the Mayor of the City of Greeley appoint Kim Longworth to said board as the County Representative, with a term to expire October 30, 2025.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Weld County, Colorado, that Kim Longworth, be, and hereby is, recommended for appointment to the Greeley Housing Authority, with a term to expire October 30, 2025.

The above and foregoing Resolution was, on motion duly made and seconded, adopted by the following vote on the 17th day of April, A.D., 2023.

BOARD OF COUNTY COMMISSIONERS
WELD COUNTY, COLORADO

ATTEST: *Cather G. Meoick*
Weld County Clerk to the Board

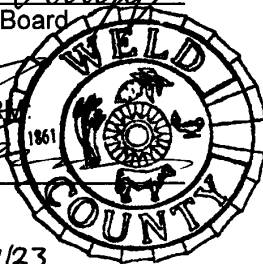
Mike Freeman
Mike Freeman, Chair

BY: *Theresa N. King*
Deputy Clerk to the Board

Perry L. Buck
Perry L. Buck, Pro-Tem

Scott K. James
Scott K. James

APPROVED AS TO FORM:
[Signature]
County Attorney



Kevin D. Ross
Kevin D. Ross

Lori Saine
Lori Saine

Date of signature: 04/24/23

cc: BOCC(KF)
04/24/23

2023-1085
HA0003



Council Agenda Summary

June 6, 2023

Key Staff Contact: Raymond C. Lee III, City Manager

Title:

Consideration of a Resolution appointing Tammy Hitchens to position of Interim Finance Director and Interim Ex-Officio City Treasurer

Summary:

Pursuant to Section 5-1 of the City's Municipal Charter, the City Council must consent to the appointment of the Finance Director and Ex-officio City Treasurer. Recently, Finance Director John Karner submitted his resignation effective at the close of business on June 14, 2023 to pursue other opportunities. In compliance with this Charter provision, the City Manager is seeking consent to the appointment of Tammy Hitchens to the position of Interim Finance Director and Interim Ex-officio City Treasurer effective at 5:01PM on June 14, 2023. Ms. Hitchens, who has served the City as its Deputy Finance Director since December 2021, has over 30 years of municipal finance experience in Colorado.

Fiscal Impact:

| | |
|---|----|
| Does this item create a fiscal impact on the City of Greeley? | No |
| Is there grant funding for this item? | No |

Strategic Focus Area:



High-Performance Government

Decision Options:

- 1) Adopt the resolution as presented; or
- 2) Amend the resolution and adopt as amended; or
- 3) Deny the resolution; or
- 4) Continue consideration of the resolution to a date certain.

Council's Recommended Action:

A motion to adopt the Resolution.

Attachments:

Resolution

**THE CITY OF GREELEY, COLORADO
RESOLUTION 20, 2023**

**A RESOLUTION APPOINTING TAMMY HITCHENS TO THE
POSITION OF INTERIM DIRECTOR OF FINANCE
AND INTERIM EX-OFFICIO CITY TREASURER.**

WHEREAS, the Greeley Municipal Charter establishes the Department of Finance in Section 5-1; and

WHEREAS, Section 5-1 of the Charter further states that the head of the Department of Finance shall be the Director of Finance and Ex-officio City Treasurer; and

WHEREAS, Section 5-1 of the Charter further provides that the Director shall be appointed by the City Manager with the advice and consent of the City Council; and

WHEREAS, John Karner has acted as the Director of Finance and the Ex-officio Treasurer, and has resigned his employment effective close of business on June 14, 2023; and

WHEREAS, the City Manager will undertake a search for a new permanent Director of Finance, but at this time has determined that Tammy Hitchens should be appointed as the Interim Director of Finance and Interim Ex-officio City Treasurer; and

WHEREAS, pursuant to Section 5-1 of the Charter the City Council must consent to the appointment of the Director of Finance and Ex-officio Treasurer; and

WHEREAS, the City Council hereby finds that Tammy Hitchens has training and knowledge in municipal accounting, budgeting, taxation and financial control as required by Section 5-1 of the Charter; and

WHEREAS, the City Council finds that the City Manager's appointment of Tammy Hitchens to act as the Interim Director of Finance and Interim Ex-officio Treasurer is appropriate.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE
CITY OF GREELEY, COLORADO:**

1. The City Council consents to the appointment of Tammy Hitchens as the Interim Director of Finance and Interim Ex-officio Treasurer.
2. The Interim Director of Finance and Interim Ex-officio Treasurer shall have the authority to exercise all duties, responsibilities and appointments as may be assigned to her by the Greeley Municipal Charter, the Greeley Municipal Code and the City Manager and Assistant City Managers.

- 3. This appointment shall continue until such time as a new Resolution is passed, as required by Section 5-1 of the Greeley Municipal Charter.
- 4. This Resolution shall be effective June 14, 2023 at 5:01pm.

PASSED AND ADOPTED, SIGNED AND APPROVED THIS _____ day of JUNE, 2023.

ATTEST:

**THE CITY OF GREELEY,
COLORADO**

**By: _____
City Clerk**

**By: _____
Mayor**



Council Agenda Summary

June 6, 2023

Key Staff Contact: John Karner, Finance Director

Title:

Public hearing and second reading of an Ordinance amending Title 6, Chapter 2 of the Greeley Municipal Code relating to Vendor Responsible for Tax

Summary:

During the May 9, 2023 City Council Work Session, following a staff presentation there was consensus among the City Council to bring forward the items necessary for the City of Greeley (City) to collect sales tax through the State of Colorado's Sales & Use Tax System (SUTS). This item follows that path with a necessary municipal code change necessary to allow the City to collect sales tax through SUTS. The update provides the opportunity for remote sellers & marketplace facilitators to remit tax returns in one online location. SUTS participation also allows the City to reduce the monetary and clerical burden taxpayers may experience while adhering to Colorado's taxability matrix.

The State of Colorado Interim Committee, the Sales and Use Tax Simplification Task Force, was originally created in 2017 to find ways to make it easier for businesses to navigate this highly complex system. Simplicity within the Colorado Sales and Use Tax landscape became imperative after the 2018 Supreme Court's ruling in *South Dakota v. Wayfair* that allowed states to require that sellers collect, and remit sales tax based on the establishment of an "economic nexus," doing away with the previous "physical presence" test.

In 2019, the State of Colorado Department of Revenue (DOR) and the Governor's Office of Information Technology (OIT) collaborated to deliver a SUTS that could be a single web portal where businesses could both look up sales and use tax information and file and remit to all jurisdictions at once. Current sale tax collections are remitted directly to the City.

Two important items to consider in potentially utilizing SUTS include:

- While this is a choice for Home Rule municipalities in Colorado, participating in SUTS opens the possibility for remote sellers & marketplace facilitators to remit tax returns in one online location. SUTS participation also allows the City to reduce the monetary and clerical burden taxpayers may experience while adhering to Colorado's taxability matrix and complying with the *South Dakota v. Wayfair* ruling. The City was not an early adopter and is now one of only 11 home rule municipalities that are currently not on the SUTS system. As the system becomes more mature and adopted more broadly, City staff believe now is the appropriate time to participate in the SUTS system.

- Moving forward, municipalities across Colorado engaged in SUTS should monitor any legislation and/ or regulations that would result in the State of Colorado retaining any portion of local sales and use taxes.

Attached is an ordinance amending the City’s Municipal Code to allow for the SUTS system to collect and remit taxes to the City. The City will also enter into an intergovernmental agreement with the State of Colorado for the purposes of permitting access to the SUTS System and its related tax information search capabilities.

Fiscal Impact:

| | |
|---|----|
| Does this item create a fiscal impact on the City of Greeley? | No |
| Is there grant funding for this item? | No |

Legal Issues:

Consideration of this matter is a legislative process which includes the following public hearing steps:

- 1) City staff presentation (if requested)
- 2) Council questions of staff
- 3) Public input (hearing opened, testimony - up to three minutes per person, hearing closed)
- 4) Council discussion
- 5) Council decision

Other Issues and Considerations:

None

Strategic Focus Area:



Business Growth



Community Vitality



High-Performance Government

Decision Options:

- 1) Adopt the ordinance as presented; or
- 2) Amend the ordinance and adopt as amended; or
- 3) Deny the ordinance; or
- 4) Continue consideration of the ordinance to a date certain.

Council's Recommended Action:

A motion to adopt the ordinance and publish with reference to title only.

