Homer City Hall
491 E. Pioneer Avenue
Homer, Alaska 99603
www.cityofhomer-ak.gov

City of Homer
Agenda

City Council Regular Meeting
Monday, June 13, 2022 at 6:00 PM
In Person at City Hall Cowles Council Chambers and by Zoom Webinar
https://cityofhomer.zoom.us/j/205093973?pwd=UmhJWEZ3ZVdvbDkxZ3Ntbld1NlNXQT09
Or Dial: +1 669 900 6833 or +1 253 215 8782 or Toll Free 877 853 5247 or 888 788 0099
Webinar ID: 205 093 973 Passcode: 610853

CALL TO ORDER, PLEDGE OF ALLEGIANCE

AGENDA APPROVAL (Only those matters on the noticed agenda may be considered, pursuant to City Council's Operating Manual, pg. 6)

MAYORAL PROCLAMATIONS AND RECOGNITIONS

PUBLIC COMMENT ON MATTERS ALREADY ON THE AGENDA

RECONSIDERATION

CONSENT AGENDA (Items listed below will be enacted by one motion. If a separate discussion is desired on an item, that item may be removed from the Consent Agenda and placed on the Regular Meeting Agenda at the request of a Councilmember.)

a. Homer City Council Unapproved Regular Meeting Minutes of May 23, 2022. Recommend adoption.

b. Memorandum 22-096 from Mayor Castner Re: Appointment of Tulio Perez to the Economic Development Advisory Commission. Recommend approval.

c. Memorandum 22-097 from Mayor Castner Re: Recommendation for the Homer City Seat on the Kenai Peninsula Borough Planning Commission

d. Memorandum 22-098 from City Clerk Re: Renewal of Liquor License for Oaken Keg and Liquor License Transfer for The Twisted Goat. Recommend approval.

e. Ordinance 22-31, An Ordinance of the City Council of Homer, Alaska Amending Homer City Code Chapter 21.93 Administrative Appeals to Clarify General Appeal Procedures and Related Matters. City Clerk. Recommended dates Introduction June 13, 2022 Public Hearing and Second Reading June 27, 2022.

Memorandum 22-099 from City Clerk as backup.
Memorandum 22-100 from City Planner as backup.

f. Ordinance 22-32, An Ordinance of the City Council of Homer, Alaska Amending Title 21.03.040 Definitions used in Zoning Code, Title 21.44 Slopes, Title 21.50.020 Site Development Standards – Level One and Title 21.50.020 Site Development Standards – Level Two. Planning Commission. Recommended dates Introduction June 13, 2022 Public Hearing and Second Reading June 27, 2022.

Memorandum 22-101 from City Planner as backup.

g. Ordinance 22-33, An Ordinance of the City Council of Homer, Alaska, Amending the FY23 Capital Budget and Appropriating $11,838 from the General Fund Capital Asset Repair and Maintenance Allowance Fund to Replace Two Vending Stations at the Library. City Manage/Library Director. Recommended dates Introduction June 13, 2022 Public Hearing and Second Reading June 27, 2022.

Memorandum 22-102 from Library Director as backup.

h. Ordinance 22-34, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating $422,840 from the Sewer Capital Asset Repair and Maintenance Allowance Fund to Implement a Solution to the Broken Clarifier Belt at the Waste Water Treatment Plant. City Manager/Public Works Director. Recommended dates Introduction June 13, 2022 Public Hearing and Second Reading June 27, 2022.

Memorandum 22-103 from Public Works Director as backup.

i. Resolution 22-050, A Resolution of the City Council of Homer, Alaska Establishing a 2022 Mil Rate of 1 Mil for the Ocean Drive Loop Special Service District. City Manager. Recommend adoption.

Memorandum 22-104 from Public Works Director as backup.

j. Resolution 22-051, A Resolution of the City Council of Homer, Alaska Adopting the City of Homer 2022 Local Hazards Mitigation Plan Update/Revision. City Manager. Recommend adoption.

Memorandum 22-105 from City Planner as backup.

k. Resolution 22-052, A Resolution of the City Council of Homer, Alaska Authorizing Task Orders to Kinney Engineering, HDL Engineering, and Nelson Engineering for Pavement Restoration Projects and Authorizing the City Manager to Negotiate and Execute the Appropriate Documents. City Manager/Public Works Director. Recommend adoption.

Memorandum 22-106 from Public Works Director as backup.

l. Resolution 22-053, An Ordinance of the City Council of Homer, Alaska Authorizing Task Orders to Bishop Engineering, LLC to Design Non-Motorized Transportation Projects and Authorizing the City Manager to Negotiate and Execute the Appropriate Documents. City Manager/Public Works Director. Recommend adoption.

Memorandum 22-107 from Public Works Director as backup.

m. Resolution 22-054, A Resolution of the City Council of Homer, Alaska Authorizing a Task Order to RESPEC Company to Develop an Engineered Solution for the Waste Water Treatment Plant Clarifier and Authorizing the City Manager to Negotiate and Execute the Appropriate Documents. City Manager/Public Works Director. Recommend adoption.

Memorandum 22-108 from Public Works Director as backup.

n. Resolution 22-055, A Resolution of the City Council of Homer, Alaska Directing the City Manager to Present an Ordinance to Fund the Demolition of the Homer Education and Recreation Complex (HERC) II Building. Mayor. Recommend adoption.

VISITORS

a. End of Session Legislative Update - Representative Sarah Vance (10 minutes)

b. COVID-19 Agency Update Derotha Ferraro, South Peninsula Hospital Public Information Officer and Lorne Carroll, State of Alaska Public Health Nurse III (10 minutes)

ANNOUNCEMENTS / PRESENTATIONS / REPORTS (5 Minute limit per report)

a. Committee of the Whole Report

b. Mayor's Report

c. Borough Report

d. Planning Commission

e. Port and Harbor Advisory Commission

f. Americans with Disabilities Act Compliance Committee

PUBLIC HEARING(S)

a. Ordinance 22-29, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget and Authorizing an Additional Expenditure of $150,000 from the Sewer Capital Asset Repair and Maintenance Allowance (CARMA) Fund for Sewer Manhole Repair or Replacement Related to the Alaska Department of Transportation and Public Facilities (AKDOT/PF) East Hill Road Repaving Project. City Manager/Public Works Director. Introduction May 23, 2022 Public Hearing and Second Reading June 13, 2022.

Memorandum 22-086 from Public Works Director as backup.

b. Ordinance 22-30, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating $18,150 from the General Fund Capital Asset Repair and Maintenance (CARMA) Fund for the Purpose of Upgrading Software Licenses for the

City's Security-Camera Systems. City Manager. Introduction May 23, 2022 Public Hearing and Second Reading June 13, 2022.

Memorandum 22-087 from Police Chief as backup.
Memorandum 22-088 from Library Director as backup.

ORDINANCE(S)

CITY MANAGER'S REPORT

a. City Manager's Report

PENDING BUSINESS

NEW BUSINESS

a. Memorandum 22-109 from City Clerk re: Request for Executive Session Pursuant to AS 44.62.310 (C)(1 & 3) Matters, the Immediate Knowledge of Which would Clearly have an Adverse Effect upon the Finances of the Government Unit, Pending Litigation, and Attorney/Client Privilege. (VanZant et al vs City of Homer 3HO-20-00251 CI)

RESOLUTIONS

COMMENTS OF THE AUDIENCE

COMMENTS OF THE CITY ATTORNEY

COMMENTS OF THE CITY CLERK

COMMENTS OF THE CITY MANAGER

COMMENTS OF THE MAYOR

COMMENTS OF THE CITY COUNCIL

ADJOURNMENT
Next Regular Meeting is Monday, June 27, 2022 at 6:00 p.m., Committee of the Whole at 5:00 p.m. All meetings scheduled to be held in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

Session 22-10 a Regular Meeting of the Homer City Council was called to order on May 23, 2022 by Mayor Ken Castner at 6:00 p.m. at the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska, and opened with the Pledge of Allegiance.

PRESENT: COUNCILMEMBERS ADERHOLD, DAVIS, ERICKSON, HANSEN-CAVASOS, LORD, VENUTI

STAFF: CITY MANAGER DUMOUCHEL
DEPUTY CITY CLERK KRAUSE
POLICE CHIEF ROBL
FINANCE DIRECTOR WALTON
PUBLIC WORKS DIRECTOR KEISER
RECREATION MANAGER ILLG
PERSONNEL DIRECTOR BROWNING
COMPTROLLER DELUMEAU
ECONOMIC DEVELOPMENT MANAGER ENGEBRETSEN
LIBRARY DIRECTOR BERRY

AGENDA APPROVAL (Only those matters on the noticed agenda may be considered, pursuant to City Council's Operating Manual, pg. 6)

Mayor Castner announced the supplemental items: **CONSENT AGENDA** Memorandum from Deputy City Clerk as backup for Resolution 22-046 provided as a laydown **PUBLIC HEARINGS** Excerpts from the EDC Regular Meeting of May 10, 2022, Planning Commission Regular Meeting May 4th and Memorandum from Recreation Manager as backup to Ordinances 22-26 through 22-28 approving HART Funds for Road and Trails Projects. **ANNOUNCEMENTS / PRESENTATIONS / REPORTS** Planning Commission written report.

LORD/VENUTI MOVED TO ADOPT THE AGENDA.

There was no discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT.

Motion carried.

MAYORAL PROCLAMATIONS AND RECOGNITIONS

PUBLIC COMMENT ON MATTERS ALREADY ON THE AGENDA

RECONSIDERATION

CONSENT AGENDA (Items listed below will be enacted by one motion. If a separate discussion is desired on an item, that item may be removed from the Consent Agenda and placed on the Regular Meeting Agenda at the request of a Councilmember.)

a. Homer City Council Unapproved Regular Meeting Minutes of May 9, 2022. City Clerk. Recommend adoption.

b. Memorandum 22-083 from Deputy City Clerk re: Liquor License Renewal for Save U More Liquor #6. Recommend approval.

c. Memorandum 22-084 from Special Projects & Communications Coordinator re: Capital Improvement Plan Development Schedule 2023-2028 and FY2024 Legislative Priorities. Recommend approval.

d. Ordinance 22-29, An Ordinance of the City Council of Homer, Alaska, Amending the FY22 Capital Budget and Authorizing an Additional Expenditure of $150,000 from the Sewer Capital Asset Repair and Maintenance Allowance (CARMA) Fund for Sewer Manhole Repair or Replacement Related to the Alaska Department of Transportation and Public Facilities (AKDOT/PF) East Hill Road Repaving Project. City Manager/Public Works Director. Introduction May 23, 2022 Public Hearing and Second Reading June 13, 2022.

Memorandum 22-086 from Public Works Director as backup.

e. Ordinance 22-30, An Ordinance of the City Council of Homer, Alaska, Amending the FY22 Capital Budget by Appropriating $18,150 from the General Fund Capital Asset Repair and Maintenance (CARMA) Fund for the Purpose of Upgrading Software Licenses for the City's Security-Camera Systems. City Manager. Introduction May 23, 2022 Public Hearing and Second Reading June 13, 2022.

Memorandum 22-087 from Police Chief as backup.

Memorandum 22-088 from Library Director as backup.

f. Resolution 22-044, A Resolution of the City Council of Homer, Alaska, Repealing the City of Homer Records Classification and Procedures Manual and Retention Schedule and Adopting An Updated City of Homer Records Management and Retention Manual. City Clerk. Recommend adoption.

Memorandum 22-089 from Deputy City Clerk as backup.

g. Resolution 22-045, A Resolution of the City Council of Homer, Alaska, Approving a Joint Use of Equipment and Facilities Agreement with the Kenai Peninsula Borough School District for the Period of July 1, 2022 through June 30, 2025 and Authorizing the City Manager to Negotiate and Execute the Appropriate Documents. City Manager. Recommend adoption.

Memorandum 22-090 from Recreation Manager as backup.

h. Resolution 22-046, A Resolution of the City Council of Homer, Alaska, Approving and Accepting a Donation from Thelma Gower to the City of Homer Municipal Art Collection of a print by Alaskan Artist Thomas Stream Entitled "Vermilion Flycatcher". City Clerk/PARCAC. Recommend adoption.

Memorandum 22-091 from Deputy City Clerk as backup

i. Resolution 22-047, A Resolution of the City Council of Homer, Alaska, Approving the Amended Homer Public Library Facility Use Policy. City Manager. Recommend adoption.

Memorandum 22-092 from Library Director as backup.

j. Resolution 22-048, A Resolution of the City Council of Homer, Alaska, Adopting Joint Resolution 2022-01 of the Councils of The Seldovia Village Tribe and Cities of Seldovia and Homer Supporting Homer Electric Association's Pursuit of Funding for the South Kachemak Bay Distribution Upgrade and Broadband Expansion Project. City Manager. Recommend adoption.

k. Resolution 22-049, A Resolution of the Homer City Council Establishing the City of Homer Property Tax Mil Levy Rate at 4.5 Mils for 2022. City Manager. Recommend adoption.

ADERHOLD/ ERICKSON MOVED TO ADOPT THE RECOMMENDATIONS OF THE CONSENT AGENDA AS READ.

There was no discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT.

Motion carried.

VISITORS

a. COVID-19 Agency Update - Lorne Carroll, State of Alaska Public Health Nurse III (10 minutes)

Lorne Carroll, State of Alaska Public Health Nurse III, provided presentation on vaccines by primary series and the recommended dosage and time period to receive the vaccines for adults and children 6 mos to 6 years, boosters for Pfizer vaccines, recommended second boosters using mRNA COVID 19 vaccine or J & J and qualifying criteria. He then provided updates on treatment regarding oral meds and antivirals persons should consult your healthcare provider or the Public Health Dept. Mr. Carroll reported that Long COVID has been identified as a disability under ADA as of July 2021 and planning for the end of COVID is set for July 15, 2022, which means possible loss of Medicaid coverage for some people. He noted that notices should be received by those persons affected. Mr. Carroll then provided information and update on the resurgence of the disease tuberculosis in the state.

Derotha Ferraro, Public Information Officer for South Peninsula Hospital provided an update on the weekly dashboard, noting that the information was provided to KBBI radio as well. She reported that there were no hospitalizations, 66 vaccines given and they are continuing to provide these by appointment. Testing is still available daily but changes will be made starting July 1, 2022 with fees being charged. She provided the updates on visitors for the in-patient hospital stays and long term care residents. Ms. Ferraro provided an brief update on the Homer Steps Up Challenge and did a shout out for Local EMS personnel in recognition of EMS Week.

b. Southern Kenai Peninsula Resiliency Coalition - Hannah Gustafson (10 minutes)

Hannah Gustafson, Resilience Coalition, reported that while there were challenges to overcome the past couple of years to do this work their focus has been on cultivating supportive adult relationships with youth on the Southern Kenai Peninsula. She reported that over the past winter the Resilience Coalition convened a series of focus groups with both youth and youth serving agencies within the community. As a result of these focus groups they were able to articulate a very specific community concern that there is not enough

welcoming, no cost, safe spaces in Homer for young people to connect with safe and trusted adults to explore and engage in interests and enjoy free time during after school and evening hours.

Sophia Lowboy, youth representative, reported on the substantial role in a child's mental health that socializing plays and that there is a lack of priority for affordable and safe spaces in Homer which has resulted in more students being susceptible to peer pressure and unequal opportunities to socialize. By creating more safe spaces for teens in Homer we can ensure that all teens have access to a trustworthy adult for advice and an opportunity to socialize. Ms. Lowboy continued by pointing out the closures of former places that teens used to meet, that most parents do not have the time or space to host a group of teenagers, changing weather hinders plans to meet and providing an easily accessible and affordable area for teenager's guarantees that all teens have access to dependable adults for guidance and every child an opportunity to socialize in a safe environment.

Ms. Gustafson provided information on risk and protective factors that affect a teen's behavior, coping skills, noting that providing balance is what influences the experience of any given young person. She emphasized the importance of safe and positive adults in the lives of young people that can provide the boost needed for that teen to become successful. She distinguished that Homer and the broader community can influence the impacts of individual experiences, the home and even school environments. Ms. Gustafson then stated that the new Community Center should be designed with the consideration of the community's young persons, reported a discussion she had with the new executive director for the Boys & Girls Club of the Kenai Peninsula whom expressed interests in providing services in Homer again if the Community desires that opportunity. She encouraged the Council to prioritize the community's youth for the next 30 years.

c. Kachemak Bay State Parks - Jack Blackwell, Kenai Area Superintendent

Jack Blackwell, Kenai Area Superintendent provided a presentation on Kachemak Bay State Park and State Wilderness Park. He noted the following:
- Mission Statement
- Established in 1970 with the Wilderness Park established in 1972
- It is approximately 380,000 acres
- It is the only State Wilderness Park managed to protect and preserve the land and water for the wilderness values
- Both parks provide world class Recreation Opportunities such as Cabins and Yurt Rentals; Hunting and Fishing; Wildlife Viewing; Surfing; Climbing; Hiking and Boating
- Economic Opportunities
    - Added $12 million to regional economy
    - Kachemak Bay State Park estimated annual revenues equals $682,500

Mako Haggerty, Friends of Kachemak Bay State Park, provided a brief organizational review and fund raising efforts of the Friends with the leadership of Kathy Sarns and Robert Archibald the work that the group has been able to achieve. He further noted that the Park is a favorite of Alaskans and a discovery for visitors to the state. He reported the maintenance of trails that are accomplished by the Friends and the trail that is maintained by the State Parks Department. He reported that there are over 80 miles of trails maintained. Mr. Haggerty provided some details on specific locations that accessible by vehicle.

ANNOUNCEMENTS / PRESENTATIONS / REPORTS (5 Minute limit per report)

a. Committee of the Whole Report

Councilmember Aderhold provided an overview of the Committee of the Whole discussion on Consent Agenda items and the City lobbyist reported that the projects that the City was hoping to be funded in capital projects were and now the budget has been presented to the Governor and he could line item veto items.

b. Worksession Report

City Manager Dumouchel provided an overview of the worksession discussion on a presentation from staff regarding sidewalks and non-motorized transportation. This was a follow-up to the approved Resolution 22-043.

c. Lunch with a Councilmember – Councilmember Venuti

Councilmember Venuti reported she was the last until September. There were a number of topics addressed and of them she reported on the HERC project and follow-up to the Public Works Campus Task Force. The meeting was well attended by persons who just happened to see the notice and one woman was 95 years old. This impressed Councilmember Venuti that at her age she was very interested in the city.

d. Mayor's Report

Mayor Castner reported on the departure of the Hickory and the arrival of Aspen to Homer. He reported that there will not be a Haunted Hickory so not sure how the event will be renamed. This was attended by Harbormaster Hawkins and City Manager and Admiral Moore. He then reported on his meeting with the Chairs of the Advisory Bodies and they are all pretty focused on the sidewalks. This meeting was attended by Economic Development Manager Engebretsen. He then reported on a meeting with Senator Sullivan on the Port Expansion project and the Senator will be working to move the project into a more active role.

d. Borough Report

e. Library Advisory Board

Kate Finn, Chair, reported that she enjoyed attending the meeting of the chairs conducted by the Mayor and the ability to watch those persons in their role of chair speaking for their Commissions. Since they are working on trails and paths, Ms. Finn wanted to put in a pitch for “All Trails lead to the Library.” Ms. Finn reported that the proposed reorganization of the Library Director’s position and Information Technology (IT) and how that action will affect the Library has been a topic for several meetings and that the Board has submitted via memorandum to the City Manager a recommendation of non-support after much consideration. She noted that the recommendations of the Board were to prioritize the creation of an IT department to address all the IT needs in an expeditious manner. The Board included an acceptable compromise would be to formalize the loan of the Library Director, noting that the Library Director has served in this role already for one year. For Council’s broader understanding written responses from individual Board members have been included in their recommendation and will be made available to Council members as the reorganization plan is presented to Council. Ms. Finn expressed on behalf of the

Board their appreciation for the work involved in this proposed action. Ms. Finn also provided updates on events and activities organized by the Library and Friends of the Homer Library and emphasized the availability of the library being a safe space for the community's youth.

g. Planning Commission

A written report was provided in the supplemental packet.