Attachments:

Ordinance

PowerPoint Presentation

**CITY OF GREELEY, COLORADO
ORDINANCE NO. 20, 2023**

**AN ORDINANCE AMENDING TITLE 6, CHAPTER 2 OF THE GREELEY
MUNICIPAL CODE RELATING TO VENDOR RESPONSIBLE FOR TAX**

WHEREAS, The State of Colorado Interim Committee, the Sales and Use Tax Simplification Task Force, was originally created in 2017 to find ways to make it easier for businesses to navigate this highly-complex system, and simplicity became imperative after the 2018 Supreme Court’s ruling in South Dakota v. Wayfair that allowed states to require that sellers collect and remit sales tax based on the establishment of an “economic nexus,” doing away with the previous “physical presence” test; and

WHEREAS, In 2019, the State of Colorado Department of Revenue (DOR) and the Governor's Office of Information Technology (OIT) collaborated to deliver a Sales & Use Tax System (SUTS) that could be a single web portal where businesses could both look up sales and use tax information and file and remit to all jurisdictions at once; and

WHEREAS, Current sale tax collections are remitted directly to the City of Greeley (City). By participating in SUTS, the City opens the possibility for remote sellers & marketplace facilitators to remit tax returns in one online location. SUTS participation also allows the City to reduce the monetary and clerical burden taxpayers may experience while adhering to Colorado’s taxability matrix; and

WHEREAS, City Council has determined that maintaining the local collection of sales and use taxes for the City is important to insure the continued financial strength of the City; and

WHEREAS, City Council acknowledges that the retail business community desires better uniformity and simplicity when operating in multiple cities; and

WHEREAS, the proposed changes to the Municipal Code are for the purpose of clarification and uniformity only, and will not result in the implementation of any new policy, nor will they result in the implementation of any new taxes, nor result in the elimination of any current tax exemptions; and

WHEREAS, it is in the best interests of the citizens of the City of Greeley to repeal and replace Chapter 2, Title 6, Section 281 with those amended codes,

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF GREELEY,
COLORADO:**

Section 1. That Section 6-281 contained in Chapter 2 of Title 6 of the Greeley Municipal Code shall be amended as shown on Exhibit A, attached hereto and incorporated herein.

Section 2. This Ordinance shall take effect on the fifth day following its final publication, as provided by Section 3-16 of the Greeley City Charter.

PASSED AND ADOPTED, SIGNED AND APPROVED ON THIS ____ DAY OF JUNE, 2023.

ATTEST

THE CITY OF GREELEY, COLORADO

By: _____
City Clerk

By: _____
Mayor

APPENDIX A
**AN ORDINANCE AMENDING TITLE 6, CHAPTER 2 OF THE GREELEY
MUNICIPAL CODE**

Section 1. Section 6-281. - Vendor responsible for tax. of the above-entitled ordinance be amended to read as follows:

- (a) Amount. Every vendor shall add the tax imposed by section 6-278(a) to the purchase price or charge of all lodging within the city.
- (b) Returns. Every vendor shall, before the 20th day of each month thereafter, make a return to the director of finance or the director's designee for the preceding calendar month, and remit to the director of finance or director's designee, simultaneously therewith the total amount due the city. The monthly returns of the vendor as required hereunder shall be made in such manner and upon such forms as the director of finance may prescribe.
- (c) Accounting practice. If the accounting methods regularly employed by the vendor in the transaction of business, or other conditions, are such that the returns aforesaid made on a calendar-month basis will impose unnecessary hardship, the director of finance may, upon request of the vendor, accept returns at such intervals as will, in the director's opinion, better suit the convenience of the vendor and will not jeopardize the collection of the tax.



Amending Title 6, Chapter 2 of the Greeley Municipal Code Relating to Vendor Responsible for Tax

**City Council Meeting – Second Reading and Public Hearing
June 06, 2023**

Amending Title 6, Chapter 2 of Vendor Responsible for Tax

- Under current City municipal code, all returns and payments must be directed to the Director of Finance
- By amending Title 6, Chapter 2, Section 6-281 the City will allow “a designee” to collect tax returns for out-of-state:
 - Marketplace Facilitators
 - Businesses that have created economic nexus
- This change allows the City to use the new Sales & Use Tax System (SUTS) from the Colorado Department of Revenue to collect tax returns

Thank you



**CITY OF GREELEY, COLORADO
ORDINANCE NO. 20, 2023**

**AN ORDINANCE AMENDING TITLE 6, CHAPTER 2 OF THE GREELEY
MUNICIPAL CODE RELATING TO VENDOR RESPONSIBLE FOR TAX**

WHEREAS, The State of Colorado Interim Committee, the Sales and Use Tax Simplification Task Force, was originally created in 2017 to find ways to make it easier for businesses to navigate this highly-complex system, and simplicity became imperative after the 2018 Supreme Court’s ruling in South Dakota v. Wayfair that allowed states to require that sellers collect and remit sales tax based on the establishment of an “economic nexus,” doing away with the previous “physical presence” test; and

WHEREAS, In 2019, the State of Colorado Department of Revenue (DOR) and the Governor's Office of Information Technology (OIT) collaborated to deliver a Sales & Use Tax System (SUTS) that could be a single web portal where businesses could both look up sales and use tax information and file and remit to all jurisdictions at once; and

WHEREAS, Current sale tax collections are remitted directly to the City of Greeley (City). By participating in SUTS, the City opens the possibility for remote sellers & marketplace facilitators to remit tax returns in one online location. SUTS participation also allows the City to reduce the monetary and clerical burden taxpayers may experience while adhering to Colorado’s taxability matrix; and

WHEREAS, City Council has determined that maintaining the local collection of sales and use taxes for the City is important to insure the continued financial strength of the City; and

WHEREAS, City Council acknowledges that the retail business community desires better uniformity and simplicity when operating in multiple cities; and

WHEREAS, the proposed changes to the Municipal Code are for the purpose of clarification and uniformity only, and will not result in the implementation of any new policy, nor will they result in the implementation of any new taxes, nor result in the elimination of any current tax exemptions; and

WHEREAS, it is in the best interests of the citizens of the City of Greeley to repeal and replace Chapter 2, Title 6, Section 281 with those amended codes,

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF GREELEY,
COLORADO:**

Section 1. That Section 6-281 contained in Chapter 2 of Title 6 of the Greeley Municipal Code shall be amended as shown on Exhibit A, attached hereto and incorporated herein.


Section 2. This Ordinance shall take effect on the fifth day following its final publication, as provided by Section 3-16 of the Greeley City Charter.

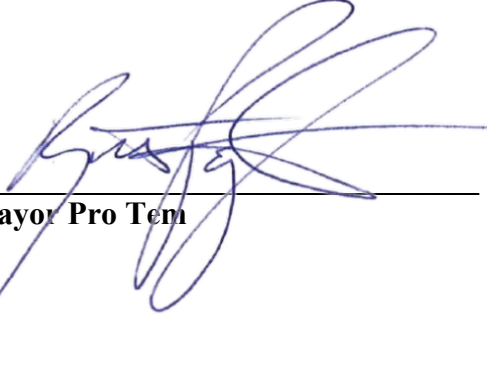
PASSED AND ADOPTED, SIGNED AND APPROVED ON THIS 6th DAY OF JUNE, 2023.

ATTEST



THE CITY OF GREELEY, COLORADO

By: 
City Clerk

By: 
Mayor Pro Tem

APPENDIX A
**AN ORDINANCE AMENDING TITLE 6, CHAPTER 2 OF THE GREELEY
MUNICIPAL CODE**

Section 1. Section 6-281. - Vendor responsible for tax. of the above-entitled ordinance be amended to read as follows:

- (a) Amount. Every vendor shall add the tax imposed by section 6-278(a) to the purchase price or charge of all lodging within the city.
- (b) Returns. Every vendor shall, before the 20th day of each month thereafter, make a return to the director of finance or the director's designee for the preceding calendar month, and remit to the director of finance or director's designee, simultaneously therewith the total amount due the city. The monthly returns of the vendor as required hereunder shall be made in such manner and upon such forms as the director of finance may prescribe.
- (c) Accounting practice. If the accounting methods regularly employed by the vendor in the transaction of business, or other conditions, are such that the returns aforesaid made on a calendar-month basis will impose unnecessary hardship, the director of finance may, upon request of the vendor, accept returns at such intervals as will, in the director's opinion, better suit the convenience of the vendor and will not jeopardize the collection of the tax.



Council Agenda Summary

June 6, 2023

Key Staff Contact: John Karner, Finance Director

Title:

Consideration of a Resolution to approve entering into an agreement with the State of Colorado Department of Revenue, and use of Sales and Use Tax System (SUTS)

Summary:

Resolution to enter into an agreement regarding the SUTS System between the Colorado Department of Revenue (“CDOR”) and the City of Greeley for the purposes of permitting access to the SUTS System and its related tax information look up tool as described in the Agreement. The SUTS System permits the acceptance of returns and processing of payments for the sales and use tax levied by the state and any local taxing jurisdictions in accord with the objectives of SB19-006.

This agreement does include guarantees of confidentiality and security with taxpayer information.

Fiscal Impact:

| | |
|---|----|
| Does this item create a fiscal impact on the City of Greeley? | No |
| Is there grant funding for this item? | No |

Legal Issues:

Consideration of this matter is a legislative process.

Other Issues and Considerations:

None

Strategic Focus Area:



Business Growth



Community Vitality



High-Performance Government

Decision Options:

- 1) Adopt the resolution as presented; or
- 2) Amend the resolution and adopt as amended; or
- 3) Deny the resolution; or
- 4) Continue consideration of the resolution to a date certain.

Council's Recommended Action:

A motion to adopt the resolution and sign Agreement Regarding Department Of Revenue Sales And Use Tax Software ("SUTS System")

Attachments:

Resolution
SUTS Agreement

**CITY OF GREELEY, COLORADO
RESOLUTION NO. 19, 2023**

A RESOLUTION OF THE CITY OF GREELEY CITY COUNCIL AUTHORIZING THE CITY TO ENTER INTO AN INTERGOVERNMENTAL AGREEMENT WITH THE STATE OF COLORADO DEPARTMENT OF REVENUE FOR THE COLLECTION OF SALES AND USE TAX FROM REMOTE TAXPAYERS.

WHEREAS, in accordance with C.R.S. § 29-1-203, governments may cooperate or contract with one another to provide any function, service, or facility lawfully authorized to each of the cooperating or contracting units;

WHEREAS, In 2019, the State of Colorado Department of Revenue (DOR) and the Governor's Office of Information Technology (OIT) collaborated to deliver a Sales & Use Tax System (SUTS) that could be a single web portal where businesses could both look up sales and use tax information and file and remit to all jurisdictions at once; and

WHEREAS, Current sale tax collections are remitted directly to the City of Greeley (City). By participating in SUTS, the City opens the possibility for remote sellers & marketplace facilitators to remit tax returns in one online location. SUTS participation also allows the City to reduce the monetary and clerical burden taxpayers may experience while adhering to Colorado's taxability matrix; and

WHEREAS, City Council has determined that maintaining the local collection of sales and use taxes for the City is important to insure the continued financial strength of the City; and

WHEREAS, City Council acknowledges that the retail business community desires better uniformity and simplicity when operating in multiple cities; and

WHEREAS, both parties desire to enter into an Intergovernmental Agreement ("IGA") for the collection of sales and use tax through the SUTS system for the benefit of the City; and

WHEREAS, it is in the best interests of the citizens of the City of Greeley to enter into this IGA, which will result in increased sales tax revenue for the City and uniformity and simplicity for taxpayers operating in multiple jurisdictions.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GREELEY, COLORADO:

Section 1. The City Council hereby authorizes the City of Greeley to execute the IGA, a copy of which is attached hereto and incorporated herein as Exhibit A.

Section 2. The City of Greeley staff is hereby authorized to make changes and modifications to the IGA, so long as the substance of the IGA remains unchanged.

Section 3. This Resolution shall become effective immediately upon its passage, as provided by the Greeley Charter.

PASSED AND ADOPTED, SIGNED AND APPROVED ON THIS ____ DAY OF JUNE, 2023.

ATTEST:

**THE CITY OF GREELEY,
COLORADO**

**By: _____
City Clerk**

**By: _____
Mayor**

EXHIBIT A
RESOLUTION _____
CITY OF GREELEY, COLORADO

AGREEMENT REGARDING DEPARTMENT OF REVENUE SALES AND USE TAX SOFTWARE (“SUTS SYSTEM”)

This agreement regarding the SUTS System (“**Agreement**”) is entered between the Colorado Department of Revenue (“**CDOR**”) and the undersigned home rule local taxing jurisdiction (“**Jurisdiction,**” collectively, “**the Parties**”) for the purposes of permitting access to the SUTS System and its related tax information look up tool as described in this Agreement. The SUTS System permits the acceptance of returns and processing of payments for the sales and use tax levied by the state and any local taxing jurisdictions in accord with the objectives of SB19-006. To further those objectives here, the Parties agree to the following:

AGREEMENT

CDOR grants Jurisdiction access to the SUTS System for Jurisdiction’s use in the collection and payment of Sales and Use tax under the terms set forth in this Agreement.

A. Purpose of Agreement

Pursuant to Senate Bill 19-006, CDOR has contracted with vendors, including at this time, MUNIREvs, Inc. and Transaction Tax Resources, Inc., Fast Enterprises, LLC, and others, which may change from time to time (collectively, “Vendors”) to provide a sales and use tax simplification system that allows taxpayers to look up and remit sales and use taxes through a single portal managed by Vendors and held in trust for the benefit of the Jurisdiction.

B. Definitions

- 1) “Confidential Information” means any information derived from the SUTS System, including but not limited to taxpayer information, return information, and “personally identifiable information,” as defined in section 24-73-101(4) (b), C.R.S.
- 2) A "Security Incident," has the meaning set forth in section 24-37.5-402(10), C.R.S., which is “an accidental or deliberate event that results in or constitutes an imminent threat of the unauthorized access, loss, disclosure, modification, disruption, or destruction of communication and information resources.” Security incidents include but are not limited to: a) detection of a virus, worm, malware, etc; b) unauthorized use of an information resource; c) unauthorized modification of an information resource; d) theft or diversion of an information resource; e) theft or diversion of property using an information resource, and f) vandalism or other damage to an information resource.”
- 3) “Taxpayer” means any individual or business required to remit sales or use taxes to a taxing jurisdiction.

4) "Sales and Use Tax" means sales and use tax collected by Taxpayers and remitted to a jurisdiction by Taxpayers. Sales and Use Tax does not include excise taxes or other taxes or fees that a jurisdiction requires taxpayers to pay.

C. Confidentiality.

1) CDOR agrees to continually maintain a secure place in which Confidential Information will be stored, regardless of whether Confidential Information is in physical or electronic form and will restrict access to Confidential Information to persons whose duties and responsibilities require such access. All third-party contractors who need such access for purposes consistent with this Agreement shall sign confidentiality agreements with CDOR or Jurisdiction no less restrictive than the confidentiality terms of this Agreement.

2) Except as may be ordered by a court of competent jurisdiction, no Confidential Information obtained pursuant to this Agreement shall be disclosed by CDOR or Jurisdiction to any person or entity not authorized to receive such information by the laws of the Jurisdiction or the State of Colorado.

3) If CDOR or Jurisdiction is served with a request for Confidential Information, CDOR or Jurisdiction shall use reasonable efforts to provide notice to the other Party within such time that CDOR or Jurisdiction may intervene and seek a protective order or other relief if it so chooses.

4) The information obtained pursuant to this Agreement shall be used only for the purpose of administration and enforcement of the sales and/or use tax laws of the Jurisdiction or the State of Colorado.

5) Nothing in this agreement shall prevent a Jurisdiction from contacting their Taxpayers for auditing or other purposes.

6) If either party becomes aware of any Security Incident, they shall notify the other immediately and cooperate with one another regarding recovery, remediation, and the necessity to involve law enforcement.

D. Payments of Taxes to Jurisdiction.

1) All funds deposited by a Taxpayer shall be and shall remain the property of Jurisdiction held in trust until transferred to Jurisdiction. Deposited remittances

bank following NACHA guidelines.

2) If any Taxpayer payment is returned via an ACH or credit card charge-back against the account past the settlement process above, that Jurisdiction will pay applicable amounts back to the SUTS System within five banking days of notification of return.

E. Data and Reports.

1) Jurisdiction will have access to all information from tax forms processed in the SUTS System that involve transactions within the Jurisdiction via CSV file downloads, PDF files or some other manner that is mutually acceptable.