Charles Barnwell, Commissioner, reported on the finalization of the Coastal setback ordinance to amend title 21 noting that the Commission has worked on this over the past year and with Alaska DGGS; Approvals of Conditional use Permits for 18 dwellings off of East End Road near Jack Gist Park, discussions on Tiny Homes, presentations on a supplement to the Non-Motorized Trails and Transportation Plan and the rezone in the area east of West Hill Road.

h. Economic Development Advisory Commission

Adele Person, Commissioner, reported on the recent meeting and they reviewed the Comp Plan, standard housing report, HERC reaching the end of one phase, bulk of the meeting has been focused on growth, strengths, weaknesses, opportunities, may formulate what the comp plan process looks like, supported the PW Directors recommendations on NMT, topic of the Draw Down group. There will be a meeting in June and they do have a vacancy.

i. Parks Art Recreation & Culture Advisory Commission

Robert Archibald, Vice Chair, reported on the work that was done by Recreation Manager Illg on the Memorandum of Understanding with KPBSD and Memorandum of Agreement Little League, Parks Superintendent Steffy's report on the increase in campground use and ballfield use, staff shortages , Little League installing a new batters cage, Public Works Director Kaiser's report on a possible land trade; Non-Motorized Transportation becoming more important as the cost of gas keeps rising. Commissioner Archibald noted that the Commission supported a recommendation for Council approval of the ordinances presented tonight. Additionally the Commission has supported the recommendation of holding another Trails Symposium and will be working on the details at upcoming meetings. He added that the Commission has also expressed supporting Council developing new code addressing connectivity to parks when new subdivisions are being developed.

PUBLIC HEARING(S)

a. Ordinance 22-24, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget and Appropriating an Additional Expenditure of $106,000 from the Homer Accelerated Roads and Trails (HART) Road Fund for the Construction of the Main Street Sidewalk Project. City Manager/Public Works Director. Introduction May 9, 2022, Public Hearing and Second Reading May 23, 2022.

   Memorandum 22-075 from Public Works Director as backup.

Mayor Castner opened the public hearing for Ordinance 22-24.

Robert Archibald, city resident, commented in support of the expenditure of the funds for this long standing issue on Main Street and noted that this was a long supported project of the Parks & Recreation Commission.

Mayor Castner closed the public hearing.

ADERHOLD/LORD MOVED TO ADOPT ORDINANCE 22-24 BY READING OF TITLE ONLY FOR SECOND AND FINAL READING.

Brief discussion on seeing the project come to fruition which has been on the Capital Improvement Plan for years and noted that this project is only for the portion of Main Street which is north of Pioneer Avenue.

VOTE: NON- OBJECTION. UNANIMOUS CONSENT.

Motion carried.

b. Ordinance 22-25, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating $750,000 from the Homer Accelerated Roads and Trails (HART) Road Fund and $100,000 from the HART Trails Fund to Establish a Non-Motorized Transportation Opportunity Fund. City Manager/Public Works Director. Introduction May 9, 2022, Public Hearing and Second Reading May 23, 2022.

   Memorandum 22-073 from Public Works Director as backup.

Mayor Castner opened the public hearing for Ordinance 22-25.

Robert Archibald, city resident, commented on support of the expenditure of the funds noting that $750,000 was a lot of money but building trails and making them accessible costs money.

Public Works Director Keiser provided a brief description and clarification of what opportunity means in relation to the ordinance and appropriating the funds using the Fairview Avenue to Eric Lane connection project as an example.

Mayor Castner closed the public hearing.

ADERHOLD/VENUTI MOVED TO ADOPT ORDINANCE 22-25 BY READING OF TITLE ONLY FOR SECOND AND FINAL READING.

There was no discussion.
VOTE: NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

c. Ordinance 22-26, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating $500,000 from the Homer Accelerated Roads and Trails (HART) Road Fund

to Establish a Pavement Restoration Program. City Manager/Public Works Director. Introduction May 9, 2022, Public Hearing and Second Reading May 23, 2022.

Memorandum 22-073 from Public Works Director as backup.

Mayor Castner opened the public hearing for Ordinance 22-26.

Adele Person, city resident commented in support of the funding and believed that it was an opportunity to assist non-motorized transportation.

Mayor Castner closed the public hearing.

ADERHOLD VENUTI MOVED TO ADOPT ORDINANCE 22-26 BY READING OF TITLE ONLY FOR SECOND AND FINAL READING.

Councilmember Aderhold stated that while she supports the intent of the ordinance and does not deny that the City should perform this work, this type of project moves away from the intent of the HART program which was intended for special assessment districts and the city sharing in the costs. Since the voters will be asked to possibly reinstate this program in a few years she advocated for Council to consider that aspect about the HART program.

Public Works Director Keiser provided clarification on the criteria that the city would place a road on a list for pavement replacement would be dependent on a number of things such as location, if the road was built by a private contractor and still under warranty, traffic impact and provided examples.

VOTE: NON-OBJECTION. UNANIMUS CONSENT.

Motion carried.

d. Ordinance 22-27, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating an Additional $511,228 from the Homer Accelerated Roads and Trails (HART) Road Fund to the Small Works Road Repair Program, the Small Works Drainage Program, and the Indefinite Delivery/Indefinite Quantity (IDIQ) Contract to East Road Services. City Manager/Public Works Director. Introduction May 9, 2022, Public Hearing and Second Reading May 23, 2022.

Memorandum 22-073 from Public Works Director as backup.

Mayor Castner opened the public hearing for Ordinance 22-27.

Robert Archibald, city resident, comment in support and noted that most streets are dirt and constructed many years ago and have the typar showing and each winter deal with more frost boils. Many people have gotten stuck and have had to leave their cars until someone can get them unstuck.

Mayor Castner closed the public hearing.

ADERHOLD/LORD MOVED TO ADOPT ORDINANCE 22-27 BY READING OF TITLE ONLY FOR SECOND AND FINAL READING.

There was no discussion.

VOTE: NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

e. Ordinance 22-28, An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating an Additional $56,803 from the Homer Accelerated Roads and Trails (HART) Trails Fund to the Small Works Trails Maintenance Program. City Manager/Public Works Director. Introduction May 9, 2022, Public Hearing and Second Reading May 23, 2022.

   Memorandum 22-073 from Public Works Director as backup.

Mayor Castner opened the public hearing for Ordinance 22-28.

Robert Archibald commented on the cost to install and upkeep trails and the efforts of volunteers along with the aging volunteer force will necessitate looking at other ways and means maybe even mechanized equipment but the funding would allow for the Parks Superintendent to maintain and keep the trail system usable.

Mayor Castner closed the public hearing.

ADERHOLD/LORD MOVED TO ADOPT ORDINANCE 22-28 BY READING OF TITLE ONLY FOR SECOND AND FINAL READING.

Councilmember Lord expressed her appreciation for the information provided by the Public Works Director and City Manager noting that for a long time HART funds were really ineffectively utilized and these are direct tax dollars directly going to very specified and strategically planned projects and programs that will directly benefit citizens across the city. She believed that it was a direct example of local government working really well.

VOTE: NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

ORDINANCE(S)

CITY MANAGER'S REPORT

a. City Manager's Report

City Manager Dumouchel commented on the memorandum updating the progress of various projects identified in the visioning session held in March, he stated that currently the activity is at the staff level but Council is currently seeing that some of the items are making their way into the meeting packets. He referred to previously conducted visioning exercise and reported that he has developed a mechanism for

providing quarterly status reports which the previous exercise did not have established. He then touched on the following items within his report: removal of invasive trees in coordination with Homer Soil & Water Conservation District; ordering of the new Fire Tanker Truck at a savings; and completion of the new Tsunami informational brochure.

PENDING BUSINESS

NEW BUSINESS

a. Memorandum 22-085 from City Clerk re: Travel Authorization for Mayor and Councilmembers to Attend the Alaska Municipal League Summer Conference August 10-12 in Sitka, Alaska.

Mayor Castner requested a motion from Council.

ADERHOLD/LORD I MOVE TO BRING MEMORANDUM 22-085 TO THE FLOOR FOR DISCUSSION.

There was no discussion.

VOTE: NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

Councilmember Aderhold stated that she would happy to attend the Conference believing that the City should be represented at the conference by an elected official.

Mayor Castner stated that the City Manager would be attending and noted that the Summer AML conferences are less formal than those held in Anchorage or Juneau. He noted that there was still time to make a decision and encouraged the other Councilmembers to inform the Clerk's Office by the middle of July if they would like to attend.

ADERHOLD/LORD MOVED TO AUTHORIZE TRAVEL FOR COUNCILMEMBER ADERHOLD TO ATTEND THE AML SUMMER CONFERENCE IN SITKA ALASKA.

There was no discussion.

VOTE: NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

RESOLUTIONS

COMMENTS OF THE AUDIENCE

Peter Roedl, city resident and commissioner on the Parks Art Recreation & Culture Advisory Commission, commented on the talks to improve our trails and wanted to encourage the City to avoid spending all the money to take care of these problems that could have been taken care of at the beginning of a project. He provided statistics on the speed of walkers, joggers, cyclists, then noted that vehicles coming down Main Street traveling at speeds ranging from 10 mph to 30 mph. Mr. Roedl stated that there are many vehicles

that also use the city's trails and sidewalks such as e-bikes, Segway's, skateboards that are motorized and encouraged the Council to consider wider roads, with bike lanes when building subdivisions noting the benefits to pedestrians and vehicular traffic. He stated that these things are becoming more and more popular and should be included in the planning of developments. He asked council if they have ever negotiated downhill stating that it was one thing to say Share the Road and another to just do it.

Kenneth Bryant, city resident, requested that the allocation for funding for city trails be amended to guarantee city businesses have first dibs at the opportunity of building trails instead of all those large companies from out of state or even out of country. He then stated that he had in hand, paperwork from Mayor Charlie Pierce's Office that the disposal fee will be waived in the event we figure out what to do with the HERC building.

Robert Archibald, city resident, wanted to remind everyone that the Kachemak Bay State Wilderness Park celebration of 50 years will be held at Grace Ridge Brewery on Wednesday, May 25, 2022 from 4:00 pm to 6:00 pm and everyone is invited.

Jan Keiser, city resident, thanked the Economic Development Advisory Commission, Planning Commission and the Parks Commission as well as the City Council for their undying support of non-motorized transportation, their dedication to help our citizens with these issues and support for the funding requests and look forward to making these projects happen. Thank you.

COMMENTS OF THE CITY ATTORNEY

COMMENTS OF THE CITY CLERK

COMMENTS OF THE CITY MANAGER

City Manager Dumouchel noted the jobs available within the city and that the y have been having difficulties in recruiting for some positions, particularly positions related to parks and recreation. He encouraged the public to check out the city website as there are seasonal and full time permanent positions available as well as the Fire Department is looking for volunteer firefighters too.

COMMENTS OF THE MAYOR

Mayor Castner commented that it has been an interesting couple of weeks and there is a lot of building going on and he believed the housing issue has stirred everybody's interest in coming up with solutions. He suggested that if property owners are sitting on a few acres and have been wondering what to do with the land contact the City and speak to Julie Engebretsen because there are developers that are looking for locations. The availability in town is finite so if you have been wondering what to do with that "back 40"contact Julie.

COMMENTS OF THE CITY COUNCIL

Councilmember Aderhold thanked the Mayor for setting his meeting with the Chairs and requested that he remember to invite the ADA Compliance Committee to attend those meetings as well, noting that while a committee, they do fill a very important and specialized role related to ADA Compliance so the committee comes at things from a different perspective. She then commented on the Kachemak Bay Writers

Conference held at the Kachemak Bay Campus last weekend that was attended by people from as far as Florida and Massachusetts. This conference is definitely on people's radar.

Councilmember Venuti reported on the recognition and designation by former Mayor Hornaday of Mary Epperson Day, June 6th which Homer Council on the Arts (HCOA) will be celebrating what would have been her 106th birthday, noting that Ms. Epperson helped establish the college and HCOA and was the treasurer for the City of Homer for 18 years. She further noted that Mary Epperson left a legacy that will be forever remembered regarding art and education and she was a phenomenal volunteer, always in the ticket booth, Ms. Venuti recounted learning that Mary's father came across the border from Mexico, then her mother bringing Mary to the United States so for a long time Mary was not a citizen. Ms. Venuti informed the body and audience that there will be a party on Saturday, June 4th from Noon to 5:00 p.m. Vendor booths, food and music.

Councilmember Erickson reported on the celebration of graduation and offered congrats to those High School Seniors, ending of sports and regional competitions, very active Little League program with games happening six days a week. She recognized that Memorial Day weekend coming up and cautioned everyone to be safe, as there are lots of people on the road. She noted that she went to Anchorage and the roads were very busy. Ms. Erickson expressed her excitement about all the trails and the need to look out for all those that the city is responsible for and encourage the users to exercise caution with whatever mode they use to access those trails.

Councilmember Lord cautioned everyone to be really careful with fire as it is really hot, expressed her appreciation for the Mayor's efforts bringing the Commission chair's together and having those conversations; she commented on the Council used to get the commission minutes in the packet and really missed being able to see those conversations and motions; noted that it was great having the support from the Commissions on the non-motorized trail work and that it was great to see the Community members volunteering just like those sitting on Council and the Commissions, acknowledging the different points of view being provided by the different members of the community is really great. Ms. Lord then commented on the Pier One Theatre camp for kids this week and how many friends in their 40's participated in their youth and thought that it was a really neat part of having a vibrant community in so many different ways with so many different activities available, this kind of institutional legacy that groups have been presenting whether it is theatre or snow machining or whatever, makes a place you live really special. Thank you.

Councilmember Hansen-Cavasos commented that schools were out, and her kids were really excited about that but reminded everyone that they should be mindful that kids will be walking or riding and may veer off the sidewalk or trail. She attended the Walli memorial and it reminded her of how amazing their community is and how important it is to keep in touch, get to know one another and related that the memorial was like a reunion, it was pretty spectacular. Ms. Hansen-Cavasos expressed how glad she was on the number of people that were able to attend the event.

Councilmember Davis expressed his appreciation on everyone working on the non-motorized trail and sidewalks issue and that there is really a lot of energy for that in the Community. He commended the Chamber on the Food Truck Festival that was held up at the KOA Campground on Baycrest stating it was a really nice event. Mr. Davis then noted that a few weeks ago when they talked about No Mow May, he

wanted to acknowledge that there were many people around town that have listened and have not mowed and so now there is a golden glow of dandelions wherever he visits and the bees must be in heaven with all the pollinators so he wanted to express his thanks to all those who participated in no Mow May.

ADJOURN

There being no further business to come before the Council Mayor Castner adjourned the meeting at 7:56 p.m. A Worksession will be held on Monday, June 6, 2022 at 6:00 p.m. The next Regular Meeting is Monday, June 13, 2022 at 6:00 p.m., Committee of the Whole at 5:00 p.m. All meetings scheduled to be held in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

_____

Renee Krause, MMC, Deputy City Clerk II

Approved:_____

City of Homer
www.cityofhomer-ak.gov

Office of the Mayor
491 East Pioneer Avenue
Homer, Alaska 99603
mayor@ci.homer.ak.us
(p) 907-235-3130
(f) 907-235-3143

Memorandum 22-096

TO: HOMER CITY COUNCIL

FROM: MAYOR CASTNER

DATE: JUNE 13, 2022

SUBJECT: APPOINTMENT OF TULIO PEREZ TO THE ECONOMIC DEVELOPMENT ADVISORY COMMISSION

Tulio Perez is appointed to the Economic Development Advisory Commission to fill the seat vacated by Debbie Speakman on May 12, 2022 and complete the remaining term, which expires April 1, 2023. This is the second of two non-resident seats available.

Recommendation

Confirm the appointment of Tulio Perez to the Economic Development Advisory Commission.

Advisory Body Application
For Appointment to Committees, Commissions, Board & Task Forces

Received
City Clerk's Office
JUN 03 2022
City of Homer
Alaska

Office of the City Clerk
491 East Pioneer Avenue
Homer, Alaska 99603
Phone: (907) 235-3130
Fax: (907) 235-3143
clerk@cityofhomer-ak.gov

The Information provided on this form will provide the basic information to the Mayor and City Council on your interest in serving on the selected Advisory Body. It is considered public and will be included in the City Council meeting packet. This information will be published in the City Directory and within city web pages if you are appointed by the Mayor and your appointment is confirmed by the City Council.

Applicant Information

Full Name: Tulio Perez

Physical Address Where you Claim Residency: 53543 Cottonwood Hill Ave Homer, AK 99603

Mailing Address: PO Box 15385

City: Fritz Creek State: AK Zip: 99603

Phone Number(s): 907-280-8316

Email: tulio.a.perez@gmail.com

Advisory Body You Are Requesting Appointment To

☐ **Planning Commission** – Meetings held on the 1st and 3rd Wednesday of each month at 6:30 p.m. and Worksessions at 5:30 p.m. prior to each meeting. No first meeting in July or second meetings in November and December.

☐ **Parks, Art, Recreation & Culture Advisory Commission** – Meetings held on the 3rd Thursday of February through June and August through November at 5:30 p.m.

☐ **Port & Harbor Advisory Commission** – Meetings held on the 4th Wednesday of January, February, March, April, September, and October at 5:00 p.m.; the 4th Wednesday of May, June, July, and August at 6:00 p.m.; and the 2nd Wednesday of December at 5:00 p.m.

☒ **Economic Development Advisory Commission** – Meetings held on the 2nd Tuesday of each month at 6:00 p.m.

☐ **Library Advisory Board** – Meetings held on the 3rd Tuesday of each month, excluding June and July, at 5:30 p.m.

☐ **ADA Compliance Committee** – Meetings held on the 2nd Thursday in the months of April, May, June, July, October, November, and as needed.

☐ **Other** – Please Indicate _____

Please Answer the Following

Are you a City Resident? ☐ Yes ☒ No If yes, how long have you been a City resident? _____

How long have you been a resident of the South Peninsula Area? 2.5 years

Background Information

Have you ever served on a similar advisory body? If so please list when, where, and how long:

2015-2017 - Secretary - Association for Advancement of Cost Engineers (AACE) - Anchorage, AK

Please list any current memberships or organizations you belong to related to your selection(s):

N/A

Please list any special training, education, or background you may have which is related to your selection(s):

BBA - UAA - Global Logistics and Supply Chain Management; MSc - Boston University - Project Management; MSc - University of Colorado Denver - Global Energy Management (in progress - expected 2023); Project Management Professional (PMP), Veteran - Alaska Air National Guard

Why are you interested in serving on the selected Advisory Body? This may include information on future goals or projects you wish to see accomplished or any additional information that may assist the Mayor in the decision making process. You may attach an additional page if needed.

Building a home and starting a family in Homer was a dream for my wife and me. I have been moved by the positive experiences that people have shared about growing up in Homer; from the educational and extracurricular opportunities to the special relationship with nature that is developed from growing up in Kachemak Bay. I also have been impressed by the unique work opportunities that this community offers kids growing up here. These are all reasons why we were drawn to starting our family here and why I want to work with the Homer Economic Development Advisory Commission. I want to help be a steward of the things that make Homer special, while adapting and preparing for the changes that our community is facing.

Specifically, I am concerned with making Homer a livable and vibrant city year-round. This means access to affordable housing and considering the impacts of the proliferation of vacation rentals on our housing inventory. We also have amazing trails that could be expanded and promoted to encourage year-round traffic to Homer. I have had friends from Anchorage visit in the spring and be blown away by the quality of our ski trails, generally followed by the statement "We had no idea these were even here!" Prioritizing the growth of Homer as a bikeable, walkable community will benefit the health of the community and also make it a more desirable place to live and work. I am also concerned with ensuring we are forward looking in terms of our energy systems. I have begun working on a small focus group seeking to promote renewable energy in the Kenai Peninsula. I believe energy will be a major potential bottleneck to Homer's economic growth. The cost of fuel is going to constrain everything from our fishing fleet to how we heat our homes. We need to be forward looking and consider ideas to help alleviate and spur innovation in this space.

Homer has a host of challenges and the growth that we are seeing is going to test this community in many ways. I look forward to working with the commission and the city in finding ways to identify problems and opportunities, then work collaboratively in identifying and implementing actionable solutions.

FOR PLANNING COMMISSION ONLY:

Have you ever developed real property other than a personal residence? If yes, briefly explain:

FOR PORT & HARBOR ADVISORY COMMISSION ONLY:

Do you use the Homer Port and/or Harbor on a regular basis? ☐ Yes ☐ No

If yes, what is your primary use? ☐ Commercial ☐ Recreational ☐ Other: _____

City of Homer
www.cityofhomer-ak.gov

Office of the Mayor
491 East Pioneer Avenue
Homer, Alaska 99603
mayor@ci.homer.ak.us
(p) 907-235-3130
(f) 907-235-3143

Memorandum 22-097

TO: HOMER CITY COUNCIL

FROM: MAYOR CASTNER

DATE: JUNE 13, 2022

SUBJECT: RECOMMENDATION FOR HOMER CITY SEAT ON THE KENAI PENINSULA BOROUGH PLANNING COMMISSION

The Homer City Seat on the Kenai Peninsula Borough Planning (KPB) Commission expires July 31, 2022. The Notice of Vacancy was advertised by the KPB Clerk's Office and the filing period closed on May 27, 2022.

Applications were received from Heather Lewis and Franco Venuti.

I find that both applicants are qualified to serve on the KPB Planning Commission and submit both applicants to KPB Mayor Pierce for his consideration and selection of a Planning Commissioner for the Homer City Seat.