2) The following reports will be available to Jurisdiction with the SUTS System:

- a) Assessment Report: This report shows all assessments, by business and includes several filters.
- b) Form Data Report: The form data report provides the ability to see all data for a taxpayer's form (e.g., gross sales through all deductions).
- c) Business Comparison Reports by Month: Allows review of trends over time for particular businesses, or an audience of businesses.
- d) Business Contact Report.
- e) Missing Account Number Report for validating Jurisdiction's Local Account Number for each registered account in the SUTS System.

F. Support.

CDOR will provide Taxpayer user support during regular, published State business hours. Support to Jurisdiction's administrative users for system questions is provided by Vendor specialists who will be available by email and phone Monday through Friday from 8:00 am to 5:00 pm Mountain Time, excluding Federal and State Holidays.

G. Retention of Data.

The SUTS System will retain, for a minimum of three years, all data, records, returns, and information: a) submitted by Taxpayers to the SUTS System, b) derived from Taxpayer submissions, and c) transferred to Jurisdiction.

H. System Failure.

If the SUTS System becomes disabled, CDOR will use good faith and reasonable 3 efforts to recover the system and all Jurisdiction data not already in the possession of Jurisdiction. This recovery of the SUTS System and data will be conducted at no

additional cost to Jurisdiction.

I. Reservation of Rights.

The software, workflow processes, user interface, designs, know-how and other services and technologies which are the sole property provided by Vendors as part of the SUTS System and CDOR's agreements with Vendors will remain with Vendors and Jurisdiction will not have any right, title or interest in or to such items, including all associated intellectual property rights.

J. Restrictions on Use of The SUTS System.

1) Jurisdiction *may not* a) sell, resell, rent or lease the SUTS System, b) use the SUTS System to store or transmit infringing, unsolicited marketing emails, libelous, or otherwise unlawful or tortious material, or to store or transmit material in violation of third-party rights, c) interfere with or disrupt the integrity or performance of the SUTS System, or d) attempt to gain unauthorized access to the SUTS System or its related systems or networks.

2) Jurisdiction may allow its third-party contractors to use the SUTS System solely on behalf of and for the benefit of Jurisdiction and only in compliance with the terms and conditions of this Agreement. Jurisdiction is responsible for compliance with the terms of this Agreement by its contractors.

K. Initial Setup.

Jurisdiction shall furnish the following items in order to use the SUTS System:

1) Jurisdiction Depository Information: Jurisdiction will provide bank deposit information (routing & account number) to CDOR's appropriate Vendors within 5 days of signing this Agreement. This information will be utilized for the deposits of taxes, penalties, and interest from the SUTS System. It is the responsibility of Jurisdiction to provide updated depository information should this account need to be changed at any point in time.

2) Initial Account Number Validation: Jurisdiction will upload their local account numbers for their Taxpayers to the SUTS System using the SUTS standard upload format (e.g. Excel, CSV) as soon as is reasonable after signing this Agreement. CDOR will use this information to validate account numbers for businesses registering on the SUTS System with actual account numbers for each jurisdiction for accurate account information on SUTS System tax returns.

4

3) The local account numbers will include the Taxpayer's account number, business

name, dba, FEIN#, address and any other contact information or the SUTS System to validate and match the registered account to Jurisdiction's account number.

4) The SUTS System will not activate for Jurisdiction for tax receipts until the Existing Account Number Data File has been provided to CDOR, imported to the SUTS System and validated by Vendor.

5) It is the responsibility of Jurisdiction to update the account numbers that need to be added or edited in the SUTS System in order to display the local account number on future tax returns generated from the SUTS System.

L. Use Tax Purchase Details.

Taxpayers filing tax returns through the SUTS System are not required to include use tax purchase details. Purchase details are typically required on Schedule B to tax returns required by local jurisdictions. However, nothing in this Agreement prevents Jurisdiction from requesting these use tax details directly from the Taxpayer.

M. Business Licenses.

The SUTS System will not require any Taxpayer to obtain separate Jurisdiction business licenses or any other license. Jurisdiction may, at Jurisdiction's discretion, use the information provided by the Taxpayer in the SUTS System to reach out separately and independently to their Jurisdiction's Taxpayers for licenses or any other requirements from the Jurisdiction that is not included in the SUTS System.

N. Frequency of Tax Filings.

Taxpayers may file tax returns via the SUTS System at the frequency which is required of Taxpayer for State taxes under CDOR regulations; however, Jurisdiction may request from CDOR that the Taxpayer may be moved to a more frequent filing, which will not be unreasonably denied.

O. Jurisdiction New Account Review.

When a Taxpayer submits a new registration with the SUTS System and does not have a Colorado Account Number, the SUTS System will require that the Taxpayer submit an online Sales Tax License Application and pay the State of Colorado license fee. The application and fee shall be sent to the CDOR for license issuance and account number creation for the Colorado Account Number. It is the

businesses in their external system of record and to update their local account number in the SUTS System using the procedures set forth above.

P. Jurisdiction Rate Validation.

- 1) Jurisdiction will provide written confirmation to Vendors of its sales and use tax rates, rules, and boundaries. Jurisdiction will use due care and make best efforts to provide accurate rates, rules, and boundaries.
- 2) Jurisdiction agrees to specify to Vendors authorized Jurisdiction users who are allowed to propose changes within the SUTS System administrative tools.
- 3) Jurisdiction will use best efforts to email Vendors or use the SUTS System administrative tools to notify Vendors of any tax rates, rules, boundaries, or other needed data changes 30 days before they are effective for them to be updated in the system. All notifications must include details on the changes and the period for which changes are effective.

Q. Tax Data Integration.

This Agreement does not provide a direct interface or integration to Jurisdiction's system of record for sales and use tax. If a direct interface or custom format is desired by Jurisdiction to better integrate to Jurisdiction's system of record, Jurisdiction may contact Vendor to discuss custom options, which may entail programming fees to be paid directly to the Vendor by the Jurisdiction.

R. Licensed Documentation.

All SUTS System user guides, sample data, marketing, training and other items provided through the SUTS System or by Vendors ("Licensed Documentation") may be used and copied by Jurisdiction via a non-exclusive license for the duration of the Agreement for Jurisdiction's use solely with the SUTS System according to the terms of this Agreement.

S. Payment and Merchant Fees.

Taxpayer pays credit, debit or any other merchant processor or bank fee associated with Taxpayer's remittance payment, and the Jurisdiction agrees to pay the ACH Credit or Debit *transfer* fees from the SUTS System to Jurisdiction's bank account, which is currently one dollar (\$1) per banking day, or approximately twenty dollars (\$20) per month for a Jurisdiction that gets a payment every banking day. The Jurisdiction will Pre-pay an amount of two hundred and sixty dollars (\$260) during

the SUTS onboarding process as a credit towards the transfer fees. Jurisdiction will replenish any funds used, paying in advance of each CDOR fiscal year on or before July 1 after receiving a notice of account and balance due by June 1.

T. Additional Terms.

1) **Governing Law.** This Agreement is governed by Colorado law without regard to conflicts of law principles.

2) **Survival of Terms.** Any terms that by their nature survive termination or expiration of this Agreement, will survive.

3) **Entire Agreement and Changes.** This Agreement constitutes the entire agreement between the Parties, and supersedes all prior or contemporaneous negotiations, agreements and representations, whether oral or written, related to this subject matter. No modification or waiver of any term of this Agreement is effective unless in a written instrument signed by both Parties.

4) **No Assignment.** Neither Party may assign or transfer this Agreement to a third party.

5) **Enforceability:** If any term of this Agreement is determined to be invalid or unenforceable, the other terms remain in effect.

6) **Notices:** All notices required or permitted to be given under this Agreement shall be in writing, and shall be delivered (a) by hand with receipt required, (b) by certified or registered mail to such Party's principal representative at the address set forth below or (c), as an email with read receipt requested addressed as given herein. This contact information may be changed by notice submitted in accordance with this section.

For CDOR:

Name: Matthew A. Samuelson

Title: Deputy Director, Taxation Division

Email: matthew.samuelson@state.co.us

Mailing address: PO Box 17087, Denver, CO 80217-0087

Cell: 720-682-6231

For Jurisdiction:

Name: _____

Title: _____

Email: _____

Address: _____

Phone: _____

7

7) **Counterparts, Facsimiles and E-Mail.** This Agreement may be signed in any number of counterparts, which together shall constitute one and the same instrument. Original signatures of the Parties on copies of this Agreement transmitted by facsimile or electronically/scanned and e-mailed copies shall be deemed originals for purposes of this Agreement, and such copies shall be binding on all Parties.

8) **Authority to Execute Agreement.** Each person executing this Agreement on behalf of each Party represents, warrants, assures, and guarantees that s/he has full legal authority to execute this Agreement on behalf of the Jurisdiction and CDOR, respectively, and to bind Jurisdiction and CDOR, to all the terms, conditions, provisions, and obligations of this Agreement.

9) **Termination of Agreement:** CDOR or Jurisdiction may terminate this Agreement for any reason on 90 days written notice to the other Party. In the event of a breach of contract, the aggrieved Party shall give written notice of breach to the other Party. If the notified Party does not cure the breach of contract, at its sole expense, within 30 days after the delivery of written notice, the Party may terminate the contract. Notwithstanding any provision of this Agreement to the contrary, both Parties retain any statutory rights they may have to immediately terminate this Agreement in whole or in part in order to protect the public interest of their citizens.

10) **Limited Financial Obligation.** Consistent with Article X, § 20 of the Colorado Constitution, any financial obligation of either party not performed during the current fiscal year is subject to annual appropriation, so the obligation shall extend only to monies currently appropriated and shall not constitute a mandatory charge, requirement, debt or liability beyond the current fiscal year.

11) **Limitation of Liability for CDOR.** CDOR, its employees, agents, including Vendors and assignees shall not be liable for any costs, expenses, claims, damages, liabilities, court fees and other amounts (including attorneys' fees and related costs) including but not limited to cost of delay, loss of data or information, failure of the SUTS system, loss of moneys remitted to SUTS, direct losses, consequential, special, indirect, incidental, punitive or exemplary loss incurred by Jurisdiction in relation to any services, including database access in connection with this Agreement.

12) **Governmental Immunity.** Liability for claims for injuries to persons or property arising from the negligence of the State, its departments, boards, commissions, committees, bureaus, offices, employees and officials, or of the Jurisdiction, its departments, boards, commissions, committees, bureaus, offices, employees and officials, shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this

8

Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

| Jurisdiction Approval | |
|--|--|
| By | Title |
| *Signature | Date |
| Municipality or County of | Date |
| Jurisdiction Mailing Address | Appointee Phone Number |
| Appointee Name | Title |
| Appointee Signature | Appointee Email |
| Name of Chief Administrative Officer or Designee | Title |
| Chief Administrative Officer or Designee Signature | Chief Administrative Officer or Designee Email |
| * <input type="checkbox"/> By checking this box and signing above, I I hereby represent, warrant, assure, and guarantee that I have full legal authority to execute this Agreement on behalf of the Jurisdiction and to bind Jurisdiction to all the terms, conditions, provisions, and obligations of this Agreement. | |
| Colorado Department of Revenue Approval | |
| By | Title |
| Signature | Date |

9



Council Agenda Summary

June 6, 2023

Key Staff Contact: John Karner, Finance Director

Title:

2022 Annual Financial Report Briefing

Summary:

Staff will give a presentation on the 2022 Annual Financial Report Briefing that provides a recap of the City's financials and revenues for that past fiscal year. The City stands in a strong financial position due to robust economic activity coming out of the COVID-19 pandemic and as a result from significant one-time resources in 2022. While the City continues to see sales tax revenue growth in 2023, we are starting to see that growth at a reduced rate from the past two years. Higher inflation is also putting additional pressure on consumer spending and the City is having to make adjustments to several capital projects due to significant increases in cost being driven by inflation. Finance staff are focused on ensuring we manage our one-time revenues wisely and continue to build on our capabilities to take a longer term approach to our forecasting and financial planning efforts moving forward.

Strategic Focus Area:



Business Growth



Community Vitality



High-Performance Government



Housing for All



Infrastructure and Mobility



Quality of Life



Safe and Secure Communities

Decision Options:

No direction need at this time. Funding recommendations for ongoing and one-time funds will be included as part of the 2024 Budget meetings with Council as well as an update on economic indicators.

Attachments:

PowerPoint Presentation

2022 Annual Financial Report Briefing & 2024 Budget Process

June 6th, 2023

John Karner | Finance Director



Agenda



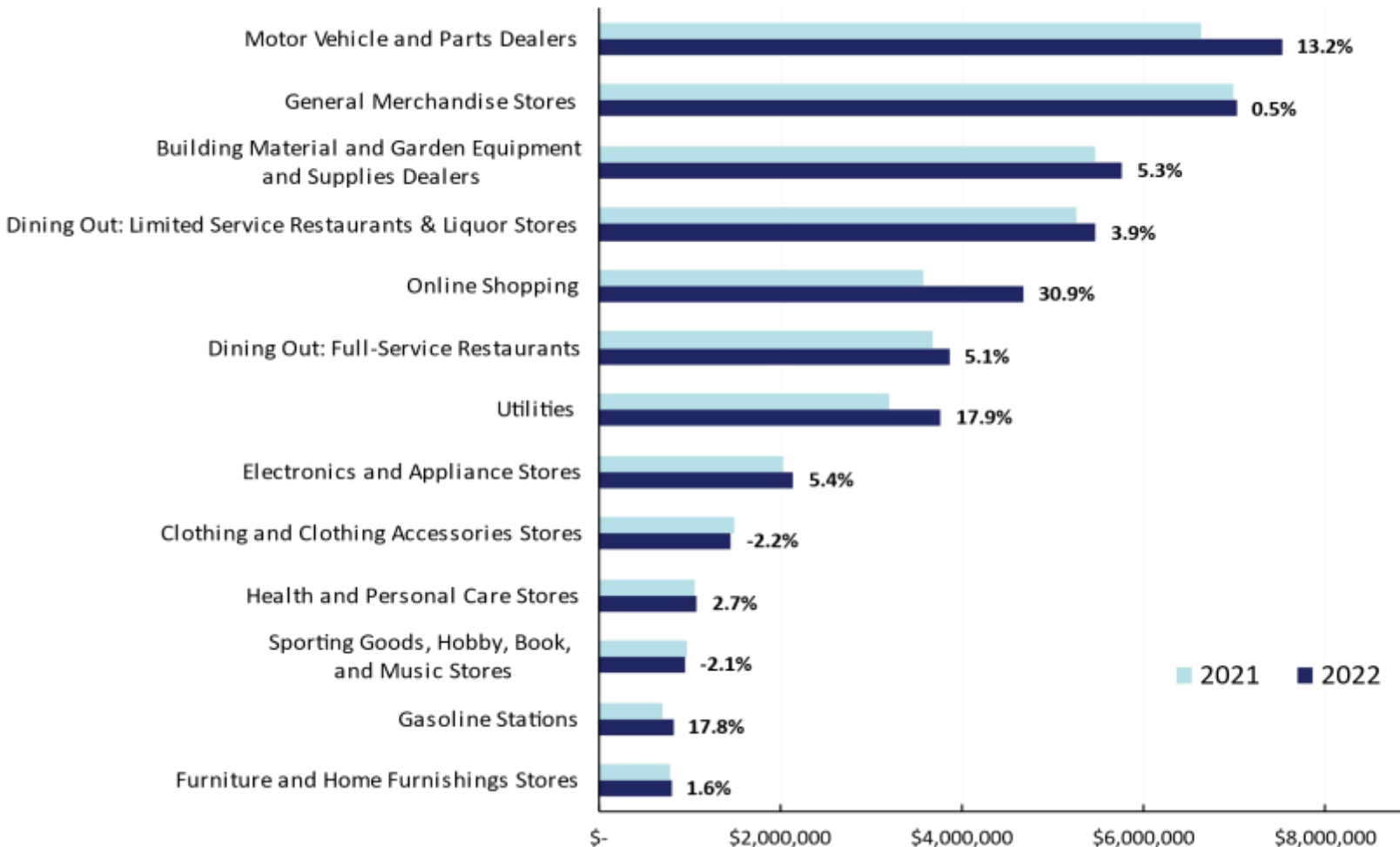
- Annual 2022 Financial Report Highlights
 - Sales Tax Revenue by Category
 - Use Tax Revenue by Category
 - Building Permits Valuation
 - Planning Fees & Building Permit Revenue
- Financial Outlook & Path Forward