Recommendation

Confirm the submission of Heather Lewis and Franco Venuti to KPB Mayor Pierce for consideration for the Homer City Seat on the KPB Planning Commission.

Kenai Peninsula Borough
Planning Department

Homer City Seat (Term Expires 07/31/2025) PC Application Submitted 2022-04-27 18:16:17

Name: Heather Lewis

Mailing Address:
P.O. Box 783
Homer, Ak 99603

My Residence Address is DIFFERENT from my Mailing Address

Residence Address
510 E Fairview
Homer , Ak 99603

Email: Heatherlewis0001@gmail.com

Home Phone: 907-942-1104

Mobile Phone:

What knowledge, experience, or expertise will you bring to the Planning Commission?
Hello,

I was born in Homer and my family has lived in Homer since 1947. I have seen many changes and currently, I work at a title company and I have 9 years of experience in this field. I see the rapid changes that are happening and want to be part of solutions to the current growing trends,

Thank you for your consideration.

Respectfully,
Heather Lewis

Voter #
[redacted]

SSN

Date of Birth
[redacted]

Kenai Peninsula Borough
Planning Department

Homer City Seat (Term Expires 07/31/2025) PC Application Submitted 2022-05-02 07:58:28

Name: Franco Venuti

Mailing Address:
4066 Kachemak Way
Homer, Alaska 99603

Residence Address

,

Email: fcvenuti@gmail.com

Home Phone: 9073991550

Mobile Phone: 9073991550

What knowledge, experience, or expertise will you bring to the Planning Commission?
I bring nine years experience as a current member of the Kenai Peninsula Borough Planning Commission and twelve years experience as a current member of the City of Homer Planning Commission as well as six years experience as a member of the Homer Chamber of Commerce Board of Directors

Voter #

SSN
[redacted]

Date of Birth
[redacted]

Franco Venuti
4066 Kachemak Way Homer, Alaska 99603
(907) 399-1550
fcvenuti@gmail.com

04/28/2022

Mayor Charles Pierce
Kenai Peninsula Borough
144 North Binkley Street
Soldotna, Alaska 99669

Dear Mayor Pierce,
This letter is being sent to you with the request that I be reappointed to my seat on the Kenai Peninsula Borough Planning Commission. I have served the Borough in this capacity for the past nine years. I believe in responsible public service and am sure that Borough staff would concur that I have been a reliable and effective member.

I bring to this position extensive experience as an Alaskan tradesman, contractor and building inspector; as well as twelve years of service as a member of the City of Homer Planning Commission. I also served six years of service as a member of the Homer Chamber of Commerce Board of Directors. My continuing connections with the community of Homer, as well as my many friends and businesses throughout the Kenai Peninsula places me in a very useful position to continue serving in this seat.
Your consideration of this request is appreciated.

Thank you for serving as Mayor of our Borough.

Respectfully submitted,

Franco Venuti

City of Homer
www.cityofhomer-ak.gov

Office of the City Clerk
491 East Pioneer Avenue
Homer, Alaska 99603
clerk@cityofhomer-ak.gov
(p) 907-235-3130
(f) 907-235-3143

Memorandum 22-098

TO: MAYOR CASTNER AND HOMER CITY COUNCIL

FROM: MELISSA JACOBSEN, MMC, CITY CLERK

DATE: JUNE 8, 2022

SUBJECT: RENEWAL LIQUOR LICENSE APPLICATION FOR OAKEN KEG AND LIQUOR LICENSE TRANSFER FOR THE TWISTED GOAT

The City Clerk's Office has been notified by the AMCO Board of a Liquor License Renewal for the following within the City of Homer:

License Type: Package Store
License #: 4162
DBA Name: Oaken Keg #1832
Service Location: 90 Sterling Highway
Homer, AK 99603
Licensee: Safeway, Inc.
Contact Person: Cody Perdue

The City Clerk's Office has been notified by the AMCO Board of a Liquor License Transfer for the following within the City of Homer:

License Type: Restaurant/Eating Place
License #: 3210
Service Location: 162 W. Pioneer Ave.
Homer, AK 99603

Transferor: Volco, LLC
Doing Business As: Little Mermaid

Transferee: Bubble Bitches, LLC
Doing Business As: The Twisted Goat

RECOMMENDATION: Voice non objection and approval for the Liquor License Renewal for Oaken Keg and Renewal Liquor License Transfer from Little Mermaid to Twisted Goat.

Fiscal Note: Revenues.

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Commerce, Community, and Economic Development
ALCOHOL & MARIJUANA CONTROL OFFICE
550 West 7th Avenue, Suite 1600
Anchorage, AK 99501
Main: 907.269.0350

May 31, 2022

Kenai Peninsula Borough / City of Soldotna
ViaEmail: mjenkins@kpb.us; jvanhoose@kpb.us ; jratky@kpb.us; cjackinsky@kpb.us; maldridge@kpb.us ncarver@kpb.us ; slopez@kpb.us; jblankenship@kpb.us ; assemblyclerk@kpb.us; mjacobsen@ci.homer.ak.us; clerk@cityofhomer-ak.gov

Re: Notice of 2022/2023 Liquor License Renewal Application

License Type:	Package Store	**License**	4162
Licensee:	Safeway, Inc		
Doing Business As:	Oaken Keg #1832		

We have received a completed renewal application for the above listed license (see attached application documents) within your jurisdiction. This is the notice required under AS 04.11.480.

A local governing body may protest the approval of an application(s) pursuant to AS 04.11.480 by furnishing the director **and** the applicant with a clear and concise written statement of reasons for the protest within 60 days of receipt of this notice, and by allowing the applicant a reasonable opportunity to defend the application before a meeting of the local governing body, as required by 3 AAC 304.145(d). If a protest is filed, the board will deny the application unless the board finds that the protest is arbitrary, capricious, and unreasonable.

To protest the application referenced above, please submit your written protest within 60 days, and show proof of service upon the applicant and proof that the applicant has had a reasonable opportunity to defend the application before a meeting of the local governing body.

Sincerely,

Joan M. Wilson

Joan M. Wilson, Director
amco.localgovernmentonly@alaska.gov

STATE OF ALASKA - ALCOHOLIC BEVERAGE CONTROL BOARD

FORM CONTROL

XXXX

ISSUED
05/19/2022
ABC BOARD

LIQUOR LICENSE
2022 - 2023
TEMPORARY

LICENSE NUMBER

4162

LICENSE RENEWAL APPLICATION DUE
DECEMBER 31, 2023 (AS 04.11.270(b))

THIS LICENSE EXPIRES MIDNIGHT
FEBRUARY 28, 2024 UNLESS DATED BELOW

TYPE OF LICENSE: Package Store

LICENSE FEE: $1,500.00

1150

CITY / BOROUGH: Homer
Kenai Peninsula Borough

D/B/A: Oaken Keg #1832
90 Sterling Highway

Mail Address:
Safeway Inc.
PO Box 29096 MS 6531
Phoenix, AZ 85038-3573

This license cannot be transferred without permission of the Alcoholic Beverage Control Board

[ ] Special restriction - see reverse side

ISSUED BY ORDER OF THE
ALCOHOLIC BEVERAGE CONTROL BOARD

Joan M. Wilson

DIRECTOR

04-900 (REV 5/9/22)

THIS LICENSE MUST BE POSTED IN A VISIBLE PLACE ON THE PREMISES

STATE OF ALASKA - ALCOHOLIC BEVERAGE CONTROL BOARD

FORM CONTROL

XXXX

ISSUED
05/19/2022
ABC BOARD

LIQUOR LICENSE
2022 - 2023
TEMPORARY

LICENSE NUMBER

4162

LICENSE RENEWAL APPLICATION DUE
DECEMBER 31, 2023 (AS 04.11.270(b))

THIS LICENSE EXPIRES MIDNIGHT
FEBRUARY 28, 2024 UNLESS DATED BELOW

TYPE OF LICENSE: Package Store

LICENSE FEE: $1,500.00

CITY / BOROUGH: Homer
Kenai Peninsula Borough

D/B/A: Oaken Keg #1832
90 Sterling Highway

Mailing Address:
Safeway Inc.
PO Box 29096 MS 6531
Phoenix, AZ 85038-3573

This license cannot be transferred without permission of the Alcoholic Beverage Control Board

[ ] Special restriction - see reverse side

ISSUED BY ORDER OF THE
ALCOHOLIC BEVERAGE CONTROL BOARD

COPY

DIRECTOR

THIS LICENSE MUST BE POSTED IN A VISIBLE PLACE ON THE PREMISES

04-900 (REV 5/9/22)

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

2022-2023 Master Checklist: Renewal License Application

Doing Business As:	Oaken Keg #1832	**License Number:**	4162
License Type:	Package Store		
Examiner:	KLG	**Transaction #:**	100351638

Document	Received	Completed	Notes
AB-17: Renewal Application	2/28	5/19/22	
App and License Fees	2/28	5/19/22	

Supplemental Document	Received	Completed	Notes
Tourism/Rec Site Statement			
AB-25: Supplier Cert (WS)			
AB-29: Waiver of Operation			
AB-30: Minimum Operation			
AB-33: Restaurant Affidavit			
COI / COC / 5 Star / FAA Cert			
FP Cards & Fees / AB-08a		✓	
Late Fee	2/28		

Names on FP Cards:	

	Yes	No	N/A
CBPL Entity Printout included?	☑ ✓	☐	☐
Business License Copy included?	☑ ✓	☐	☐
Background(s) Completed & Date: _____	☐	☐	☐

Special Consideration: _____ **Board Meeting Date:** 6/20/2022

LGB Sent Date: 5/19/2022 **LGB Deadline Date:** _____

LGB 1 Name: KPB (City of Homer) **LGB 2 Name:** _____

☐ Waive ☐ Protest ☐ Lapsed ☐ Waive ☐ Protest ☐ Lapsed

Alcohol and Marijuana Control Office
550 W 7th Avenue,
Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-17b: 2022/2023 Package Store Renewal Application

- This form and any required supplemental forms must be completed, signed by the licensee, and postmarked no later than 12/31/2021 per AS 04.11.270, 3 AAC 304.160, with all required fees paid in full, or a non-refundable **$500.00** late fee applies.
- Any complete application for renewal or any fees for renewal that have not been postmarked by 02/28/2022will be expired per AS 04.11.540,3 AAC 304.160(e).
- All fields of this application must be deemed complete by AMCO staff and must be accompanied by the required fees and all documents required, or the application will be returned without being processed, per AS 04.11.270, 3 AAC 304.105
- Receipt and/or processing of renewal payments by AMCO staff neither indicates nor guarantees in any way that an application will be deemed complete, renewed, or that it will be scheduled for the next ABC Board meeting.

Establishment Contact Information

Licensee (Owner):	SAFEWAY INC.	**License #:**	4162
License Type:	PACKAGE STORE		
Doing Business As:	OAKEN KEG #1832		
Premises Address:	90 STERLING HIGHWAY		
Local Governing Body:	CITY OF HOMER (KENAI PENINSULA BOROUGH)		
Community Council:	NONE		

If your mailing address has changed, write the NEW address below:

Mailing Address:					
City:		**State:**		**ZIP:**	

Section 1 – Licensee Contact Information

Contact Licensee: The individual listed below must be listed in Section 2 or 3 as an Official/Owner/Shareholder of your entity and must be listed on CBPL with the same name and title.
This person will be the designated point of contact regarding this license, unless the Optional contact is completed.

Contact Licensee:	CODY PERDUE	**Contact Phone:**	208-395-3216
Contact Email:	CODY.PERDUE@ALBERTSONS.COM		

Optional: If you wish for AMCO staff to communicate with **anyone other than the Contact Licensee** about your license, list them below:

Name of Contact:	LEGAL LICENSING TEAM	**Contact Phone:**	623-869-4326
Contact Email:	LEGALLICENSING.TEAM@ALBERTSONS.COM		

Name of Contact:		**Contact Phone:**	
Contact Email:			

Section 2 – Written Order Information

Do you intend to sell alcoholic beverages and ship them to another location in response to written solicitation in calendar years 2022 and/or 2023?

YES ☐ NO ☑

AMCO Received 2/28/22

Alaska Alcoholic Beverage Control Board

Form AB-17b: 2022/2023 License Renewal Application

Section 3 – Entity or Community Ownership Information

Sole Proprietors should skip this Section.

Use the link from Corporations, Business and Professional Licensing (CBPL) below to assist you in finding the Entity #.
https://www.commerce.alaska.gov/cbp/main/search/entities

Alaska CBPL Entity #:	39147F (SAFEWAY INC.)

READ BEFORE PROCEEDING: Any new or changes to Shareholders (10% or more), Managers, Corporate Officers, Board of Directors, Partners, Controlling Interest or Ownership of the business license must be reported to the ABC Board within 10 days of the change and must be accompanied by a full set of fingerprints on FBI-approved card stock, AB-08a's, payment of $48.25 for each new officer with a date-stamped copy of the CBPL change per AS 04.11.045, 50 & 55, or a Notice of Violation will be issued to your establishment and your application will be returned.

The **only exception** to this is a Corporation who can meet the requirements set forth in AS 04.11.050(c).

DO NOT LIST OFFICERS OR TITLES THAT ARE NOT REQUIRED FOR YOUR ENTITY TYPE.

- **Corporations** of ***any*** type *including non-profit* must list ONLY the following:
  - All shareholders who own 10% or more stock in the corporation
  - Each President, Vice-President, Secretary, and Managing Officer regardless of percentage owned
- **Limited Liability Corporations**, of ***any*** type must list ONLY the following:
  - All Members with an ownership interest of 10% or more
  - All Managers (of the LLC, not the DBA) regardless of percentage owned
- **Partnerships** of ***any*** type, *including Limited Partnerships* must list ONLY the following:
  - Each Partner with an interest of 10% or more
  - All General Partners regardless of percentage owned

Important Note: All entries below must match our records, or your application will be returned per AS 04.11.270, 3 AAC 304.105. You **must** list full legal names, all required titles, phone number, percentage of shares owned (if applicable) and a full mailing address for each official of your entity whose information we require. **If more space is needed: attach additional completed copies of this page. Additional information not on this page will be rejected.**

Name of Official:	VIVEK SANKARAN				
Title(s):	PRESIDENT	Phone:	208-395-6700	% Owned:	0
Mailing Address:	250 PARKCENTER BLVD				
City:	BOISE	State:	ID	ZIP:	83706

Name of Official:	BRADLEY BECKSTROM				
Title(s):	ASSISTANT SECRETARY, DIRECTOR	Phone:	208-395-5886	% Owned:	0
Mailing Address:	250 PARKCENTER BLVD				
City:	BOISE	State:	ID	ZIP:	83706

Name of Official:	CODY PERDUE				
Title(s):	DIRECTOR, TREASURER, VICE PRESIDENT	Phone:	208-395-3216	% Owned:	0
Mailing Address:	250 PARKCENTER BLVD				
City:	BOISE	State:	ID	ZIP:	83706

Alaska Alcoholic Beverage Control Board

Form AB-17b: 2022/2023 License Renewal Application

Section 3 – Entity or Community Ownership Information

Sole Proprietors should skip this Section.

Use the link from Corporations, Business and Professional Licensing (CBPL) below to assist you in finding the Entity #.
https://www.commerce.alaska.gov/cbp/main/search/entities

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- **Limited Liability Corporations**, of ***any*** type must list ONLY the following:
  - All Members with an ownership interest of 10% or more
  - All Managers (of the LLC, not the DBA) regardless of percentage owned
- **Partnerships** of ***any*** type, *including Limited Partnerships* must list ONLY the following:
  - Each Partner with an interest of 10% or more
  - All General Partners regardless of percentage owned

Important Note: All entries below must match our records, or your application will be returned per AS 04.11.270, 3 AAC 304.105. You **must** list full legal names, all required titles, phone number, percentage of shares owned (if applicable) and a full mailing address for each official of your entity whose information we require. **If more space is needed: attach additional completed copies of this page. Additional information not on this page will be rejected.**

Name of Official:	ALBERTSONS SAFEWAY LLC				
Title(s):	SHAREHOLDER	Phone:	925-467-3700	% Owned:	100
Mailing Address:	TAX DIVISION 5918 STONERIDGE MALL RD				
City:	PLEASANTON	State:	CA	ZIP:	94588-3229

Name of Official:	JULIETTE PRYOR				
Title(s):	SECRETARY, DIRECTOR	Phone:	208-395-4409	% Owned:	0
Mailing Address:	250 PARKCENTER BLVD				
City:	BOISE	State:	ID	ZIP:	83706

Name of Official:					
Title(s):		Phone:		% Owned:	
Mailing Address:					
City:		State:		ZIP:	

Alaska Alcoholic Beverage Control Board

Form AB-17b: 2022/2023 License Renewal Application

Section 4 – Sole Proprietor Ownership Information

Corporations, LLC's and Partnerships of ALL kinds should skip this section.

READ BEFORE PROCEEDING: Any new or changes to the ownership of the business license must be reported to the ABC Board within 10 days of the change and must be accompanied by a full set of fingerprints on FBI approved cardstock, AB-08a's, payment of $48.25 for each **new** owner or officer and a date stamped copy of the CBPL change per AS 04.11.045, or a Notice of Violation will be issued to your establishment and your application will be returned.

Important Note: All entries below must match our records, or your application will be returned per AS 04.11.270, 3 AAC 304.105. You must list full legal names, phone number, and mailing address for each owner or partner whose information we require.

If more space is needed, attach additional copies of this page. Additional owners not listed on this page will be rejected.

This individual is an: [ ] Applicant [ ] Affiliate

Name:				**Contact Phone:**	
Mailing Address:					
City:		**State:**		**ZIP:**	
Email:					

This individual is an: [ ] Applicant [ ] Affiliate

Name:				**Contact Phone:**	
Mailing Address:					
City:		**State:**		**ZIP:**	
Email:					

Section 5 – License Operation

Check ONE BOX for EACH CALENDAR YEAR that best describes how this liquor license was operated:	2020	2021
1. The license was **regularly operated continuously** throughout each year. (Year-round)	X	X
2. The license was **only operated during a specific season** each year. (Seasonal) *If your operation dates have changed, list them below:* _____ to _____		
3. The license was only operated to meet the minimum requirement of 240 total hours each calendar year. *A complete AB-30: Proof of Minimum Operation Checklist, and all documentation must be provided with this form.*		
4. The license was not operated at all or was not operated for at least the minimum requirement of 240 total hours each year, during one or both calendar years. *A complete Form AB-29: Waiver of Operation Application and corresponding fees must be submitted with this application for each calendar year during which the license was not operated.* **If you have not met the minimum number of hours of operation in 2020 and/or 2021, you are not required to pay the fees, however a complete AB-29 is required with Section 2 marked "OTHER" and COVID is listed as the reason.**		

Section 6 – Violations and Convictions

	Yes	No
Have **ANY** Notices of Violation been issued for this license **OR** has **ANY** person or entity in this application been convicted of a violation of Title 04, 3AAC 304 or a local ordinance adopted under AS 04.21.010 in 2020 or 2021?		X

If you checked YES, you MUST attach a list of all Notices of Violation and/or Convictions per AS 04.11.270(a)(2)

If you are unsure if you have received any Notices of Violation, contact the office before submitting this form.

Alaska Alcoholic Beverage Control Board

Form AB-17: 2022/2023 License Renewal Application

Section 7 – Certifications

As an applicant for a liquor license renewal, I declare under penalty of perjury that I have read and am familiar with AS 04 and 3 AAC 304, and that this application, including all accompanying schedules and statements, are true, correct, and complete.

- I agree to provide all information required by the Alcoholic Beverage Control Board or requested by AMCO staff in support of this application and understand that failure to do so by any deadline given to me by AMCO staff will result in this application being returned and potentially expired if I do not comply with statutory or regulatory requirements.
- I certify that all current licensees (as defined in AS 04.11.260) and affiliates have been listed on this application, and that in accordance with AS 04.11.450, no one other than the licensee(s) has a direct or indirect financial interest in the licensed business.
- I certify that this entity is in good standing with Corporations, Business and Professional Licensing (CBPL) and that all entity officials and stakeholders are current and accurately listed, and I have provided AMCO with all required changes of Shareholders (10% or more), Managers, Corporate Officers/Board of Directors, Partners, Controlling Interest or Ownership of the business license, and have provided all required documents for any new or changes in officers.
- **I certify that all licensees, agents, and employees who sell or serve alcoholic beverages or check identification of patrons have completed an alcohol server education course approved by the ABC Board and keep current, valid copies of their course completion cards on the licensed premises during all working hours, if applicable for this license type as set forth in AS 04.21.025 and 3 AAC 304.465.**
- I certify that I have not altered the functional floor plan or reduced or expanded the area of the licensed premises, and I have not changed the business name from what is currently approved and on file with the Alcoholic Beverage Control Board.

I certify on behalf of myself or of the organized entity that I understand that providing a false statement on this form or any other form provided by AMCO is grounds for rejection or denial of this application or revocation of any license issued.