2022 Annual Financial Report Highlights

| City Revenue Highlights | 2021 Actual | *2022 Actual | % C hange 2021 Actual vs 2022 Actual | |
|---|---------------|---------------|--|--------|
| TAX REVENUE | | | | |
| Sales Tax | \$ 76,246,237 | \$ 84,901,070 | \$ 8,654,834 | 11.4% |
| Property Tax | 17,423,178 | 17,941,817 | 518,638 | 3.0% |
| Use Tax | 13,854,831 | 19,176,629 | 5,321,798 | 38.4% |
| Food Tax | 9,696,506 | 11,087,455 | 1,390,948 | 14.3% |
| Lodging Tax | 620,002 | 642,891 | 22,889 | 3.7% |
| RESIDENTIAL UTILITY RATE REVENUE | | | | |
| Water Rates: Residential | \$ 25,156,154 | \$ 27,214,777 | \$ 2,058,624 | 8.2% |
| Sewer Rates: Residential | 8,378,501 | 9,838,766 | 1,460,265 | 17.4% |
| Stormwater Rates: Residential | 7,651,602 | 8,753,492 | 1,101,890 | 14.4% |
| ADDITIONAL COMPARATIVES | | | | |
| Development Impact Fees | \$ 17,852,705 | \$ 31,379,514 | \$ 13,526,808 | 75.8% |
| Oil Royalties | 2,588,936 | 7,942,235 | 5,353,300 | 206.8% |
| Building Permits | 2,003,116 | 3,417,185 | 1,414,070 | 70.6% |

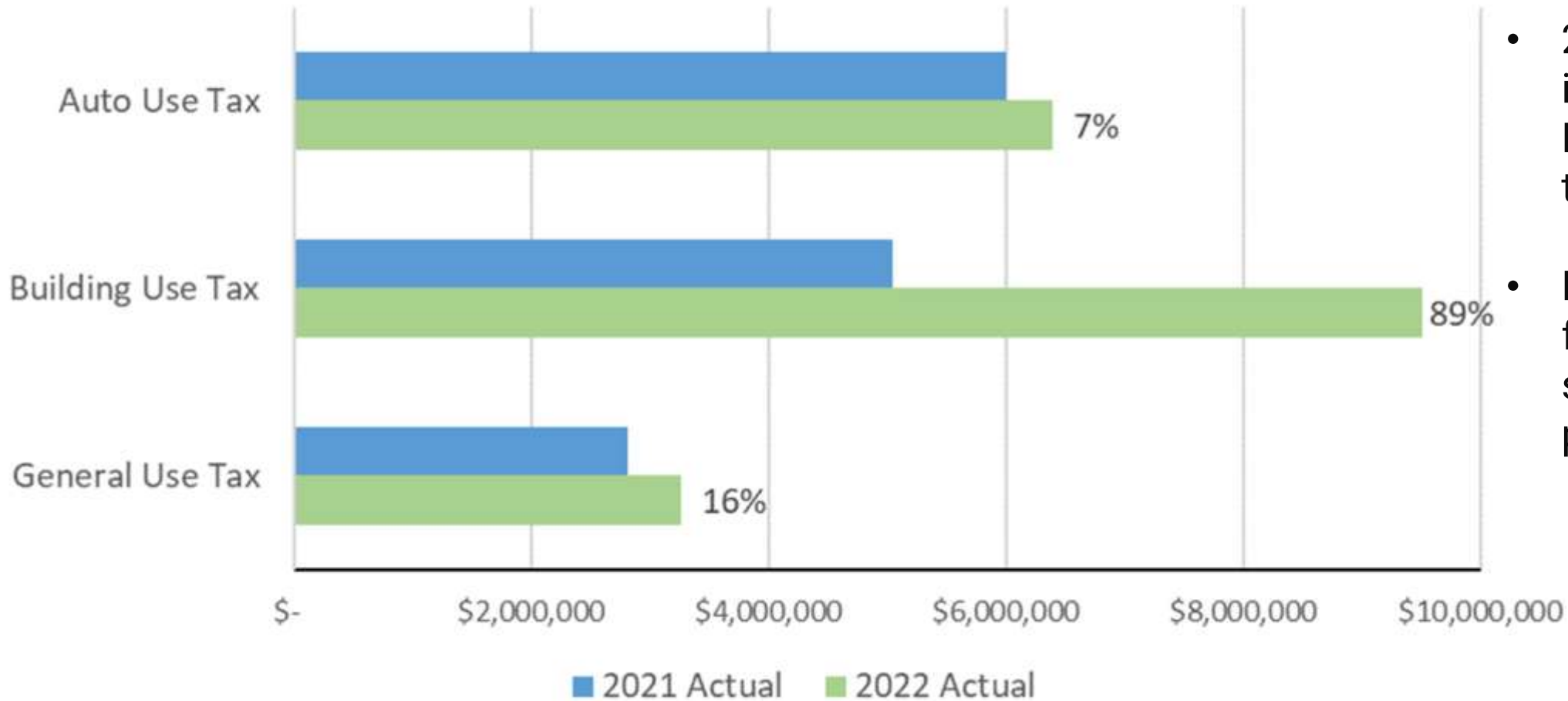
- Strong financial year driven by significant one-time revenue growth and pent-up demand coming out of COVID.
- Higher retail and utility rates with healthy economic conditions contributed to revenue growth in City's Enterprise Funds

Sales Tax Revenue by Category: 2021-2022



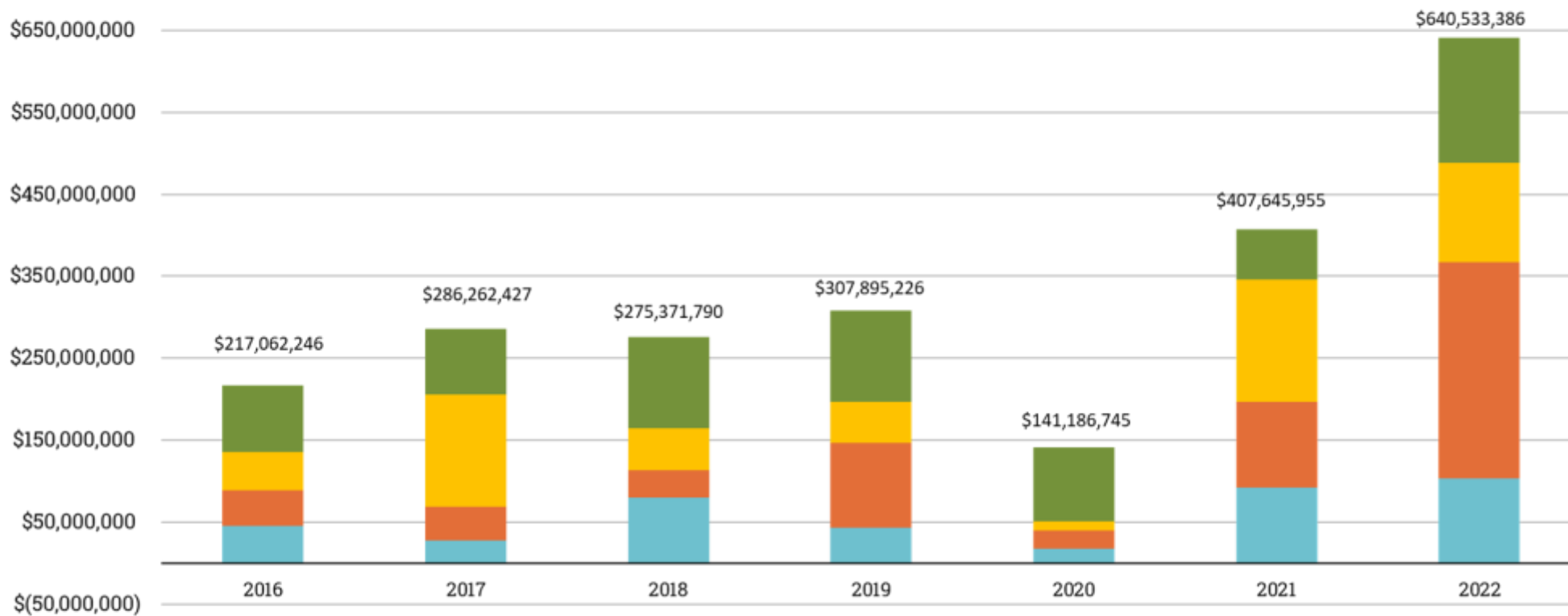
- 11% increase in sales tax revenue from 2021 to 2022 (\$8.6M)
- Category increases were driven by high prices and economic growth.
- Online shopping continues to grow; showing importance of marketplace facilitator compliance.

Use Tax Revenue by Category: 2021-2022



- 28% (\$5.3M) increase in Use Tax Revenue from 2021 to 2022
- Building Use follows trends we saw in building permit growth.