DocuSigned by:
Bradley Beckstrom NB
6938687DD0944E5...
Signature of licensee

BRAD BECKSTROM
Printed name of licensee

Signature of Notary Public

Notary Public in and for the State of: Idaho

My commission expires: 8/30/2027

Subscribed and sworn to before me this 25th day of February, 2022.

All renewal and supplemental forms are available online

Any application that is not complete or does not include ALL required completed forms and fees will not be processed and will be returned per AS 04.11.270; 3 AAC 304.105.

DANIEL ALBANO NOTARY PUBLIC Comm. No. 20213720 STATE OF IDAHO

FOR OFFICE USE ONLY

License Fee:	$	**Application Fee:**	$ 300.00	**Misc. Fee:**	$
Total Fees Due:					$

AMCO Received 2/28/22

Details

ENTITY DETAILS

Name(s)

Type	Name
Legal Name	SAFEWAY INC.

Entity Type: Business Corporation

Entity #: 39147F

Status: Good Standing

AK Formed Date: 11/7/1986

Duration/Expiration: Perpetual

Home State: DELAWARE

Next Biennial Report Due: 1/2/2024

Entity Mailing Address: CORP TAX DEPT, PO BOX 20, BOISE, ID 83726-0020

Entity Physical Address: 11555 DUBLIN CANYON RD, PLEASANTON, CA 94588

Registered Agent

Agent Name: JILL MCLEOD

Registered Mailing Address: 1031 W 4TH AVE STE 600, ANCHORAGE, AK 99501

Registered Physical Address: 1031 W 4TH AVE STE 600, ANCHORAGE, AK 99501

Officials

☐ Show Former

AK Entity #	Name	Titles	Owned
	ALBERTSONS SAFEWAY LLC	Shareholder	100.00
	BRADLEY BECKSTROM	Assistant Secretary, Director	
	CODY PERDUE	Director, Treasurer, Vice President	
	JULIETTE PRYOR	Secretary, Director	
	VIVEK SANKARAN	President	

Filed Documents

Date Filed	Type	Filing	Certificate
11/07/1986	Creation Filing		
2/01/1988	Biennial Report		
1/12/1990	Biennial Report		
12/13/1991	Biennial Report	Click to View	
12/31/1993	Biennial Report	Click to View	
12/11/1995	Biennial Report	Click to View	

Date Filed	Type	Filing	Certificate
12/19/1997	Biennial Report	Click to View	
1/25/2000	Biennial Report	Click to View	
2/04/2002	Biennial Report	Click to View	
2/02/2004	Biennial Report	Click to View	
1/03/2006	Biennial Report	Click to View	
3/03/2008	Biennial Report	Click to View	
12/18/2009	Biennial Report	Click to View	
12/23/2011	Biennial Report	Click to View	
7/30/2014	Biennial Report	Click to View	
2/17/2015	Change of Officials	Click to View	
5/13/2015	Change of Officials	Click to View	
5/13/2015	Agent Change	Click to View	
10/14/2015	Certificate of Compliance		Click to View
2/26/2016	Biennial Report	Click to View	
10/17/2017	Certificate of Compliance		Click to View
11/03/2017	Biennial Report	Click to View	
11/15/2017	Agent Change	Click to View	
6/06/2018	Change of Officials	Click to View	
12/05/2018	Certificate of Compliance		Click to View
10/03/2019	Biennial Report	Click to View	
12/14/2020	Change of Officials	Click to View	
12/13/2021	Biennial Report	Click to View	

Close Details **Print Friendly Version**

License Detail

LICENSE DETAILS

License #: 908762

Print Business License

Business Name: SAFEWAY

Status: Active

Issue Date: 11/23/2007

Expiration Date: 12/31/2023

Mailing Address: 251 Little Falls Dr
Wilmington, DE 19808

Physical Address: 20427 N 27TH AVE
PHOENIX, AZ 85027

Owners

SAFEWAY INC.

Activities

Line of Business	NAICS	Professional License #
42 - Trade	445110 - SUPERMARKETS AND OTHER GROCERY (EXCEPT CONVENIENCE) STORES	

Endorsements

End #	Issue	Renew	Expiration	Action End	Action Note	Address
1	11/6/2017	11/22/2021	12/31/2023			30 COLLEGE RD, FAIRBANKS, AK 99701
2	11/6/2017	11/22/2021	12/31/2023			3627 AIRPORT WAY, FAIRBANKS, AK 99701
3	11/6/2017	11/22/2021	12/31/2023			44428 STERLING HWY, SOLDOTNA, AK 99669
4	11/6/2017	11/22/2021	12/31/2023			2685 MILL BAY RD, KODIAK, AK 99615
5	11/6/2017	11/22/2021	12/31/2023			301 NORTH SANTA CLAUS LANE, NORTH POLE, AK 99705
6	11/6/2017	11/22/2021	12/31/2023			3033 VINTAGE BLVD, JUNEAU, AK 99801
7	11/6/2017	11/22/2021	12/31/2023			2417 TONGASS AVE, KETCHIKAN, AK 99901
8	11/6/2017	11/22/2021	12/31/2023			1907 SEWARD HWY, SEWARD, AK 99664
9	11/6/2017	11/22/2021	12/31/2023			90 STERLING HWY, HOMER, AK 99603
10	11/6/2017	11/22/2021	12/31/2023			10576 KENAI SPUR HWY, KENAI, AK 99611
11	11/6/2017	11/22/2021	12/31/2023			313 MEALS ST, VALDEZ, AK 99686

License Lapse(s)

If this business license lapsed within the last four years the lapsed periods will appear below. Lapsed periods are the unlicensed period between an expiration date and renewal date.

No Lapses on record for the last 4 years.

Close License Detail **Print Friendly Version**

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Commerce, Community, and Economic Development
ALCOHOL & MARIJUANA CONTROL OFFICE
550 West 7th Avenue, Suite 1600
Anchorage, AK 99501
Main: 907.269.0350

June 3, 2022

Kenai Peninsula Borough
City of Homer

VIA Email: mjenkins@kpb.us; jvanhoose@kpb.us; jratky@kpb.us; cjackinsky@kpb.us; maldridge@kpb.us; ncarver@kpb.us; slopez@kpb.us; jblankenship@kpb.us; assemblyclerk@kpb.us; mjacobsen@ci.homer.ak.us; clerk@cityofhomer-ak.gov

License Type:	Restaurant/Eating Plac	**License Number:**	3210
Licensee:	Bubble Bitches LLC		
Doing Business As:	The Twisted Goat		
Premises Address:	162 W Pioneer Avenue		

We have received a completed application for the above listed license (see attached application documents) within your jurisdiction. This is the notice required under AS 04.11.480.

A local governing body may protest the approval of an application(s) pursuant to AS 04.11.480 by furnishing the director **and** the applicant with a clear and concise written statement of reasons for the protest within 60 days of receipt of this notice, and by allowing the applicant a reasonable opportunity to defend the application before a meeting of the local governing body, as required by 3 AAC 304.145(d). If a protest is filed, the board will deny the application unless the board finds that the protest is arbitrary, capricious, and unreasonable. To protest the application referenced above, please submit your protest within 60 days and show proof of service upon the applicant.

AS 04.11.491 – AS 04.11.509 provide that the board will deny a license application if the board finds that the license is prohibited under as a result of an election conducted under AS 04.11.507.

AS 04.11.420 provides that the board will not issue a license when a local governing body protests an application on the grounds that the applicant's proposed licensed premises are located in a place within the local government where a local zoning ordinance prohibits the alcohol establishment, unless the local government has approved a variance from the local ordinance.

Sincerely,

Joan M. Wilson

Joan Wilson, Director
amco.localgovernmentonly@alaska.gov

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-01: Transfer License Application

What is this form?

This transfer license application form is required for all individuals or entities seeking to apply for the transfer of ownership and/or location of an existing liquor license. Applicants should review **Title 04** of **Alaska Statutes** and **Chapter 304** of the **Alaska Administrative Code**. All fields of this form must be completed, per AS 04.11.260, AS 04.11.280, AS 04.11.290, and 3 AAC 304.105.

This form must be completed and submitted to AMCO's main office, along with all other required forms and documents, before any license application will be considered complete.

Section 1 – Transferor Information

Enter information for the *current* licensee and licensed establishment.

Licensee:	VogLCO LLC.			**License #:**	3210
License Type:	Restaurant/Eating Place			**Statutory Reference:**	AS 04.11.100
Doing Business As:	Little Mermaid				
Premises Address:	162 W. Pioneer Ave.				
City:	Homer	**State:**	AK	**ZIP:**	99603
Local Governing Body:	City of Homer				

Transfer Type:

- [x] Regular transfer
- [ ] Transfer with security interest
- [ ] Involuntary retransfer

OFFICE USE ONLY			
Complete Date:	6-3-2022	*Transaction #:*	100373776
Board Meeting Date:	6-28-2022	*License Years:*	22-23
Issue Date:		*BRE:*	KRS

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-01: Transfer License Application

Section 2 – Transferee Information

Enter information for the ***new*** applicant and/or location seeking to be licensed.

Licensee:	Bubble Bitches LLC				
Doing Business As:	The Twisted Goat				
Premises Address:	162 W. Pioneer Ave.				
City:	Homer	**State:**	AK	**ZIP:**	99603
Community Council:	N/A				

Mailing Address:	P.O. Box 2415				
City:	Homer	**State:**	AK	**ZIP:**	99603

Designated Licensee:	Josephine Whitby		
Contact Phone:	435-851-0976	**Business Phone:**	907-299-8801
Contact Email:	pinkmoon31@yahoo.com		

Seasonal License? Yes ☐ No ☑ If "Yes", write your six-month operating period: _____

Section 3 – Premises Information

Premises to be licensed is:

☑ an existing facility ☐ a new building ☐ a proposed building

The next two questions must be completed by beverage dispensary (including tourism) and package store applicants only:

What is the distance of the shortest pedestrian route from the public entrance of the building of your proposed premises to the outer boundaries of the nearest school grounds? Include the unit of measurement in your answer.

What is the distance of the shortest pedestrian route from the public entrance of the building of your proposed premises to the public entrance of the nearest church building? Include the unit of measurement in your answer.

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Alaska Alcoholic Beverage Control Board

Form AB-01: Transfer License Application

Section 4 – Sole Proprietor Ownership Information

This section must be completed by any sole proprietor who is applying for a license. Entities should skip to Section 5.
If more space is needed, please attach a separate sheet with the required information.
The following information must be completed for each licensee and each affiliate (spouse).

This individual is an: ☐ applicant ☐ affiliate

Name:					
Address:					
City:		**State:**		**ZIP:**	

This individual is an: ☐ applicant ☐ affiliate

Name:					
Address:					
City:		**State:**		**ZIP:**	

Section 5 – Entity Ownership Information

This section must be completed by any entity, including a corporation, limited liability company (LLC), partnership, or limited partnership, that is applying for a license. Sole proprietors should skip to Section 6.
If more space is needed, please attach a separate sheet with the required information.

- If the applicant is a **corporation**, the following information must be completed for each ***stockholder who owns 10% or more*** of the stock in the corporation, and for each ***president, vice-president, secretary,*** and ***managing officer***.
- If the applicant is a **limited liability organization**, the following information must be completed for each ***member with an ownership interest of 10% or more***, and for each ***manager***.
- If the applicant is a **partnership**, including a **limited partnership**, the following information must be completed for each ***partner with an interest of 10% or more***, and for each ***general partner***.

Entity Official:	Josephine Whitby				
Title(s):	Member	**Phone:**	435-851-0976	**% Owned:**	50
Address:	64513 Shelton Ave. West				
City:	Homer	**State:**	AK	**ZIP:**	99603

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
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Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-01: Transfer License Application

Entity Official:	Susan Malone				
Title(s):	Member	**Phone:**	907-399-7637	**% Owned:**	50
Address:	P.O. Box 2415				
City:	Homer	**State:**	AK	**ZIP:**	99603

Entity Official:					
Title(s):		**Phone:**		**% Owned:**	
Address:					
City:		**State:**		**ZIP:**	

Entity Official:					
Title(s):		**Phone:**		**% Owned:**	
Address:					
City:		**State:**		**ZIP:**	

This subsection must be completed by any applicant that is a corporation or LLC. Corporations and LLCs are required to be in good standing with the Alaska Division of Corporations (DOC) and have a registered agent who is an individual resident of the state of Alaska.

DOC Entity #:	10183520	**AK Formed Date:**	1/05/22	**Home State:**	AK
Registered Agent:	Josephine Whitby		**Agent's Phone:**	435-851-0976	
Agent's Mailing Address:	64513 Shelton Ave.				
City:	Homer	**State:**	AK	**ZIP:**	99603

Residency of Agent: Yes No

Is your corporation or LLC's registered agent an individual resident of the state of Alaska? ☒ ☐

Alcohol and Marijuana Control Office
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alcohol.licensing@alaska.gov
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Alaska Alcoholic Beverage Control Board

Form AB-01: Transfer License Application

Section 6 – Other Licenses

Ownership and financial interest in other alcoholic beverage businesses:	Yes	No
Does any representative or owner named as a transferee in this application have any direct or indirect financial interest in any other alcoholic beverage business that does business in or is licensed in Alaska?	☐	☒

If "Yes", disclose which individual(s) has the financial interest, what the type of business is, and if licensed in Alaska, which license number(s) and license type(s):

Section 7 – Authorization

Communication with AMCO staff:	Yes	No
Does any person other than a licensee named in this application have authority to discuss this license with AMCO staff?	☐	☒

If "Yes", disclose the name of the individual and the reason for this authorization:

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-01: Transfer License Application

Section 8 – Transferor Certifications

Additional copies of this page may be attached, as needed, for the controlling interest of the current licensee to be represented.

I declare under penalty of perjury that the undersigned represents a **controlling interest** of the current licensee. I additionally certify that I, as the current licensee (either the sole proprietor or the controlling interest of the currently licensed entity) have examined this application, approve of the transfer of this license, and find the information on this application to be true, correct, and complete.

Signature of transferor

Mary K. Vogl
Printed name of transferor

Subscribed and sworn to before me this 14th day of Feb, 2022.

Signature of Notary Public

Notary Public in and for the State of AK

My commission expires: 5-6-23

Signature of transferor

Evan J Vogl
Printed name of transferor

Subscribed and sworn to before me this 14th day of Feb, 2022.

Signature of Notary Public

Notary Public in and for the State of AK

My commission expires: 5-6-23

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Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-01: Transfer License Application

Section 9 – Transferee Certifications

Read each line below, and then sign your initials in the box to the right of each statement:	Initials
I certify that all proposed licensees (as defined in AS 04.11.260) and affiliates have been listed on this application.	
I certify that all proposed licensees have been listed with the Division of Corporations.	
I certify that I understand that providing a false statement on this form or any other form provided by AMCO is grounds for rejection or denial of this application or revocation of any license issued.	
I certify that all licensees, agents, and employees who sell or serve alcoholic beverages or check the identification of a patron will complete an approved alcohol server education course, if required by AS 04.21.025, and, while selling or serving alcoholic beverages, will carry or have available to show a current course card or a photocopy of the card certifying completion of approved alcohol server education course, if required by 3 AAC 304.465.	
I agree to provide all information required by the Alcoholic Beverage Control Board in support of this application.	

As an applicant for a liquor license, I declare under penalty of perjury that I have read and am familiar with AS 04 and 3 AAC 304, and that this application, including all accompanying schedules and statements, is true, correct, and complete.

Signature of transferee

Josephine Whitby
Printed name

Subscribed and sworn to before me this 4th day of March, 2022.

AMBER ANDERSON
My Commission Expires
NOTARY PUBLIC
May 6, 2023
STATE OF ALASKA

Signature of Notary Public

Notary Public in and for the State of AK.

My commission expires: 5-6-23

Alcohol and Marijuana Control Office
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Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-02: Premises Diagram

What is this form?

A detailed diagram of the proposed licensed premises is required for all liquor license applications, per AS 04.11.260 and 3 AAC 304.185. Your diagram must include dimensions and must show all entrances and boundaries of the premises, walls, bars, fixtures, and areas of storage, service, consumption, and manufacturing. If your proposed premises is located within a building or building complex that contains multiple businesses and/or tenants, please provide an additional page that clearly shows the location of your proposed premises within the building or building complex, along with the addresses and/or suite numbers of the other businesses and/or tenants within the building or building complex.

The second page of this form is not required. Blueprints, CAD drawings, or other clearly drawn and marked diagrams may be submitted in lieu of the second page of this form. The first page must still be completed, attached to, and submitted with any supplemental diagrams. An AMCO employee may require you to complete the second page of this form if additional documentation for your premises diagram is needed.

This form must be completed and submitted to AMCO's main office before any license application will be considered complete.

	Yes	No
I have attached blueprints, CAD drawings, or other supporting documents in addition to, or in lieu of, the second page of this form.	☑	☐

Section 1 – Establishment Information

Enter information for the business seeking to be licensed, as identified on the license application.

Licensee:	Bubble Bitches LLC	**License Number:**	3210		
License Type:	Restaurant/Eating Place				
Doing Business As:	The Twisted Goat				
Premises Address:	1162 W. Pioneer Ave.				
City:	Homer	**State:**	AK	**ZIP:**	99603

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
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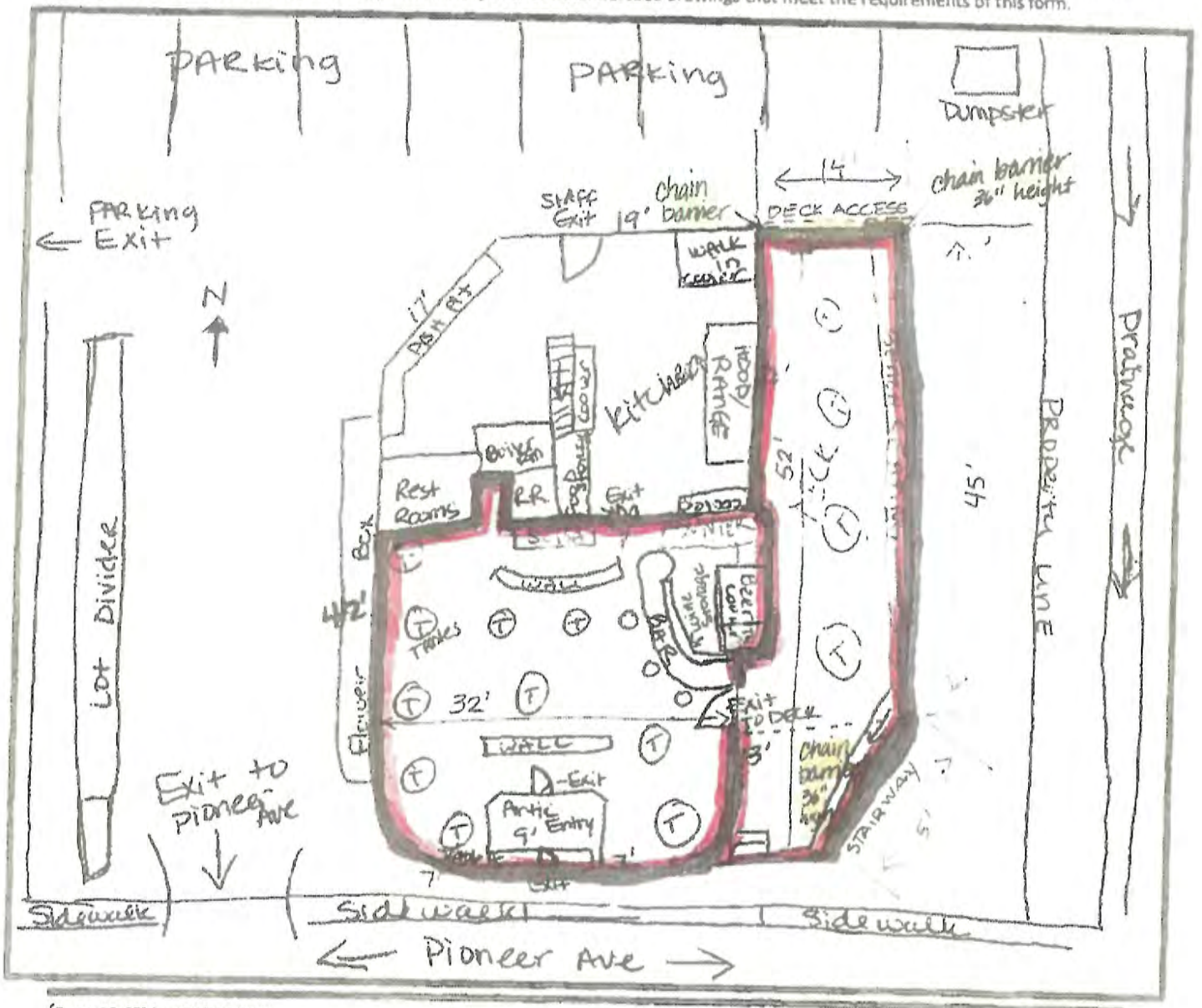
Alaska Alcoholic Beverage Control Board

Form AB-02: Premises Diagram

Section 2 – Detailed Premises Diagram

Clearly indicate the boundaries of the premises and the proposed licensed area within that property. Clearly indicate the interior layout of any enclosed areas on the proposed premises. Clearly identify all entrances and exits, walls, bars, and fixtures, and outline in red the perimeter of the areas designated for alcohol storage, service, and consumption. Include dimensions, cross-streets, and points of reference in your drawing. You may attach blueprints or other detailed drawings that meet the requirements of this form.



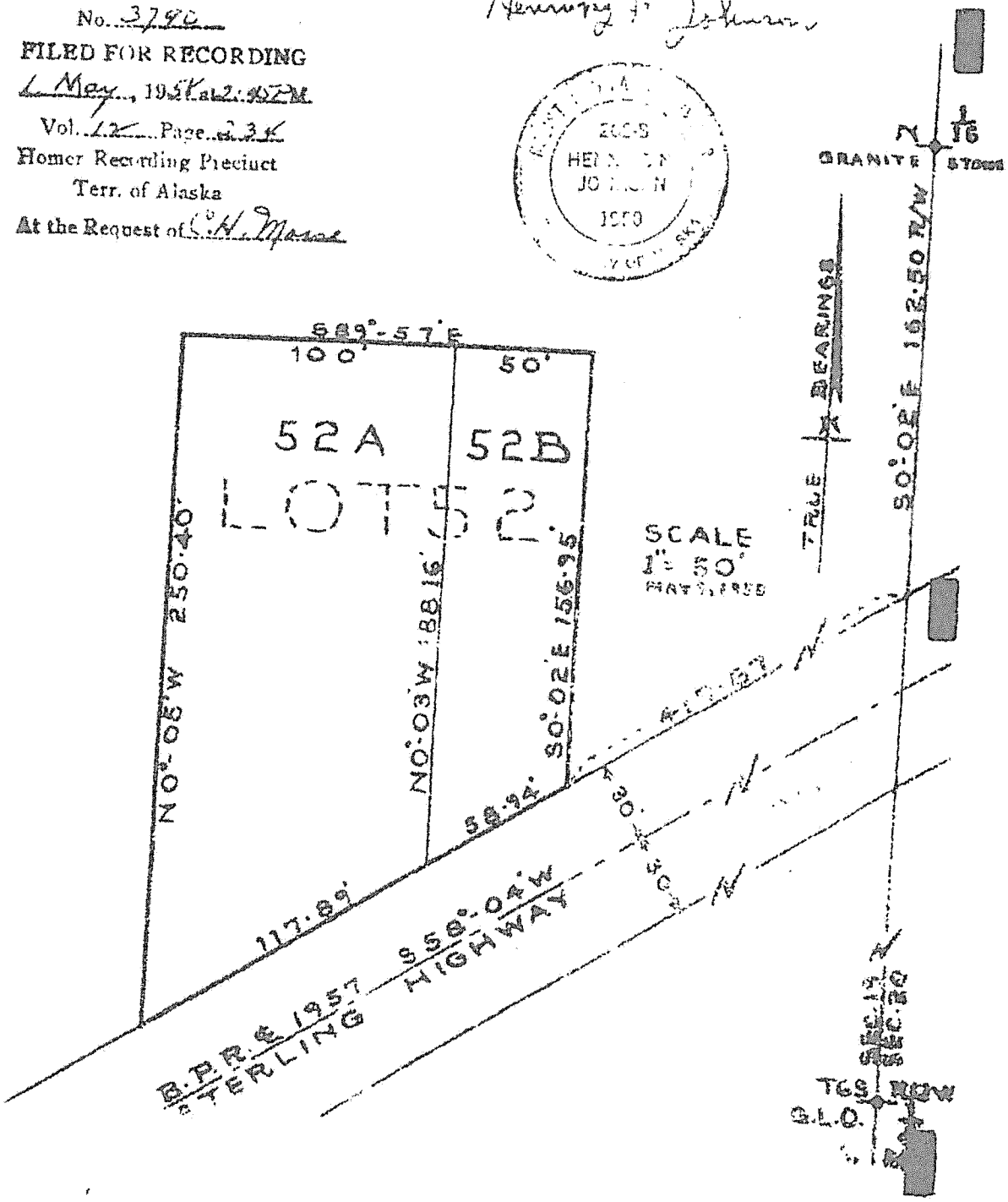
RESURVEY & SUBDIVISION LOT 52 BUNNELL'S SUBDIVISION
LOCATED IN E½ NE¼ SEC. 19 T6S R13W S.M.

234

This plat purports to show a closed survey of Lot 52 of Bunnell Subdivision, based on physical evidence of corners as originally surveyed by Fred Spaht. No overlaps or encroachments have resulted by this new survey. Small inconsistencies with plat of Bunnell Subdivision are due to errors of closure on said plat.

Henning & Johnson

No. 3780
FILED FOR RECORDING
4 May, 1954 at 2:30 PM
Vol. 12 Page 235
Homer Recording Precinct
Terr. of Alaska
At the Request of C. H. Mann



Geographic Information Systems
144 North Binkley Street, Soldotna, Alaska 99669

162 W Pioneer Ave Homer, AK 99603

Legend

- Mileposts
- City Limits
- Highways
- Major Roads
- Roads
  - Town Medium Volume
  - Town Low/Seasonal; Other
  - Proposed
- Parcels

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

0 0.01 0.02 Miles

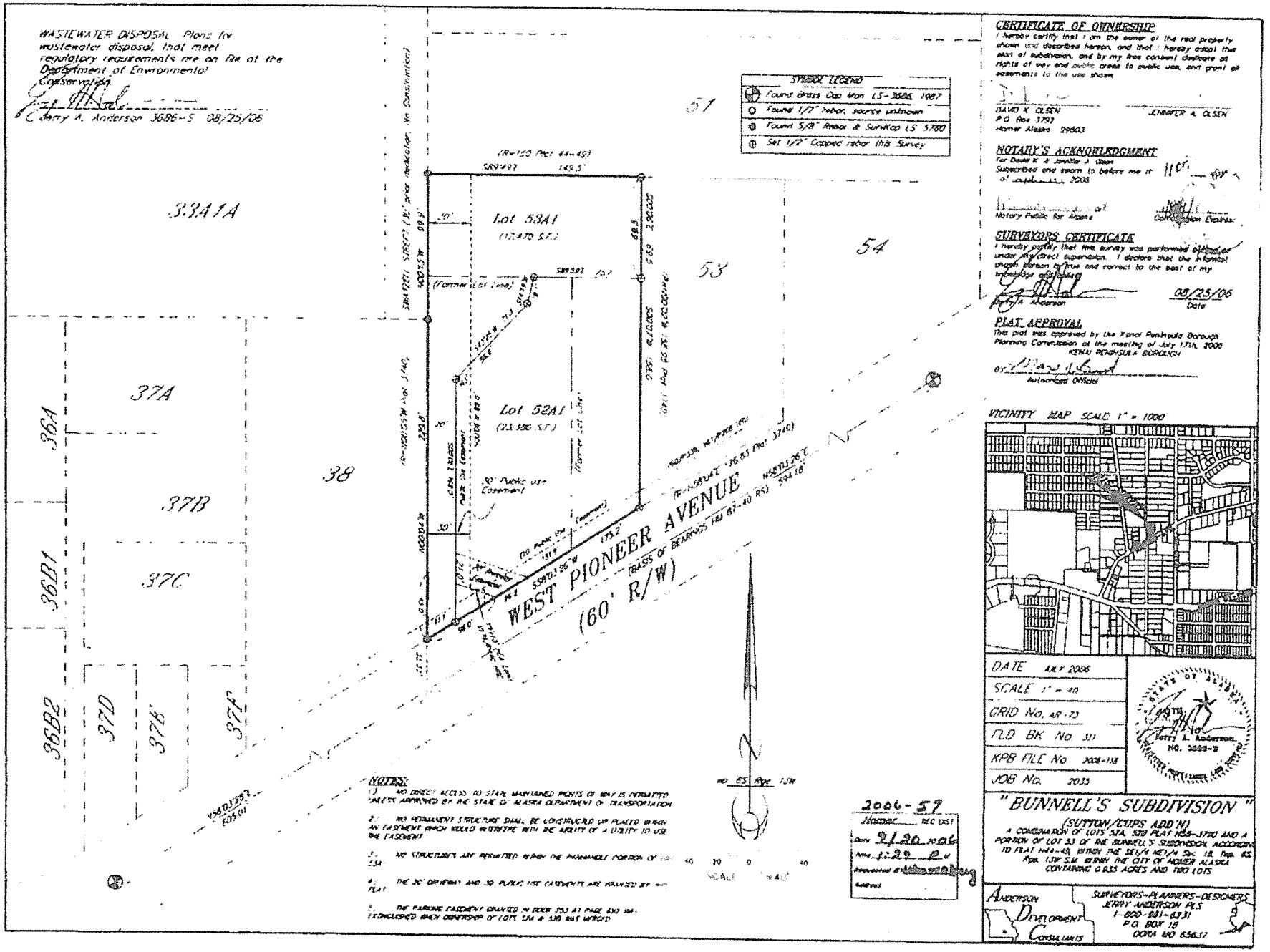
Coordinate System: NAD_1983_StatePlane_Alaska_4_FIPS_5004_Feet

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

Cafe Cups Restaurant

KPB NOTE: See PC Resolution 2009-30



907-269-0359

#3210
Incomp...ice.pdf

Bubble Bitches LLC. dba The Twisted Goat

Outdoor/Indoor Serving Security Plan

1. All minors must be accompanied by an adult (age over 21) while in the restricted area when any alcohol is being served/sold/consumed.
2. All new patrons are carded upon ordering alcohol.
3. All staff is trained in the identification of fake IDs.
4. A 36" wooden railing is around the outdoor servicing area.
5. Underaged persons will be monitored closely by our professionally trained alcohol servers.
6. Proper egress from the outdoor service area will always remain unobstructed.
7. ABC mandated posters as required by law are posted inside Twisted Goat and at the entrances of the outdoor seating area.
8. All entrances and exits will provide clear notice that NO ALCOHOL IS ALLOWED BEYOND THE OUTDOOR SEATING AREA.
9. Keeping outdoor seating area viable without any increased risk to minors exposed to alcohol WILL continue to be a part of our training for our staff.
10. All safety related operations for our current liquor service will additionally be enforced in the new service area.
11. Proper signage at points of entry indicating no minors without a parent or legal guardian will be posted.
12. All servers will closely monitor that only the guests that have been carded will have alcoholic beverages.
13. Our top priority continues in providing safety for all guests regarding the service of alcoholic beverages.
14. Servers will be present in the outdoor area to monitor consumption.

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-03: Restaurant Designation Permit Application

What is this form?

A restaurant designation permit application is required for a licensee desiring designation under 3 AAC 304.715 – 3 AAC 304.795 as a bona fide restaurant, hotel, or eating place for purposes of AS 04.16.010(c) or AS 04.16.049. Designation will be granted only to a holder of a beverage dispensary, club, recreational site, golf course, or restaurant or eating place license, and only if the requirements of 3 AAC 304.305, 3 AAC 304.725, and 3 AAC 304.745, as applicable, are met. A menu or expected menu listing the meals, including entrees prepared onsite and offered to patrons, and copy of the DEC Food Service Permit (or corresponding DHHS documentation for licenses located in the Municipality of Anchorage) must accompany this form. Applicants should review AS 04.16.049 – AS 04.16.052 and 3 AAC 304.715 – 3 AAC 304.795. All fields of this form must be completed. The required $50 permit fee may be made by credit card, check, or money order.

Section 1 – Establishment Information

Enter information for licensed establishment.

Licensee:	Bubble Bitches LLC		
License Type:	Restaurant/Eating Place	License Number:	3210
Doing Business As:	The Twisted Goat		
Premises Address:	162 W. Pioneer Ave.		
City:	Homer	State: AK	ZIP: 99603
Contact Name:	Josephine Whitby	Contact Phone:	435-851-0976

Section 2 – Type of Designation Requested

This application is for the request of designation as a bona fide restaurant, hotel, or eating place for purposes of AS 04.16.010(c) or AS 04.16.049, and for the request of the following designation(s) (check all that apply):

1. ☐ **Dining after standard closing hours:** AS 04.16.010(c)
2. ☑ **Dining by persons 16 – 20 years of age:** AS 04.16.049(a)(2)
3. ☑ **Dining by persons under the age of 16 years, accompanied by a person over the age of 21:** AS 04.16.049(a)(3)
4. ☑ **Employment for persons 16 or 17 years of age:** AS 04.16.049(c)
   NOTE: Under AS 04.16.049(d), this permit is not required to employ a person 18 - 20 years of age.

OFFICE USE ONLY			
Transaction #:	100373776	*Initials:*	

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-03: Restaurant Designation Permit Application

Section 3 – Minor Access

Review AS 04.16.049(a)(2); AS 04.16.049(a)(3); AS 04.16.049(c)

List where within the premises minors are anticipated to have access in the course of either dining or employment as designated in Section 2. (Example: Minors will only be allowed in the dining area. OR Minors will only be employed and present in the Kitchen.)

Minors will only be allowed in designated dining areas. Hiring policies are that all dining staff shall be TAP trained and legal serving age. Minors shall only be employed in the Kitchen areas and shall not be allowed access to dining areas.

Describe the policies, practices and procedures that will be in place to ensure that minors do not gain access to alcohol while dining or employed at your premises.

All dining areas and all access points are always in full view of all staff. All outside dining access points have chain barriers at 36" height with directional signage for guest entry through main doors and "No Alcohol Beyond THis Point". Non-entry points have existing rail barriers.
House policies include mandatory TAP training for all dining area staff.

Is an owner, manager, or assistant manager who is 21 years of age or older always present on the premises during business hours? Yes ☑ No ☐

Section 4 – DEC Food Service Permit

Per 3 AAC 304.910 for an establishment to qualify as a Bona Fide Restaurant, a Food Service Permit or (for licenses within the Municipality of Anchorage) corresponding Department of Health and Human Services documentation is required.

Please follow this link to the DEC Food Safety Website: http://dec.alaska.gov/eh/fss/food/
Please follow this link to the Municipality Food Safety Website:
http://www.muni.org/Departments/health/Admin/environment/FSS/Pages/fssfood.aspx

IF you are unable to certify the below statement, please discuss the matter with the AMCO office: Initials

I have attached a copy of the current food service permit for this premises OR the plan review approval. 

**Please note, if a plan review approval is submitted, a final permit will be required before finalization of any permit or license application.*

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-03: Restaurant Designation Permit Application

Section 5 – Hours of Operation

Review AS 04.16.010(c).

Enter all hours that your establishment intends to be open. Include variances in weekend/weekday hours, and indicate am/pm:

7 days a week 12pm - 10pm

Section 6 – Entertainment & Service

Review AS 04.11.100(g)(2)

Are any forms of entertainment offered or available within the licensed business or within the proposed licensed premises?

Yes ☐ No ☑

If "Yes", describe the entertainment offered or available and the hours in which the entertainment may occur:

Food and beverage service offered or anticipated is:

☑ table service ☐ buffet service ☐ counter service ☐ other

If "other", describe the manner of food and beverage service offered or anticipated:

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-03: Restaurant Designation Permit Application

Section 7 – Certifications and Approvals

Read each line below, and then sign your initials in the box to the right of each statement: Initials

There are tables or counters at my establishment for consuming food in a dining area on the premises. [JW]

I have included with this form a menu, or an expected menu, listing the meals to be offered to patrons. This menu includes entrees that are regularly sold and prepared by the licensee at the licensed premises. [JW]

I certify that the license for which I am requesting designation is either a beverage dispensary, club, recreational site, golf course, or restaurant or eating place license. [JW]

I have included with this application a copy of the most recent AB-02 or AB-14 for the premises to be permitted. [JW]
(AB-03 applications that accompany a new or transfer license application will not be required to submit an additional copy of their premises diagram.)

I declare under penalty of perjury that this form, including all attachments and accompanying schedules and statements, is true, correct, and complete.

Signature of licensee

Joseph in Whitby
Printed name of licensee

Signature of Notary Public

Notary Public in and for the State of AK.

My commission expires: 5-6-23

AMBER ANDERSON
My Commission Expires
NOTARY PUBLIC
May 6, 2023
STATE OF ALASKA

Subscribed and sworn to before me this 4th day of March, 2022

Local Government Review (to be completed by an appropriate local government official): Approved ☐ Denied ☐

Signature of local government official

Date

Printed name of local government official

Title

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
alcohol.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Alcoholic Beverage Control Board

Form AB-03: Restaurant Designation Permit Application

AMCO Enforcement Review: Enforcement Recommendation: Approve ☐ Deny ☐

Signature of AMCO Enforcement Supervisor

Printed name of AMCO Enforcement Supervisor

Date

Enforcement Recommendations:

AMCO Director Review: Approved ☐ Denied ☐

Signature of AMCO Director

Printed name of AMCO Director

Date

Limitations:

THE TWISTED GOAT

starters

CRANBERRY PISTACHIOS GOAT CHEESES BALLS	16
PESTO PARMESEAN MEATBALLS	16
STUFFED ROASTED PEPPERS	12
CHARCUTERIE BOARD	20
FRIED PICKLES	8
SOUP	6
OYSTERS	12/16

main course

PASTA	22/28
RIB EYE STEAK	28
FISH N CHIPS	20
CIOPPINO	28
MAC N CHEESE	18
FRIED CHICKEN DINNER	22

salads

CAESAR	14
ROASTED BEET	14
SOUTH WESTERN	14
HOUSE	10

pizzas $24

BEETNIK • OIL/MOZZ/ROASTED BEETS/ARUGULA/GOAT CHZ/PESTO SWIRL

FORAGER • OIL/MOZZ/ARUGULA/MUSHROOMS/ONIONS/ FRESH GARLIC/PARMESEAN

SUNRISE • WHITE SAUCE/MOZZ/CHICKEN/BACON/

THE GOAT • OIL/MOZZ/ARUGULA/FREH GARLIC /APPLES/GOAT CHZ

C.B.R. • OIL/MOZZ/CHICKEN/BACON/RED PEPPERS/GREEN ONIONS/RANCH

AUGUSTINE • CHIPOTLE RED/MOZZ/CHORIZO/RED PEPPERS/SERRANO PEPPERS/SRIACCHIA DRIZZLE

FUN GUY • OIL/MOZZ/FRESH GARLIC/CRIMINI/BUTTON/ PORTABELLO MUSHROOMS/

SHANGRILA • MASALASAUCE/TUMERIC CHICKEN/SHREDDED CARROTS/GREEN ONIONS/INDIAN PICKLE CREAM CHZ

BBQ CHICKEN • WHITE SAUCE/MOZZ/CHICKEN/BACON BLUE CHZ/ONIONS/GREEN ONINS/BBQ SAUCE DRIZZLE

KANALOA • RED SAUCE/MOZZ/CANADIAN BACON/SERRANO PEPPERS/FINISHED WITH A PASSION FRUIT CREMA

HAWAIIN • RED SAUCE/MOZZ/CANADIAN BACON/PINEAPPLE

MEEAT LOVERS • RED/MOZZ/PEPPERONI/SAUSAGE/BACON/ CANADIAN BACON/CHORIZO

COMBINATION • RED/MOZZ/PEPPERONI/ITALIAN SAUSAGE BLACK OLIVES/MUSHROOMS/ONI /BELL PEPPERS

Alaska Food Code
Establishment Permit

Division of Environmental Health
Food Safety & Sanitation Program

Permit Number:	12927
Issued to:	**BUBBLE BITCHES, LLC**
For:	**The Twisted Goat**
For Operation of:	**FF-1 Food Service**
Located at:	**162 W Pioneer AVE Homer, AK 99603**

This permit, issued under the provisions of 18 AAC 31, is valid until the noted expiration date or unless suspended or revoked by the department.

This permit is not transferable for change of ownership, facility location, or type of operation. It must be posted in plain view in the establishment and is the property of the State of Alaska.

Expiration Date:

Program Manager

If you have questions or concerns regarding safe food handling practices call toll free:

1-87-SAFE-FOOD

(in Anchorage call 334-2560)

STATE OF ALASKA Division of Environmental Health

Invoice #3602

REMIT TO:
Environmental Conservation
Environmental Health
555 Cordova Street
Anchorage, AK 99501

TYPE CODE
FF-1

Facility #

CONTACT NAME:	Josephine Whitby	**ADDRESS:**	PO Box 2415
DBA:	The Twisted Goat	**CITY:**	Homer
PHONE:	907-299-8801	**STATE, ZIP:**	AK, 99603
EMAIL:	pinkmoon31@yahoo.com		

FSS Contact Name: Heidi Isernhagen

Phone: 907-262-3416

APPLICANT: IMPORTANT

1. **Make check payable to: State of Alaska**
2. **Reference invoice number and facility number on your check.**

Date Payment Received:

PAID: $0.00

AMOUNT DUE: $490.00

NOTE: Payment due by 3/15/2022 2:15:24 PM. Plan review will not begin until payment is received.