Building Permits Valuation: 2016-2022



- Other Permits*
- New Commercial
- New Multi-Family
- New Single-Family

* Other permits includes all construction permits that do not pertain to new construction, such as projects involving the repair or replacement of existing

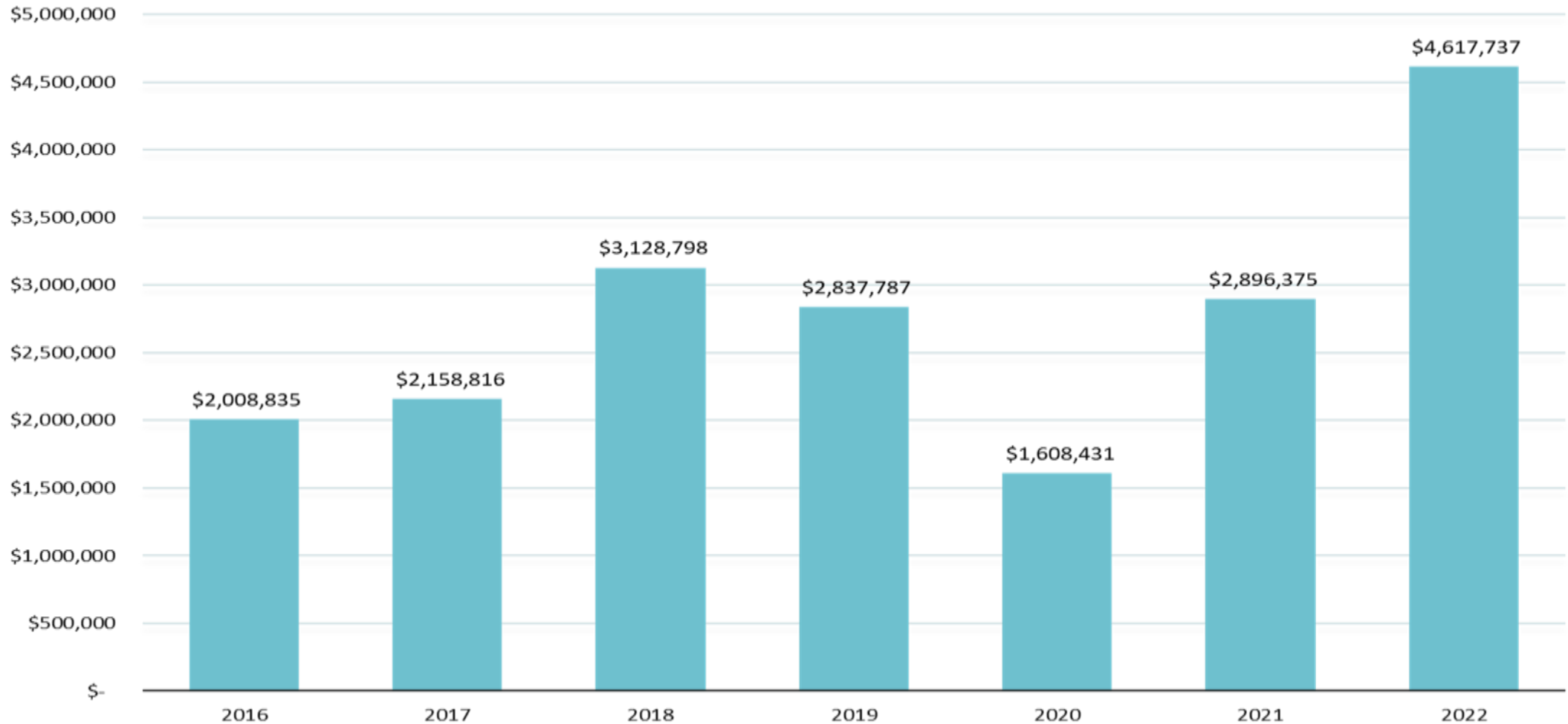
Financial Outlook & Path Forward

- While early 2023 trends show continued sales & use tax growth, that growth has declined from highs seen in 2022.
 - YTD sales tax growth rate of 17% for Q1 in 2022 to a current growth rate of 5.6% for Q1 in 2023.
- Significant inflationary pressures continue to exist; forcing Citizens and City to adjust spending plans.
 - Slower growth seen in sales and use tax receipts.
 - Inflationary factors have required adjustments in City's capital projects planning and execution.
- Focus on adjusting back to a balanced period of growth and managing challenges of high inflation environment.
 - Managing one-time revenues wisely; strategic investments that will provide long lasting value to City.
 - Ongoing funds allocated to support continuous and sustainable City Council Priorities.
 - Expanding City's forecasting and long-term financial planning capabilities; moving toward 10+yr forecast for revenue and expenditure planning starting in 2024 budget process.

Questions and Discussion



Planning Fees & Building Permit Revenue: 2016-2022





Council Agenda Summary

June 6, 2023

Key Staff Contact:

John Karner, Finance Director

Robert Miller, Treasurer/ Interim Budget and Compliance Manager

Title:

2024 Budget Development Process

Summary:

Throughout 2023, the City Manager’s Office has made long range planning a priority through three (3) year road mapping exercises for Departments and foresight training for the Executive Leadership Team and key budget staff. All of these efforts are a part of a multi-year initiative to shift traditional short term planning particularly when it comes to the annual budget process mindset.

The Fiscal 2024 City Manager’s Recommended Budget Process has been built around intentional use of a future-focused lens and the completion of three year departmental horizons, requiring staff to forecast Departmental budget needs and developing plans to budget for programs, services and needs that advance City Council and organizational goals and priorities over a three horizon. The multi-year project is also embedding new practices to demonstrate and share how city resources are allocated and initiatives to maximize Greeley’s quality of life for its residents and businesses. Ultimately, this approach will enable the staff and City Council to evaluate and understand the impact of funds on City Council and organizational focus areas and communicate with Greeley residents about the day-in and day-out efforts to ensure Greeley’s vitality.

This presentation is intended to update City Council on the Fiscal Year 2024 budget process, provide information of City Council appointee requests being considered through the City Manager recommended budget process, and allow for Council to provide feedback on the focus areas upon which the recommended budget will be developed.

Strategic Focus Area:



Business Growth



Community Vitality



High-Performance Government



Housing for All



Infrastructure and Mobility



Quality of Life



Safe and Secure Communities

Decision Options:

None at this time.

Attachments:

PowerPoint Presentation

2024 City Manager Recommended Development Preview

June 6th, 2023



2024 Budget Context

Headwinds

- Higher Operating Costs
- Economic Uncertainty
- Increases to legal obligations and partnership agreements
- Limited on-going funding

Tailwinds

- Potential Growth from New Residential and Commercial Development
- Increase Property Valuations
- One-time funds (carryover, ARPA)



City Manager Recommended Budget Development Guided By:

- City Council Strategic Plan Focus Areas
- Short- and long-term organizational needs
- Iterating resources to maximize employee recruitment and retention
- Community and Economic Vitality Initiatives

2024 Budget Process

Introduces new steps and evaluations that over the next three years will help:

- Each department explain the relationship between its programs and the focus areas in City's strategic plan.
- Clearly define and share the story of how department budgets advance the city, including how success is measured.

The 2024 Budget Process Enhancements



Future-focused



Resilient



Transparent

City Manager Recommended Budget Process

City Council Appointee Budget Requests



Anticipated Budget Needs in 2024: Municipal Court

- New FTE- Deputy Court Administrator
 - Position Costs \$116,367
 - \$56,741- Utilizing .5 Court Marshal Vacancy and remaining amount from General Fund
 - Position Related Costs \$3,450
 - Computer/Software & Phone \$3,100
 - Memberships & Travel related costs \$350
- Court Interpreter Hourly Rate Increase
 - Office of Language Access's Financial Policy requires an hourly rate increase from \$35 to \$45 / hour
 - \$1,920 per year
- X-Ray Machine Replacement
 - Replacement Cost \$50,000
 - Maintenance Agreement \$50,000
- Total Anticipated Increase Request: \$221,737

Anticipated Budget Needs 2024: City Attorney's Office

- New FTEs - 3 Senior Attorney Positions
 - Position Costs \$605,988
 - Position Related Costs \$28,440
- New FTE - 1 Senior Paralegal Position
 - Position Costs \$118,137
 - Position Related Costs \$8120
- New FTE - 1 Legal Assistant Position
 - Position Costs \$84,856
 - Position Related Costs \$8120
- Part-time Law Student Interns and Law Clerks \$83,700
- Specialized Outside Legal Counsel \$68,000
- Legal Education, Training, and Staff Development \$57,500
- Recruitment, Applicant Assessment, Professional Coaching, and Team-Building \$78,000

TOTAL = \$1.14 Million

City Manager Recommended Budget Process

Timeline & Feedback



The 2024 Budget Process - Timelines

| Item | Date | Status |
|---|------------------------------|---------------|
| Department Budget Proposal Development | February through June 2023 | Completed |
| Finance Department & City Manager's Office Recommended Budget Development Process | June through August 2023 | In Progress |
| Proposed 2024 Budget Sent to Council | Sept 5 th , 2023 | Not Completed |
| Council Budget Work Session I | Sept 12 th , 2023 | Not Completed |
| Council Budget Work Session II | Sept 26 th , 2023 | Not Completed |
| First Budget Public Hearing | Oct 3 rd , 2023 | Not Completed |
| Second Budget Public Hearing and Final Reading | Oct 17 th , 2023 | Not Completed |

Feedback

Does City Council have any feedback on the focus areas as context upon which the City Manager's Recommended Budget will be developed?