Date Issued: 3/15/2022

TOTAL FEES

ANNUAL FEE	$0.00
Less 50% Discount	$0.00
SUBTOTAL	$0.00
PLAN REVIEW FEE	$0.00
CHANGE OF OWNERSHIP FEE	$490.00
OTHER:	$0.00
TOTAL FEES	$490.00

Alaska Department of Environmental Conservation

Sale 508040

Items

Description	Applicant	Identifier	Quantity	Unit Price	Total
FS:FF1 Food Service	Josephine Whitby Twisted Goat Change of ownership Facility #9438	12927	1	490.00	490.00

Payments

Receipt #	Date	Remitter	Contact	Method	Amount
QXKXVXUX	3/18/2022 2:47 PM	Josephine Whitby Twisted Goat	pinkmoon31@yahoo.com 435-851-0976	Credit Card (Terminal) Account ******6500 Auth Code 06722D	490.00

Total

Items $	490.00
Payments $	490.00
Amount Due $	0.00

Phone 1 (907) 269-0484
Fax 1 (907) 465-5070
TDD 1 (800) 770-8973

Mailing Address Department of Environmental Conservation
P.O. Box 111800
Juneau, AK 99811-1800

Website https://dec.alaska.gov/
Email dec.adec.userfees@alaska.gov

City of Homer
www.cityofhomer-ak.gov

Police Department
625 Grubstake Avenue
Homer, Alaska 99603
police@cityofhomer-ak.gov
(p) 907-235-3150
(f) 907-235-3151/ 907-226-3009

Memorandum

TO: MELISSA JACOBSEN, MMC, CITY CLERK

CC: LISA LINEGAR, COMMUNICATIONS SUPERVISOR

FROM: MARK ROBL, POLICE CHIEF

DATE: JUNE 7, 2022

SUBJECT: LIQUOR LICENSE TRANSFER APPLICATION FOR TWISTED GOAT – No objection

The Homer Police Department has no objection to the Alcohol and Marijuana Control Office of a Liquor License Transfer Application within the City of Homer for the following business:

License Type: Package Store
License #: 4162
DBA Name: Oaken Keg #1832
Service Location: 90 Sterling Highway
Homer, AK 99603
Licensee: Safeway, Inc.
Contact Person: Cody Perdu

City of Homer
www.cityofhomer-ak.gov

Police Department
625 Grubstake Avenue
Homer, Alaska 99603
police@cityofhomer-ak.gov
(p) 907-235-3150
(f) 907-235-3151/ 907-226-3009

Memorandum

TO: MELISSA JACOBSEN, MMC, CITY CLERK

CC: LISA LINEGAR, COMMUNICATIONS SUPERVISOR

FROM: MARK ROBL, POLICE CHIEF

DATE: JUNE 7, 2022

SUBJECT: LIQUOR LICENSE TRANSFER APPLICATION FOR TWISTED GOAT – No objection

The Homer Police Department has no objection to the Alcohol and Marijuana Control Office of a Liquor License Transfer Application within the City of Homer for the following business:

License Type: Restaurant/Eating Place
License #: 3210
Service Location: 162 W. Pioneer Ave.
Homer, AK 99603

Transferor: Volco, LLC
Doing Business As: Little Mermaid

Transferee: Bubble Bitches, LLC
Doing Business As: The Twisted Goat

Office of the Borough Clerk
144 North Binkley Street, Soldotna, Alaska 99669 • (907) 714-2160 • (907) 714-2388 Fax

Johni Blankenship, MMC
Borough Clerk

5/19/2022

Sent via email: clerk@ci.homer.ak.us

Homer City Hall
City of Homer Clerk

RE: Non-Objection of Application

Licensee/Applicant	:	Safeway Inc.
Business Name	:	Safeway - Oaken Keg #1832
License Type	:	Package Store
License Location	:	90 Sterling Highway, Homer, AK 99603, City of Homer
License No.	:	4162
Application Type	:	License Renewal

Dear Ms. Jacobsen,

This serves to advise that the Kenai Peninsula Borough has reviewed the above referenced application and has no objection.

Should you have any questions, or need additional information, please do not hesitate to let us know.

Sincerely,

Johni Blankenship, MMC
Borough Clerk

JB/JS

Encl.

cc: robert.gordon@safeway.com;

ORDINANCE REFERENCE SHEET
2022 ORDINANCE
ORDINANCE 22-31

An Ordinance of the City Council of Homer, Alaska Amending Homer City Code Chapter 21.93 Administrative Appeals to Clarify General Appeal Procedures and Related Matters.

Sponsor: City Clerk

1. City Council Regular Meeting June 13, 2022 Introduction

   Memorandum 22-099 from City Clerk as backup.
   Memorandum 22-100 from City Planner as backup.

CITY OF HOMER
HOMER, ALASKA

City Clerk

ORDINANCE 22-31

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING HOMER CITY CODE CHAPTER 21.93 ADMINISTRATIVE APPEALS TO CLARIFY GENERAL APPEAL PROCEDURES AND RELATED MATTERS.

WHEREAS, Ordinance 22-44(S) was adopted on August 9, 2021 and amended Homer City Code to establish that administrative appeals from certain final City Planning decisions shall be filed before a hearing officer; and

WHEREAS, The amendments in this ordinance further clarify the appeal process.

NOW THEREFORE THE CITY OF HOMER ORDAINS

Section 1. Homer City Code Chapter 21.93.020 Decisions subject to appeal is hereby amended as follows:

21.93.020 Decisions subject to appeal.

a. The following final decisions made under this title by the City Manager, City Planner, City Planner's designee may be appealed by a person with standing:

1. Approval or denial of a zoning permit.
2. Approval or denial of a sign permit.
3. Approval or denial of any other permit that is within the authority of the City Planner to approve or deny.
4. An enforcement order issued under HCC 21.90.060.
~~5. Any other decision that is expressly made appealable to the Commission by other provisions of the Homer Zoning Code.~~

b. The following final decisions of the Commission may be appealed by a person with standing:

1. Grant or denial of a conditional use permit.
2. Grant or denial of a variance.
3. Grant or denial of formal recognition of a nonconforming use or structure, or a decision terminating a nonconforming use or structure.
4. Grant or denial of a conditional fence permit.
5. A decision by the Commission in a matter appealed to the Commission under HCC 21.93.020.

~~6. Any other final decision that is expressly made appealable to a hearing officer by other provisions of the code.~~

Section 2. Homer City Code Chapter 21.93.100 General appeals procedure is hereby amended as follows:

21.93.100 General appeals procedure.

a. A hearing officer shall be appointed in accordance with HCC 21.91.100.

b. The City Clerk shall notify all parties by mail of the appointed hearing officer. All parties shall have ten days from the date of mailing of the notice to object in writing to the hearing officer based upon conflicts of interest, personal bias or ex parte contacts. Failure to file an objection to the hearing officer within the ten days shall waive any objection to the hearing officer.

~~b~~ **c**. All appeals must be heard and a decision rendered within 90 days after the appeal record has been prepared. The hearing officer may, for good cause shown, extend the time for hearing.

d. The hearing officer will hold a preconference hearing to develop a briefing schedule, set a hearing date, and address other matters as needed related to the appeal hearing.

~~c~~ **e**. The appellant, appellee, owner of the property that is the subject of the action or determination, and their representatives shall be provided not less than 15 days' written notice of the time and place of the appeal hearing.

~~d. The City Clerk shall identify the hearing officer in the notice of hearing. All parties shall have five days from the date of the notice to object to the hearing officer based upon conflicts of interest, personal bias or ex parte contacts. Failure to file an objection to the hearing officer within the 10 days shall waive any objection to the hearing officer.~~

~~e~~ **f**. A notice of hearing shall be published at least once during the calendar week prior to the appeal hearing date and the notice shall contain:

1. A brief description of the proposal on which the public body is to act;
2. A legal or common description of the property involved and a street address;
3. Date, time and place of the public hearing;
4. A statement that the complete proposal is available for review, specifying the particular City office where the proposal may be examined.

Two weeks prior to the appeal hearing, the notice of hearing discussed in this subsection shall be mailed to owners of record on the Borough Assessor's records of real property within a 300-foot periphery of the site that is the subject of the proposed action.

~~f~~ **g**. An electronic recording shall be kept of the entire proceeding. The electronic recording shall be preserved for one year unless required for further appeals. No recording or minutes shall be kept of deliberations that are not open to the public.

~~21.93.530 Prehearing conference.~~
~~The hearing officer will hold a preconference hearing to develop a briefing schedule, set a hearing date, and address other matters as needed related to the appeal hearing.~~

Section 3. Homer City Code 21.93.550 Hearing officer decision is hereby amended as follows:

21.93.550 Hearing officer decision.

The hearing officer may affirm or reverse the decision of the lower administrative body in whole or in part. A decision affirming, reversing, or modifying the decision appealed from shall be in a form that finally disposes of the case on appeal, except where the case is remanded for further proceedings. **A decision by the hearing officer is a final administrative decision appealable under Homer City Code 21.91.130 and is not subject to reconsideration.**

Section 4. Homer City Code 21.93.710 Ex parte communication prohibited is hereby amended as follows:

21.93.710 Ex parte communication prohibited.

a. The hearing officer appointed to review a decision issued by the Commission shall not have ex parte communication with any person. “Ex parte communication” means to communicate, directly or indirectly, with the appellant, other parties or persons affected by the appeal, or members of the public concerning an appeal or issues specifically presented in the notice of appeal, either before the appeal hearing or during any period of time the matter is under consideration ~~or subject to reconsideration~~, without notice and opportunity for all parties to participate in the communication.

b. This section does not prohibit:

1. Communications between municipal staff and Commission or the hearing officer where:

a. Such staff members are not themselves parties to the appeal; and

b. Such communications do not furnish, augment, diminish, or modify the evidence in the record on appeal.

2. Communications between the Commission and its legal counsel.

c. *Repealed by Ord. 21-44(S).*

d. *Repealed by Ord. 21-44(S).*

e. *Repealed by Ord. 21-44(S).*

f. It is a violation, subject to penalties and other enforcement remedies under this title:

1. For any person to knowingly have or attempt to have ex parte communication with a hearing officer in violation of subsection (a) of this section.

2. For the hearing officer to knowingly receive an ex parte communication in violation of subsection (a) of this section.

3. For the hearing examiner to knowingly fail to place on the record any matter that is an ex parte contact.

Section 5. This Ordinance is of a permanent and general character and shall be included in the City Code.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA, this __ day of_____, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

YES:
NO:
ABSTAIN:
ABSENT:

First Reading:
Public Hearing:
Second Reading:
Effective Date:

City of Homer
www.cityofhomer-ak.gov

Office of the City Clerk
491 East Pioneer Avenue
Homer, Alaska 99603
clerk@cityofhomer-ak.gov
(p) 907-235-3130
(f) 907-235-3143

Memorandum 22-099

TO: MAYOR CASTNER AND HOMER CITY COUNCIL

FROM: MELISSA JACOBSEN, MMC, CITY CLERK

DATE: JUNE 2, 2022

SUBJECT: AMENDMENTS TO HOMER CITY CODE CHAPTER 21.93

Homer City Council amended Homer City Code Chapter 21.93 to establish that all appeals of Planning and Zoning matters will be heard by a hearing officer with the adoption of Ordinance 21-44(S).

After working with this updated code, further edits are needed to better clarify the appeal process. The edits are related to:

- Removing ambiguous language regarding decisions subject to appeal,
- Noticing parties of the assignment of a hearing officer,
- Moving the information of the prehearing conference from its own section to the general appeals procedure section,
- Adding language to clarify that the decision of the hearing officer is final and not subject to reconsideration, and
- Removing reference to the matter being subject to reconsideration under ex parte communication prohibited.

Recommendation: Adopt Ordinance 22-31.

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

Memorandum 22-100 (PL 22-06)

TO: MAYOR CASTNER AND HOMER CITY COUNCIL

FROM: RICK ABBOUD, AICP, CITY PLANNER

DATE: MAY 25, 2022

SUBJECT: AMENDMENTS TO CHAPTER 21.93 ADMINISTRATIVE APPEALS

After gaining experience with the recently amended appeal code, the City Clerk has submitted some amendments to better clarify the process.

The Planning Commission reviewed the edits and held a public hearing on the item at their meeting on May 18, 2022. No one from the public offered testimony at the hearing. With six Commissioners present, they Commission voted with unanimous support to recommend the draft ordinance be adopted by the Homer City Council.

Attachments:

Planning Staff Report 22-36 w/attachment
Planning Commission Minutes Excerpt

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

Staff Report PL 22-36

TO: HOMER PLANNING COMMISSION
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: MAY 18, 2022
SUBJECT: APPEAL CODE

Introduction

After gaining some experience with the new appeal code, the City Clerk has some clean-up proposed for the language found in Title 21.

Analysis

The City Clerk has provided a memo regarding the proposed changes to the appeal code. The Planning Commission is required to make a recommendation on all proposed amendments to Title 21.

Staff Recommendation

Review the proposed amendment, hold public hearing, and make recommendation to the City Council for adoption.

Attachments

City Clerk memo
Proposed ordinance

City of Homer
www.cityofhomer-ak.gov

Office of the City Clerk
491 East Pioneer Avenue
Homer, Alaska 99603
clerk@cityofhomer-ak.gov
(p) 907-235-3130
(f) 907-235-3143

Memorandum

TO: CHAIR SMITH AND PLANNING COMMISSION

FROM: MELISSA JACOBSEN, MMC, CITY CLERK

DATE: MAY 11, 2022

SUBJECT: AMENDMENTS TO HOMER CITY CODE CHAPTER 21.93

Homer City Council amended Homer City Code Chapter 21.93 to establish that all appeals of Planning and Zoning matters will be heard by a hearing officer with the adoption of Ordinance 21-44(S).

After working with this updated code further edits are needed to better clarify the appeal process. The edits are related to:

- Removing ambiguous language regarding decisions subject to appeal,
- Noticing parties of the assignment of a hearing officer,
- Moving the information of the prehearing conference from its own section to the general appeals procedure section,
- Adding language to clarify that the decision of the hearing officer is final and not subject to reconsideration, and
- Removing reference to the matter being subject to reconsideration under ex parte communication prohibited.

Recommendation: Conduct a public hearing and forward to City Council with a recommendation to adopt the ordinance.

A. Staff Report 22-35, City Planner's Report

City Planner Abboud provided a summary of Staff Report 22-35. At his request for a volunteer, no Commissioners stepped forward to give the PC report to City Council at their May 23rd meeting. Chair Smith will provide a written report to the Clerk.

Commissioner Venuti commented on attending a webinar regarding Tiny Homes.

PUBLIC HEARINGS

A. Staff Report 22-36, An Ordinance of the City Council of Homer, Alaska, Amending Homer City Code 21.93 Administrative Appeals. City Clerk.

Chair Smith introduced the item by reading the title. He invited City Planner Abboud to speak to the memoranda provided.

City Planner Abboud spoke to Staff Report 22-36, highlighting the following:

- After the City Clerk has reviewed the revisions it was found that there were items that needed minor clarifications and procedures.
- Review of the draft ordinance which was provided in the Supplemental Packet

Chair Smith opened the public hearing, after verifying with the Clerk that there was no members of the public present on Zoom or present in the Chambers he closed the public hearing. He opened the floor to questions from the commission.

City Planner Abboud provided clarification on the date for the Public Hearing on the Rezone for Commissioner Barnwell in the previous item on the agenda.

Chair Smith commented on the action removing the responsibility from the Commission.

Chair Smith requested a motion and second.

HIGHLAND/VENUTI MOVED TO ADOPT STAFF REPORT 22-36 AND FORWARD A RECOMMENDATION THAT CITY COUNCIL APPROVE THE ORDINANCE AMENDING HOMER CITY CODE 21.93 ADMINISTRATIVE APPEALS TO CLARIFY GENERAL APPEAL PROCEDURES AND RELATED MATTERS.

There was no discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT.

Motion carried.

B. Staff Report 22-37, An Ordinance of the City Council of Homer, Alaska, Amending Title 21.03.040 Definitions Used in Zoning Code, Title 21.44 Slopes, Title 21.50.020 Site Development Standards - Level One and Title 21.50.020 Site Development Standards - Level Two Redefining Coastal Bluff and Setback Therefrom. Planning Commission.

Chair Smith introduced the item by reading of the title and deferred to City Planner Abboud.

City Planner Abboud provided a summary of Staff Report 22-37. He highlighted the following points:

- Review of the draft ordinance which was provided in the Supplemental Packet which provided the documentation that recommended changes fit well within the Comprehensive Plan guidelines

ORDINANCE REFERENCE SHEET
2022 ORDINANCE
ORDINANCE 22-32

An Ordinance of the City Council of Homer, Alaska Amending Title 21.03.040 Definitions used in Zoning Code, Title 21.44 Slopes, Title 21.50.020 Site Development Standards – Level One and Title 21.50.020 Site Development Standards – Level Two.

Sponsor: Planning Commission

1. City Council Regular Meeting June 13, 2022 Introduction

   Memorandum 22-101 from City Planner as backup.

CITY OF HOMER
HOMER, ALASKA

Planning Commission

ORDINANCE 22-32

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING TITLE 21.03.040 DEFINITIONS USED IN ZONING CODE, TITLE 21.44 SLOPES, TITLE 21.50.020 SITE DEVELOPMENT STANDARDS – LEVEL ONE, AND TITLE 21.50.020 SITE DEVELOPMENT STANDARDS – LEVEL TWO.

WHEREAS, The State of Alaska Division of Geological & Geophysical Surveys (DGGS) provided a study titled Coastal Bluff Stability Assessment for Homer Alaska; and

WHEREAS, The study provided information and technical assistance to improve regulation of the coastline susceptible to erosion; and

WHEREAS, The 2018 Homer Comprehensive Plan concludes that new strategies will be needed to protect the environment as the community grows – particularly regarding drainage, erosion, open space, [and] climate change; and

WHEREAS, The 2018 Homer Comprehensive Plan identifies that a need exists for the community to take seriously the issue of allowing ongoing shoreline development; and

WHEREAS, The Homer Planning Commission has considered the recommendations for coastal bluff definition and coastal setback policies developed by the DGGS study; and

WHEREAS, The Homer Planning Commission has found that the proposed amendments provide better measures of safety for those developing in proximity to the coastline than current code.

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. Homer City Code Chapter 21.03.040 Definitions used in zoning code is hereby amended to read as follows:

"Coastal ~~bluff~~**edge**" means ~~a bluff whose toe is~~ **the seaward extent of a relatively flat land where a slope break or scarp occurs that is adjacent and** within 300 feet of the mean high water line of Kachemak Bay. **The chosen coastal edge must represent the seaward extent of land that is neither part of a previous landslide nor a bench on a slope.**

Section 2. Homer City Code Chapter 21.44 Slopes is hereby amended to read as follows:

Chapter 21.44 SLOPES **& COASTAL DEVELOPMENT**

21.44.010 Purpose and intent.

This chapter regulates development activity and structures in areas affected by slopes, bluffs, ~~coastal bluffs~~, ~~and~~ ravines, **and the coastal edge,** and provides the means for additional review and protection to encourage safe and orderly growth to promote the health, welfare and safety of Homer residents.

21.44.020 Applicability.

a. This chapter applies to all development activity that disturbs the existing land surface, including without limitation clearing, grading, excavating and filling in areas that are subject to any of the following conditions:

1. Lots with average slopes 15 percent or greater, bluffs, coastal ~~bluffs~~ **edge** and ravines;

2. Located within 40 feet of the top or within 15 feet of the toe of a steep slope, bluff, coastal ~~bluff~~ **edge** or ravine; and

3. Any other location where the City Engineer determines that adverse conditions associated with slope stability, erosion or sedimentation are present.

b. This chapter imposes regulations and standards in addition to the requirements of the underlying zoning district(s). [Ord. 08-29, 2008].

21.44.030 Slope development standards.

The following standards apply to all development activity on a site described in HCC 21.44.020:

a. No development activity, including clearing and grading, may occur before the issuance of a zoning permit under Chapter 21.70 HCC.

b. Area of Development.

1. Except where the City Engineer approves a site plan under HCC 21.44.050 that provides for a larger area of development, the area of development on a lot with an average slope:

a. Of 15 to 30 percent shall not exceed 25 percent of the total lot area.

b. Greater than 30 percent but less than 45 percent shall not exceed 10 percent of the total lot area.