Council Agenda Summary

Title:

Scheduling of Meetings, Other Events

Summary:

During this portion of the meeting the City Manager or City Council may review the attached Council Calendar or Planning Calendar and Schedule for City Council Meetings and Work Sessions and make any necessary changes regarding any upcoming meetings or events.

Attachments:

Council Meetings and Other Events Calendars


Council Meeting and Work Session Schedule/Planning Calendar

June 5, 2023 - June 11, 2023

| June 2023 | | | | | | | July 2023 | | | | | | |
|-----------|----|----|----|----|----|----|-----------|----|----|----|----|----|----|
| Su | Mo | Tu | We | Th | Fr | Sa | Su | Mo | Tu | We | Th | Fr | Sa |
| | | | | 1 | 2 | 3 | | | | | | | 1 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 25 | 26 | 27 | 28 | 29 | 30 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | | | | | | 30 | 31 | | | | | |

Monday, June 5

Tuesday, June 6

6:00pm - 6:30pm City Council Meeting (R_CCS_Council Chambers - WiFi Ready; R_CCS_Council Chambers Overflow Room 103) - Council Master Calendar 



Wednesday, June 7

Thursday, June 8

Friday, June 9

Saturday, June 10

Sunday, June 11

June 12, 2023 - June 18, 2023

| June 2023 | | | | | | | July 2023 | | | | | | |
|-----------|----|----|----|----|----|----|-----------|----|----|----|----|----|----|
| Su | Mo | Tu | We | Th | Fr | Sa | Su | Mo | Tu | We | Th | Fr | Sa |
| | | | | | 1 | 2 | 3 | | | | | | 1 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 25 | 26 | 27 | 28 | 29 | 30 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | | | | | | 30 | 31 | | | | | |

Monday, June 12

Tuesday, June 13

6:00pm - City Council Work Session Meeting (R_CCS_Council Chambers - WiFi Ready) - Council Master Calendar ↻

Wednesday, June 14

Thursday, June 15

7:30am - 8:30am DDA (DeBoutez/Butler) ↻

3:30pm - 4:30pm Airport Authority (Clark/Payton) ↻

Friday, June 16

Saturday, June 17

Sunday, June 18

June 19, 2023 - June 25, 2023

| June 2023 | | | | | | | July 2023 | | | | | | |
|-----------|----|----|----|----|----|----|-----------|----|----|----|----|----|----|
| Su | Mo | Tu | We | Th | Fr | Sa | Su | Mo | Tu | We | Th | Fr | Sa |
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| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 25 | 26 | 27 | 28 | 29 | 30 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | | | | | | 30 | 31 | | | | | |

Monday, June 19

Tuesday, June 20

6:00pm - City Council Meeting (R_CCS_Council Chambers - WiFi Ready; R_CCS_Council Chambers Overflow Room 103) - Council Master Calendar ↻



Wednesday, June 21

- 7:30am - Visit Greeley (Butler)** ↻
- 12:00pm - 4:00pm Mayor's Summit on Entrepreneurship** (Aims Community College; (Welcome Center)) - Council Master Calendar
- 2:00pm - 5:00pm Water & Sewer Board (Gates)** ↻

Thursday, June 22

1:00pm - 3:00pm 4P Meeting w/ Weld County -option #2 (SW Weld Bldg, Large Conference Room, 4209 CR 24.5, Longmont, CO) - Council Master Calendar

Friday, June 23

Saturday, June 24

Sunday, June 25

CML 2023 Annual Commerce ***Registration Now Open*******
(Aurora Colorado) - Council Master Calendar

June 26, 2023 - July 2, 2023

| June 2023 | | | | | | | July 2023 | | | | | | |
|-----------|----|----|----|----|----|----|-----------|----|----|----|----|----|----|
| Su | Mo | Tu | We | Th | Fr | Sa | Su | Mo | Tu | We | Th | Fr | Sa |
| | | | | 1 | 2 | 3 | | | | | | | 1 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 25 | 26 | 27 | 28 | 29 | 30 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | | | | | | 30 | 31 | | | | | |

Monday, June 26

- 11:30am - 12:30pm Greeley Chamber of Commerce (Hall) ↻
- 6:00pm - 7:00pm Youth Commission (Clark) ↻

Tuesday, June 27

- 6:00pm - City Council Work Session Meeting (R_CCS_Council Chambers - WiFi Ready) - Council Master Calendar ↻

Wednesday, June 28

- 7:00am - 8:00am Upstate Colorado Economic Development (Gates/Hall) (Upstate Colorado Conference Room) - Council Master Calendar ↻

Thursday, June 29

Friday, June 30

Saturday, July 1

Sunday, July 2

| City Council Meeting Scheduling 2023 | | | |
|---------------------------------------|--|------------------------|----------------|
| | 5/30/2023 | | |
| | This schedule is subject to change | | |
| Date/Type | Description | Sponsor | Placement/Time |
| June 13, 2023 Council Work Session | Homelessness -Greeley's Foundations Team Update | Juliana Kitten | |
| June 20, 2023 Council Meeting | Proclamation - Parks & Recreation Month | Mayor | Intro |
| | Proclamation - Greeley Stampede | Mayor | Intro |
| | Minutes Approval (6/6/23 Council Meeting) | Heidi Leatherwood | Consent |
| | Consideration of a Resolution - Voluntary Allocation of Sales Tax w/DDA | Don Threewitt | Consent |
| | Intro & 1st Rdg Ord - Seeley 1 Annexations | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 2 Annexations | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 3 Annexations | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 4 Annexations | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 5 Annexations | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 1 Zoning | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 2 Zoning | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 3 Zoning | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 4 Zoning | Doug May | Consent |
| | Intro & 1st Rdg Ord - Seeley 5 Zoning | Doug May | Consent |
| | Intro & 1st Rdg Ord - Rangeview Improvement District | John Karner | Consent |
| | Authorization to Acquire Real Property by Purchase or Exercise of Eminent Domain (C Street - 59th Ave. to 66th | Paul Trombino | Regular |
| | PH & 2nd Rdg Ord - 2024-2026 Fire Union Collective Bargaining Agreement | Brian Kuznik/Noel Mink | Regular |
| Boards & Commissions Appointments | Heidi Leatherwood | Regular | |
| June 27, 2023 Council Work Session | Greeley Long-Term Revenue Needs | John Karner | |
| | Overview of Translation Services Costs | Heidi Leatherwood | |
| | Concept Planning Update - 9th/10th Street and 8th Avenue Corridors | Paul Trombino | |
| | Overview of Ironwood Development Agreement | Paul Trombino | |
| | Legislative Update | Stacy Coons | |
| July 04, 2023 Council Meeting | CANCELLED | | |

At Home in Greeley

En Casa en Greeley



**PUBLIC
WORKSHOP #2**

**REUNIÓN
COMUNITARIA N° 2**

**THURSDAY, JUNE 8
JUEVES, 8 DE JUNIO**

**Greeley Recreation Center
651 10th Ave., Room 101
5:30 - 7:00 p.m.**

*Let's reimagine 10th
Street together!
Share your thoughts and
feedback on design &
development ideas for the 10th
Street Area.*

*¡Diseñemos juntos
la calle 10!
Comparta sus ideas y opiniones
acerca del diseño y desarrollo
de la calle 10.*



Scan QR code or visit speakupgreeley.com/housing-needs



Escanee el código QR o visite speakupgreeley.com/en-casa-en-greeley



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