2. The area of development on a lot with an average slope of 45 percent or greater shall not exceed the area of development described in a site plan approved by the City Engineer under HCC 21.44.050.

c. Setbacks. Subject to the exceptions to setback requirements in HCC 21.44.040, all development activity is subject to the following setback requirements:

1. No structure may be closer to the top of a ravine, steep slope or ~~**noncoastal**~~ bluff than the lesser of:

a. Forty feet; or

b. One-third of the height of the bluff or steep slope, but not less than 15 feet.

2. No structure may be closer than 15 feet to the toe of a bluff ~~**other than a coastal bluff**~~.

3.~~ No structure may be closer than 40 feet to the top of a coastal bluff and closer than 15 feet to the toe of a coastal bluff.~~ **Structures shall be setback 40 feet from the coastal edge starting at the eastern extent of the City of Homer, adjacent to Kachemak Bay extending to the north-south Section Line dividing Sections 19 & 24 Township 6 South Range 14 West Seward Meridian, and excluding all property South of Mile Post 175 of the Sterling Highway. All structures west of the section line shall be setback 60 foot from the coastal edge. No structure may be placed closer than 15 feet from the toe of a coastal edge.**

d. Natural Drainage. The site design and development activity shall not restrict natural drainage patterns, except as provided in this subsection.

1. To the maximum extent feasible, the natural surface drainage patterns unique to the topography and vegetation of the site shall be preserved. Natural surface drainage patterns may be modified only pursuant to a site plan approved by the City Engineer under HCC 21.44.050, and upon a showing that there will be no significant adverse environmental impacts on the site or on adjacent properties. If natural drainage patterns are modified, appropriate soil stabilization techniques shall be employed.

2. The site shall be graded as necessary to ensure that drainage flows away from all structures for a distance of at least 10 feet, especially where building pads are cut into hillsides.

3. The development activity shall not cause an adverse effect on adjacent land and surrounding drainage patterns.

e. Erosion Control.

1. Erosion control methods approved by the ~~**City Planner and**~~ City Engineer, including without limitation sediment traps, small dams and barriers, shall be used during construction and site development to protect water quality, control soil erosion and control the velocity of runoff.

2. Winter Erosion Control Blankets. If development on a slope is not stabilized by October 15th, erosion control blankets (or a product with equivalent performance characteristics) must be installed upon completion of the seasonal work, but no later than October 15th. The erosion control blankets shall remain in place until at least the following May.

3. Vegetation shall remain undisturbed except as necessary to construct improvements and to eliminate hazardous conditions, in which case it must be replanted with approved materials including ground cover, shrubs and trees. Native vegetation is preferred for replanting operations, and will be used where practicable.

4. Grading shall not alter the natural contours of the terrain except as necessary for building sites or to correct unsafe conditions. The locations of buildings and roads shall be planned to follow and conform to existing contours as nearly as possible. [Ord. 08-29, 2008].

21.44.040 Exceptions to setback requirements.

a. Any of the following may be located within a setback required by HCC 21.44.030(c):

1. A deck extending no more than five feet into the required setback.

2. An unoccupied accessory structure having a building area not greater than 200 square feet that is no closer than 15 feet to the top of any bluff or ravine.

3. A boardwalk, sidewalk, foot path or stairway that provides access to a beach, bluff or accessory structure, and that is located at or within three feet above ground level.

4. Development activity that the ~~**City Planner**~~ **City Engineer** determines is reasonably intended to stabilize an eroding coastal ~~**bluff**~~ **edge**.

b. No structure other than a structure described in subsection (a) of this section may be located in a required setback without a conditional use permit issued in accordance with Chapter 21.71 HCC and a site plan approved by the City Engineer under HCC 21.44.050. [Ord. 08-29, 2008].

21.44.050 Site plan requirements for slope development.

a. No permit for development activity for which HCC 21.44.030 or 21.44.040(b) requires a site plan may be approved unless the City Engineer approves a site plan for the development activity that conforms to the requirements of this section. The City Engineer shall accept or reject the plan as submitted or may require that specific conditions be complied with in order for the plan to meet approval.

b. The site plan shall be prepared by a qualified geotechnical engineer licensed to practice in the State of Alaska and shall include the following information:

1. The location of all watercourses, water bodies, and wetlands within 100 feet of the location of the proposed development activity.

2. The location of all existing and proposed drainage structures and patterns.

3. Site topography shown by contours with a maximum vertical interval of five feet.

4. The location of all proposed and existing buildings, utilities (including on-site well and septic facilities), driveways and streets.

5. The location of all existing vegetation types including meadow, forest and scrub lands, identifying all areas of vegetation that will be removed as well as vegetation to be preserved or replaced. Specifications for revegetation shall also be included.

6. Specific methods that will be used to control soil erosion, sedimentation, and excessive stormwater runoff during and after construction.

7. A description of the stability of the existing soils on site and a narrative and other detail sufficient to demonstrate the appropriateness of the development and construction methods proposed.

8. A grading plan for all areas that will be disturbed by the development activity.

9. A slope stability analysis including the following:

a. Summary of all subsurface exploration data, including subsurface soil profile, exploration logs, laboratory or in situ test results, and groundwater information;

b. Interpretation and analysis of the subsurface data;

c. Summary of seismic concerns and recommended mitigation;

d. Specific engineering recommendations for design;

e. Discussion of conditions for solution of anticipated problems;

f. Recommended geotechnical special provisions;

g. An opinion on adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes.

Section 3. Homer City Code Chapter 21.50.020 Site development standards – level one is hereby amended to read as follows:

21.50.020 Site development standards – Level one.

This section establishes level one site development standards.

a. Slopes. All development on a site affected by a slope of 15 percent or more, bluff, coastal ~~**bluff**~~ **edge** or ravine, as described in HCC 21.44.020, shall be subject to the requirements of Chapter 21.44 HCC in addition to the requirements of this section.

b. Drainage. All development activity on lands shall conform to the following:

1. Development shall provide a drainage system that is designed to deposit all runoff into either an engineered drainage system or into a natural drainage.

2. Where open-ditch construction is used to handle drainage within the development, a minimum of 15 feet shall be provided between any structures and the top of the bank of the defined channel of the drainage ditch.

3. When a closed system is used to handle drainage within the development, all structures shall be a minimum of 10 feet from the closed system.

c. Landscaping Requirements. All development activity on lands shall conform to the following:

1. Development activities shall not adversely impact other properties by causing damaging alteration of surface water drainage, surface water ponding, slope failure, erosion, siltation, intentional or inadvertent fill or root damage to neighboring trees, or other damaging physical impacts. The property owner and developer shall take such steps, including installation of culverts or buffers, or other methods, as necessary to comply with this requirement.

2. Upon completion of earthwork, all exposed slopes and all cleared, filled, and disturbed soils shall be protected against subsequent erosion by methods such as, but not limited to, landscaping, maintenance of native vegetative cover, or plantings to minimize invasive species.

3. All exposed, cleared, filled and disturbed soils shall be revegetated within nine months following the initiation of earthwork, or reseeded by the next August 31st. Native revegetation is acceptable if the site naturally revegetates within that nine-month period. If native revegetation is not successful within that nine-month period, the property owner and developer shall revegetate by other means no later than the end of that nine-month period.

4. Drainage can be stabilized by other means than vegetation, if approved in writing by the City Engineer.

d. A stormwater plan approved under Chapter 21.75 HCC is required for development that:

1. Creates more than 25,000 square feet of new impervious surface area on a lot;

2. Increases the total impervious surface area of a lot beyond one acre;

3. Includes grading, excavation or filling that cumulatively moves 1,000 cubic yards or more of material; or

4. Includes grading, excavation or filling that creates a permanent slope of 3:1 or more, and that has a total height, measured vertically from toe of slope to top of slope, exceeding 10 feet.

Section 4. Homer City Code Chapter 21.50.030 Site development standards – level two is hereby amended to read as follows:

21.50.030 Site development standards – Level two.

This section establishes level two site development standards.

a. Site Development.

1. Development shall not adversely impact other properties by causing damaging alteration of surface water drainage, surface water ponding, slope failure, erosion, siltation, or root damage to neighboring trees, or other adverse effects.

2. Upon completion of earthwork, all exposed slopes and all cleared, filled, and disturbed soils shall be protected against subsequent erosion by methods such as, but not limited to, landscaping, planting, and maintenance of vegetative cover.

3. All exposed, cleared, filled and disturbed soils shall be revegetated within nine months following the initiation of earthwork.

b. Slopes. All development on a site affected by a slope of 15 percent or more, bluff, coastal ~~**bluff**~~ **edge** or ravine, as described in HCC 21.44.020, shall be subject to the requirements of Chapter 21.44 HCC in addition to the requirements of this section.

c. Drainage.

1. Development shall provide a drainage system, as approved by the City, that is designed to deposit all runoff into either an engineered drainage system or into a natural drainage.

2. Where open-ditch construction is used to handle drainage within the development, a minimum of 15 feet shall be provided between any structures and the top of the bank of the defined channel of the drainage ditch.

3. When a closed system is used to handle drainage within the development, all structures shall be a minimum of 10 feet horizontally from the closed system.

4. Drainage can be stabilized by methods other than vegetation, if approved in writing by the City Engineer.

d. A development activity plan (DAP) approved by the City under Chapter 21.74 HCC is required if the project includes:

1. Land clearing or grading of 10,000 square feet or greater surface area;

2. The cumulative addition of 5,000 square feet or greater of impervious surface area from pre-development conditions;

3. Grading involving the movement of 1,000 cubic yards or more of material;

4. Grading that will result in a temporary or permanent slope having a steepness of 3:1 or greater and having a total slope height, measured vertically from toe of slope to top of slope, exceeding five feet;

5. Grading that will result in the diversion of an existing drainage course, either natural or human-made, from its existing point of entry to or exit from the grading site; or

6. Any land clearing or grading on a slope steeper than 20 percent, or within 20 feet of any wetland, watercourse, or water body.

e. A stormwater plan (SWP) approved under Chapter 21.75 HCC is required if the project includes:

1. An impervious surface coverage that is greater than 60 percent of the lot area (existing and proposed development combined);

2. The cumulative addition of 25,000 square feet or greater of impervious surface area from the pre-development conditions;

3. Land grading of one acre or greater surface area;

4. Grading involving the movement of 10,000 cubic yards or more of material;

5. Grading that will result in a temporary or permanent slope having a steepness of 3:1 or greater and having a total slope height, measured vertically from toe of slope to top of slope, exceeding 10 feet; or

6. Any land clearing or grading on a slope steeper than 25 percent, or within 10 feet of any wetland, watercourse, or water body.

f. Landscaping Requirements. All development shall conform to the following landscaping requirements:

1. Landscaping shall include the retention of native vegetation to the maximum extent possible and shall include, but is not limited to, the following:

a. Buffers.

i. A buffer of three feet minimum width along all lot lines where setbacks permit; except where a single use is contiguous across common lot lines, such as, but not limited to, shared driveways and parking areas. Whenever such contiguous uses cease the required buffers shall be installed.

ii. A buffer of 15 feet minimum width from the top of the bank of any defined drainage channel or stream.

b. Parking Lots.

i. A minimum of 10 percent of the area of parking lots with 24 spaces or more shall be landscaped in islands, dividers, or a combination of the two;

ii. Parking lots with 24 spaces or more must have a minimum 10-foot landscaped buffer adjacent to road rights-of-way;

iii. Parking lots with only one single-loaded or one double-loaded aisle that have a 15-foot minimum landscaped buffer adjacent to road rights-of-way are exempt from the requirement of subsection (f)(1)(b)(i) of this section.

2. Topsoil addition, final grading, seeding, and all plantings of flora must be completed within nine months of substantial completion of the project, or within the first full growing season after substantial completion of the project, whichever comes first.

Required landscaping will be maintained thereafter, with all shrubs, trees, and ground cover being replaced as needed.

Section 5. This Ordinance is of a permanent and general character and shall be included in the City Code.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA this _____day of _____, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

YES:
NO:
ABSTAIN:
ABSENT:

First Reading:
Public Hearing:
Second Reading:
Effective Date:

City of Homer
www.cityofhomer-ak.gov

Planning
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Homer, Alaska 99603
Planning@ci.homer.ak.us
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(f) 907-235-3118

Memorandum 22-101

MEMORANDUM PL 22-07

TO: MAYOR CASTNER AND THE HOMER CITY COUNCIL
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: May 26, 2022
SUBJECT: COASTAL SETBACKS

After evaluating a an analysis of coastal bluff stability and policy completed by the Alaska Department of Natural Resources Division of Geological and Geophysical Surveys (DGGS), the Homer Planning Commission recommends an amendment to code that regulates setback from the coast of the City of Homer.

The recommendation of a 40' setback starting from the eastern boundary of Homer to below Soundview Avenue is widely accepted as a reasonable distance that gives most everyone an option to develop without an engineering study. One may develop with a smaller setback if it is recommended by an engineer, accepted by the City Engineer and approved with a CUP. The 60' setback designated for the coastal edge near Soundview Avenue continuing to the western boundary of the City recognizes the additional hazard predicted in the study. These lots are larger in size, have some of the tallest cliff faces, and some are unlikely to be developed such as those belonging of the Department of Natural Resources.

The use of the term 'coast bluff' has been modified to better describe features that represent appropriate points from which to measure the setback. The coastal edge is not solely dependent on bluff height, as the height of the bluff is not the only factor that contributes to the rate of erosion near the coast. This term 'coastal bluff' has been replaced with 'coastal edge', which necessitates that the term 'coastal bluff' be replaced where ever it is used in code.

The Commission finds that it is valuable to create a more practical setback now, but there are other actions and review to consider for the future. It is recognized that this ordinance should be revisited every five years or after any significant erosive event for consideration of modification. It is foreseeable that the City will need to work on additional measures to ensure responsible site development work near the coastal edge.

The subject of coastal setback was an agenda item at 6 Planning Commission meetings. The Commission held a public hearing on the proposed ordinance at their meeting of May 18, 2022 and voted with unanimous consent to recommend that the City Council adopt the draft ordinance.

Coastal Bluff Stability Mapping
Homer, Alaska

December 1, 2021

Jacquelyn Overbeck and Richard Buzard
Alaska Division of Geological & Geophysical Surveys

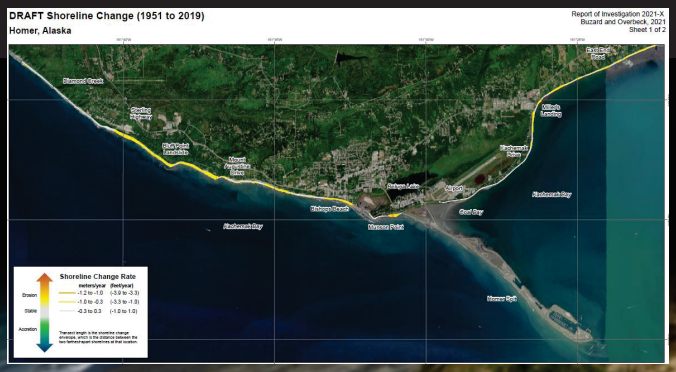
Coastal Bluff Stability Mapping: Project History

- 2018 DGGS Collects lidar to support landslide hazard project.
- 2019 initiate FEMA funded Coastal Bluff Stability Analysis.
- 2020-2021 present to Homer Planning Commission and for focus group for detailed feedback.
- 2021 provide final deliverables and outreach meetings.
- December 31, 2021 project completed.
- Future guidance through SOA.

Alaska Division of Geological & Geophysical Surveys | **Coastal Hazards Program**

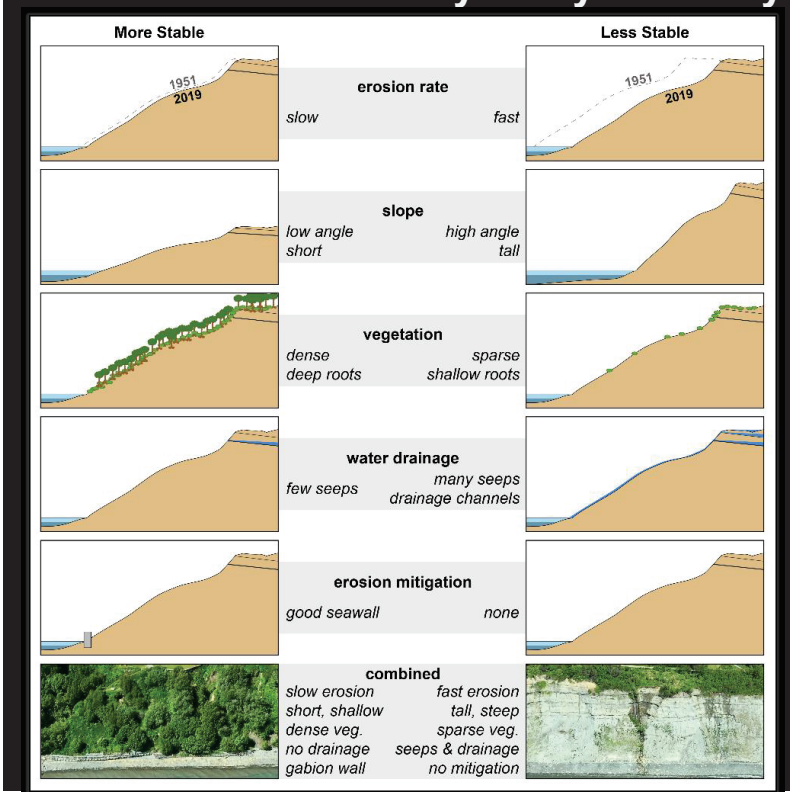
Coastal Bluff Stability Mapping: Project Overview & Deliverables

- Update shoreline change assessment (from Baird and Pegau).
- Use existing methods to define coastal bluff stability metrics and map bluffs in Homer.
- Provide data in relevant format for decision making on City Zoning policies.



Assessing the Hazard – Where?

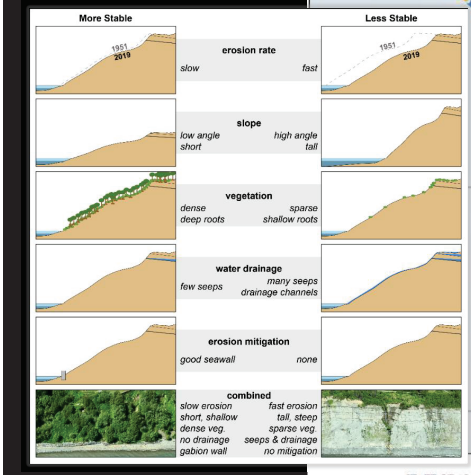
Coastal Bluff Stability Analysis: Analysis

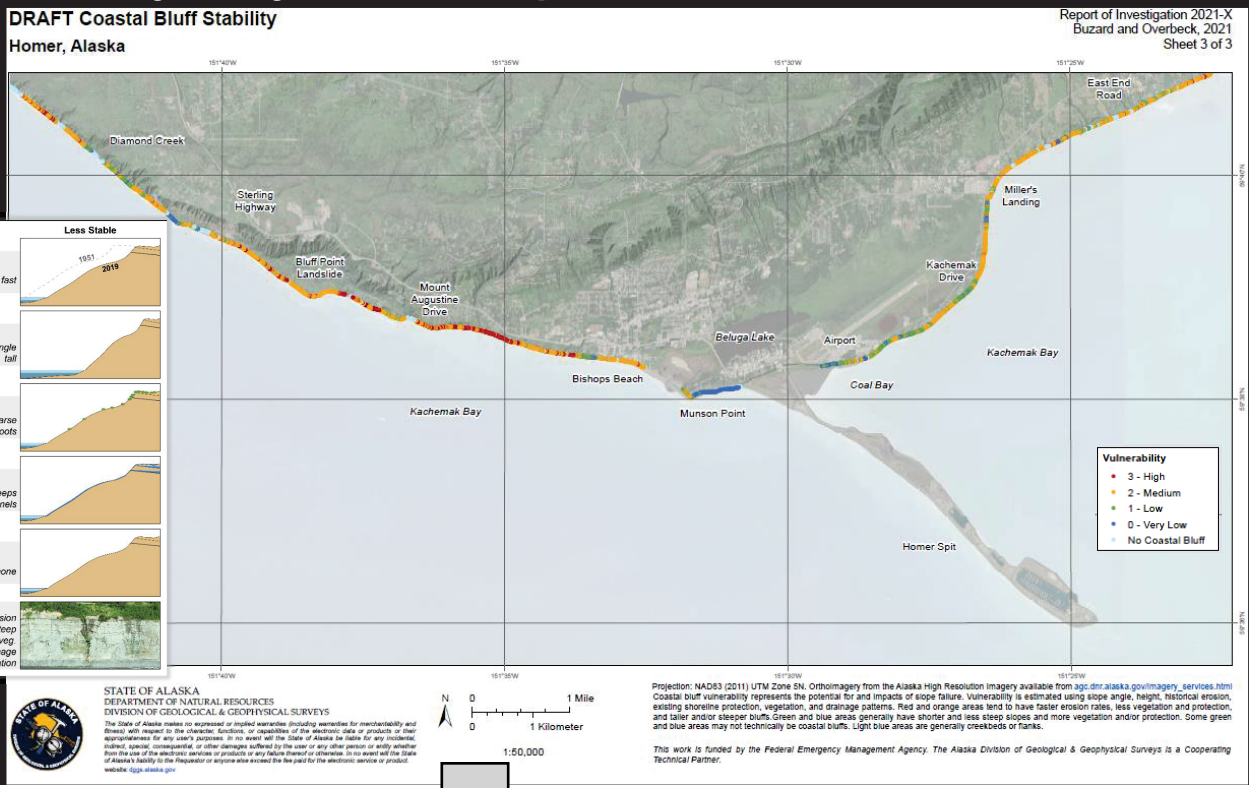


Bluff Stability Analysis based on Maine Geological Survey, 2015, Coastal bluffs maps: Maine Geological Survey [website]:
www.maine.gov/dacf/mgs/pubs/mapuse/series/descrip-bluff.htm

https://www.youtube.com/channel/UCs0-6PGoKbrO3jrnREdKKgQ/videos

Coastal Bluff Stability Analysis: Final Map





Data for Decision Making – How Much?

Coastal Bluff Stability Mapping: Data for Decision Making

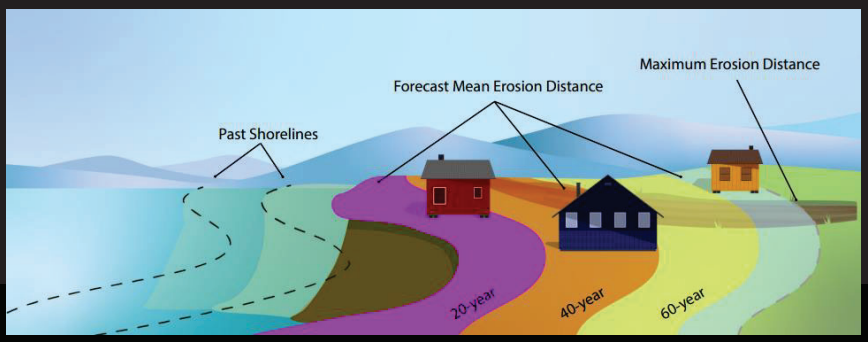
"Bluff" means an abrupt elevation change in topography of at least 15 feet, with an average slope of not less than 200 percent (two feet difference in elevation per one foot of horizontal distance). – City of Homer

In Homer, most coastal bluffs have slopes between 31 and 87 percent.

Alaska Division of Geological & Geophysical Surveys | **Coastal Hazards Program**

Coastal Bluff Stability Mapping: Data for Decision Making

No structure may be closer than **40 ft from the top of a coastal bluff**, and not closer than 15 feet from the toe.—City of Homer

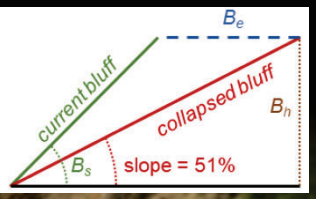


Two methods for evaluating potential erosion forecast **distance** within the bluff stability parameters:

- Historical Shoreline Change Rate
- Computed Bluff Failure Distance

$$B_e = B_h \times (B_s - 0.51)$$

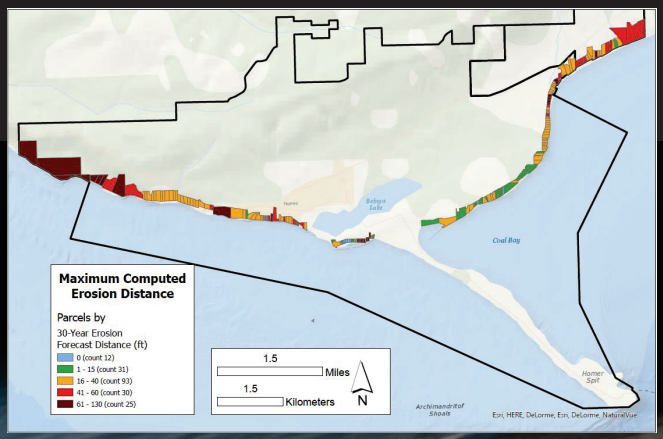
B_e = Horizontal bluff erosion due to slope failure
B_h = Bluff height
B_s = Average bluff slope percent (as a fraction)

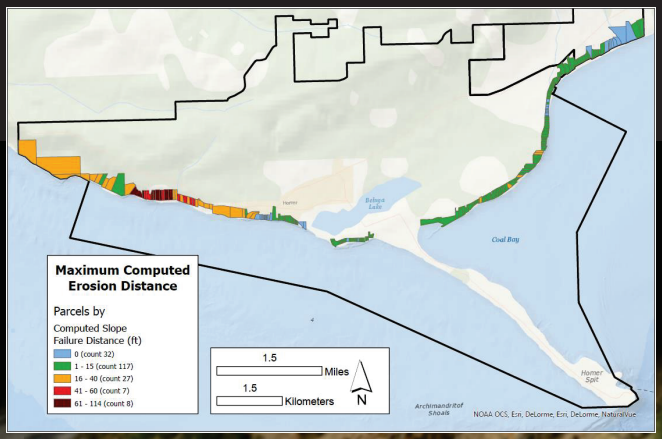


Coastal Bluff Stability Mapping: Data for Decision Making

Determining forecasted erosion distance and slope failure distance based on parcel.

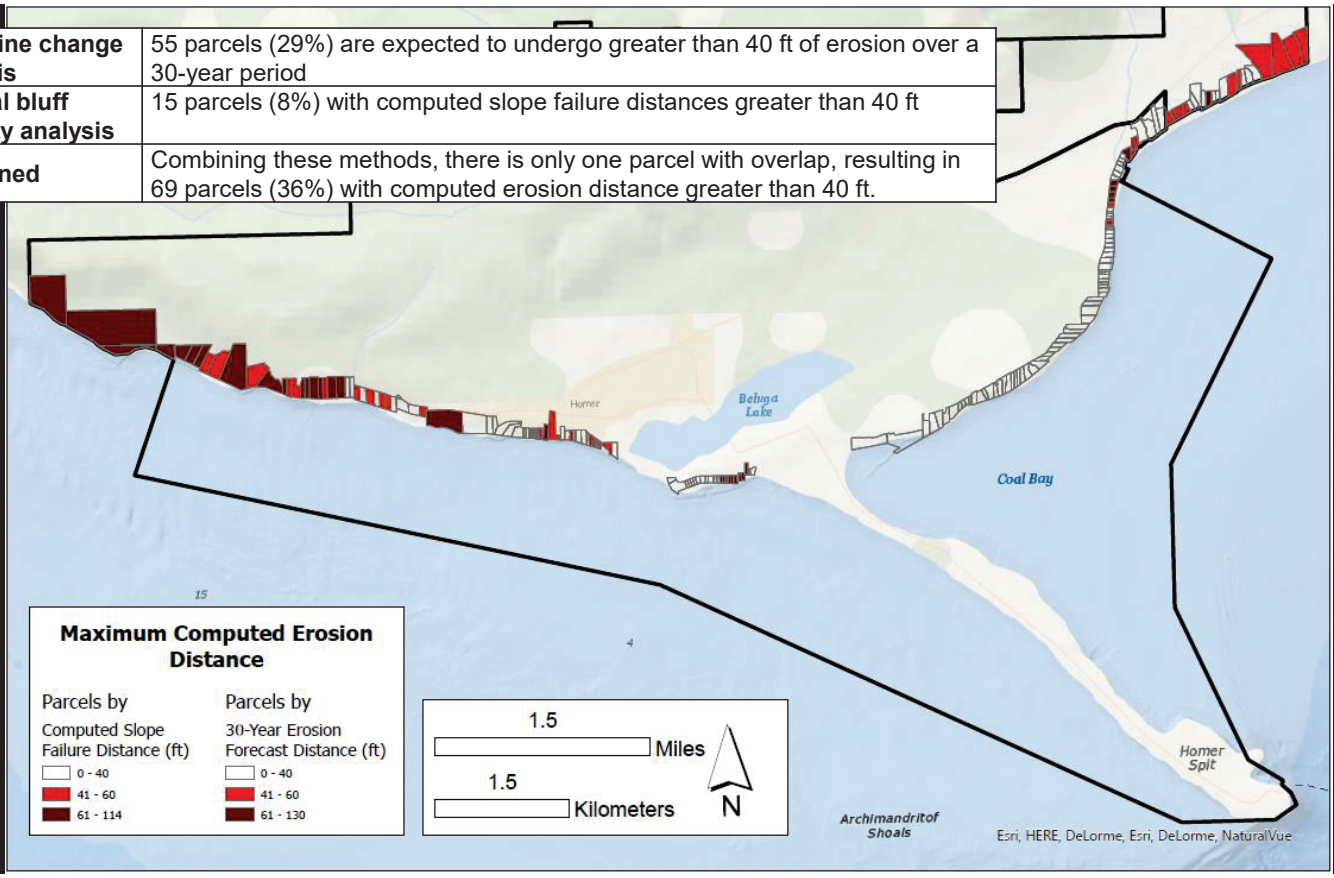
Parcels are not differentiated between developed and undeveloped.





Alaska Division of Geological & Geophysical Surveys | Coastal Hazards Program

Shoreline change analysis	55 parcels (29%) are expected to undergo greater than 40 ft of erosion over a 30-year period
Coastal bluff stability analysis	15 parcels (8%) with computed slope failure distances greater than 40 ft
Combined	Combining these methods, there is only one parcel with overlap, resulting in 69 parcels (36%) with computed erosion distance greater than 40 ft.



Coastal Bluff Stability Mapping: Summary

Key Findings

- Data to assist in changes to City Zoning Code:
  - Bluff Definition
  - Coastal Setback

Many of the parcels within the City boundary are already developed.

Next Steps

- Report and maps awaiting administrative review in DGGS. Report makes for outreach materials with the public.
- FEMA project coming to an end. DGGS available for future public meetings and technical guidance.

Contact Information

https://dggs.alaska.gov/hazards/coastal/

Jacquelyn Overbeck
Coastal Hazards Program Manager
Phone: 907-451-5026
Email: jacquelyn.overbeck@alaska.gov

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(f) 907-235-3118

Staff Report PL 21-70

TO: Homer Planning Commission
FROM: Rick Abboud, AICP, City Planner
DATE: December 1, 2021
SUBJECT: Coastal Bluff Analysis

Introduction

Jaci from Alaska Department of Natural Resources Division of Geological and Geophysical Surveys (DGGS) will present on the latest draft of her report during the work session.

Analysis

My initial thought is that we have developed a good assessment of some hazards that affect coastal bluff stability. There are still a few things to consider and we may require some additional input.

First we must consider the measure of protection that we which to legislate. In general, I believe that most of the coastal areas would benefit from a 40' setback in all circumstances without the input of an engineer. There does seem to be some exception to this that may be a consideration. Will wait for feedback from the presentation before further addressing.

The other item is the concern is that our definitions that incorporate the bluff definition of a 2/1 slope and topography of at least 15 feet of elevation change. While this definition is a good rule of thumb for generally describing a slope that may be prone to failure, it really does not address an eroding shoreline. The erosion rate does not necessarily translate well to a slope and height calculation. One may be at 5 feet in elevation and be experiencing a high rate of erosion.

My goal is not to necessarily solve this issue at this meeting, but I would like to describe concerns and further develop solutions after receiving some input from the Commission after Jaci's presentation.

HCC 21.03.040

"Bluff" means an abrupt elevation change in topography of at least 15 feet, with an average slope of not less than 200 percent (two feet difference in elevation per one foot of horizontal distance).

"Coastal bluff" means a bluff whose toe is within 300 feet of the mean high water line of Kachemak Bay.

HCC 21.44.030 Slope development standards

c. Setbacks. Subject to the exceptions to setback requirements in HCC 21.44.040, all development activity is subject to the following setback requirements:

1. No structure may be closer to the top of a ravine, steep slope or noncoastal bluff than the lesser of:

a. Forty feet; or

b. One-third of the height of the bluff or steep slope, but not less than 15 feet.

2. No structure may be closer than 15 feet to the toe of a bluff other than a coastal bluff.

3. No structure may be closer than 40 feet to the top of a coastal bluff and closer than 15 feet to the toe of a coastal bluff.

Staff Recommendation
Discuss and make recommendations for further considerations of the Commission

  - it is not expected that nine additional residences will impact the natural drainage any more than what is actually going on currently
- what development is proposed for Lot A since the majority of the parcel is over 20% slope
  - Parcel A does not really lend itself for development and be feasible
  - Make that parcel a nature conservancy if possible
  - There is a spot in the NW corner that could be developed and possibly could be accessed from Alpine Way

HIGHLAND/MOVE TO ADOPT STAFF REPORT 21-69 AND RECOMMEND APPROVAL OF THE REVISED TERRA BELLA PRELIMINARY PLAT TO CREATE NINE RESIDENTIAL LOTS ALONG FAIRVIEW AVENUE AND ONE LARGE TRACT ACCESSED FROM ALPINE WAY WITH THE FOLLOWING COMMENTS:

1. DEDICATE A PUBLIC ACCESS EASEMENT OVER THE EXISTING CAMPGROUND ROAD WHERE IT ENCROACHES ON TRACT A
2. GRANT A PUBLIC ACCESS OR TRAIL EASEMENT FROM THE NORTHWEST CORNER OF KAREN HORNADAY PARK TO THE CITY PARCEL
3. CORRECT PLAT NOTE 6 TO SPECIFY WHICH LOTS HAVE ACCESS TO CITY WATER AND SEWER
4. DEDICATE A 60 FOOT DRAINAGE EASEMENT CENTERED ON THE EASTERN CREEK.
5. ACCEPT A 40 FOOT DRAINAGE EASEMENT ON THE WESTERN CREEK AS SHOWN ON THE PLAT (TO BE PROVIDED AS A LAYDOWN AT THE MEETING.)

A lengthy discussion ensued on approving the plat with development of the steeper parcels that will create drainage issues for the downslope properties. City Planner Abboud counseled the Commission on denial of the plat without the basis of standing regulations. Further discussion on postponement to have the applicant present or respond to their concerns ensued as well as points made on supporting their recommendation by the Borough and if the issue went to Court, and development versus subdivision is where these issues can be addressed.

VOTE. YES. BENTZ, CONLEY, BARNWELL, VENUTI, SMITH, CHIAPPONE
VOTE. NO. HIGHLAND.

Motion carried.

PENDING BUSINESS

A. Staff Report 21-70 Coastal Bluff Analysis

Chair Smith Introduced the item by reading of the title and invited City Planner Abboud to provide his report.

City Planner Abboud stated that this is a follow-up to the presentation and believed that Ms. Overbeck did a great job on what is in existing code. He facilitated discussions and responses to questions on the following:

- Recommended 40 foot setback requirement
    - Commented on the approval and construction of the cabin on the bluff side just at the entrance of the Homer
    - location of the 40 feet may not be adequate
        - increasing to 60 feet or more may not be advisable
- defining coastal bluff that would be relative to Homer
- when the coast line marches back those definitions should still be applicable
    - is 30 years the right term to plan for
- changing environmental conditions will policy and definitions still be effective
- review definitions to determine better ones that identify or describe coastal bluffs
- determine if a thirty year planning horizon the right term limit to consider
    - Environmental conditions
    - Infill on coastal bluffs
        - having policy and definitions that will address these conditions
- gradual erosion rate versus historic erosion rates
    - Hard data available to 60 years in the past
    - erosion versus evulsion regulations
    - description of the bluffs since they will move
- getting professional assistance
    - providing property at the end of West Hill is not described in the definitions
        - this may be a location where the bluff will let go all at once
        - the capacity to perform a buyout
        - application is 100 pages
        - rules and regulations pertaining to this
- satisfying the needs of the lender over the home owner and selecting a term that is in between
- the impact of the chemicals and toxins not to mention the human aspect when those house go into the ocean
- receding shoreline and the willingness of property owners in 20-30 years for implementing shoreline hardening and what that will look like for the community

NEW BUSINESS

A. Staff Report 21-71, Rezoning Portions of Rural Residential District to Urban Residential

Chair Smith introduced the item by reading of title and invited City Planner Abboud to provide his report.

City Planner Abboud provided a summary of Staff Report 21-71 for the Commission.
He facilitated discussion on the following:

- green infrastructure to mitigate drainage issues
- the inherent need of housing
- natural infrastructure is like fingers of green that are necessary for drainage connectivity trails or non-motorized access
- concerns on the wetlands
    - all area is wet, some of the larger lots they can have a discussion and some property owners may have to go to the Corps of Engineers

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Staff Report Pl 22-01

TO: Homer Planning Commission
FROM: Rick Abboud, City Planner
DATE: January 5, 2022
SUBJECT: City Planner's Report

City Council 12.13.21
Board of Adjustment (BOA)

a. Consideration of Motion for Leave to Supplement Points on Appeal to Address Planning Commission's Dismissal of Appeal by Frank Griswold, Appellant
Memorandum 21-201 from City Clerk as backup

b. Recommendation by the Planning Commission to Dismiss the Appeal of Conditional Use Permit (CUP) 20-15 for the Reconstruction of a Restaurant Building at 106 W. Bunnell Avenue, Homer, Alaska based on the Applicant's Withdrawal of their CUP Application.
Memorandum 21-202 from City Clerk as backup

REFERRED matters to a hearing officer with discussion.

Regular meeting

i. Ordinance 21-72, An Ordinance of the City Council of Homer, Alaska Appropriating $3,400 from the Land Fund to Acquire Tax Foreclosed Property from the Kenai Peninsula Borough and Retaining the Property for the Public Purpose of Determining the Special Assessment Liens and Creating a Clear Title to the Property, and Authorizing the City Manager to Negotiate and Execute the Appropriate Documents. City Manager. Recommended dates Introduction December 13, 2021 Public Hearing and Second Reading January 10, 2022.
Memorandum 21-209 from Deputy City Planner as backup

Kenai Homelessness Coalition
I did record a presentation that was presented at the MAPP Community Meeting on December 17th. If the Commission has interest, I can share the 3 minute video. We have come up with a

new Draft Strategic Plan. You can sign up for updates on the coalition at https://www.kenaipeninsulahomeless.org/.

Permitting software

We continue to work on modifying and testing the software with hope that it will be ready for the next building season.

Hazard Mitigation Plan Update

Have not interacted much with the contractor during the holiday season, I look forward to picking things up in the New Year.

Rural Residential Rezone Update: a rough project outline

1. Make information available (January)

Over the next few weeks, staff will create content for a flier and the city website on the rezone. This content will include:

~ The rezone process
~Why now is the time to change the land use rules
~Analyze current land uses and non-conformities
~Explain what land use rights would change for property owners

2. Work with community partners (February)

After we have this information together, we'd like to work with community partners such as the realtor and developer community on increasing community awareness of the need for change. This could include public presentations if appropriate.

3. Schedule public outreach (conduct in mid-late February)

Prior to scheduling a public hearing, we'd like to have some method for people to meet with a planner and possibly a commissioner. Planning is working on another project, and we're trying a library fireplace area open house/brown bag type interaction. We'll see how that goes and modify for this rezone project.

4. Conduct public hearing and forward recommendations to Council (March?)

Economic Development Advisory Commission

At their December meeting, the EDC made some recommendations on the Land Allocation Plan, and reviewed the latest draft of the Wayfinding and Streetscape plan. Final review will be January 11th, with City Council review tentatively planned for January 42th.

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Staff Report PL 22-03

TO: Homer Planning Commission
FROM: Rick Abboud, AICP, City Planner
DATE: January 5, 2022
SUBJECT: Consideration of bluff setbacks

Introduction We heard from Jaci Overbeck at our last meeting concerning bluff stability.

Analysis Now that we have the study it is time to consider actions. One item that I plan to address is creating a definition of Coastal Bluff that works for Homer. I have talked to the Public Works Director to help find the appropriate professional among the engineering firms that the City has under contract.

Next is to consider the amount of regulation that is appropriate to apply. I propose to start the conversation with the consideration of having a set 40' setback from the bluff starting on the east side of town and then transition to a 60' setback from the bluff starting south of Saltwater Drive. Due to still having technical issues with our GIS system, I plan to screen share the Borough Parcel Viewer to provide the Commission with a view and sense of dimensions of the lots that are found along the coast from Saltwater Drive to the west. Using the maps attached to the study, you can see the increased erosion rates and decreased bluff stability from below Saltwater Drive and to the west.

Third is to consider the allowance for a land owner to develop closer than the setback with the guidance of an engineer. This item is intertwined with the consideration of the amount of regulation that is decided upon. Generally, our numbers from the study are based off of the consideration of a 30 year time frame. This is where we may make an allowance for an erosion mitigation device or methods.

Based on the discussion I will draft up some draft language for technical review and I will seek out answers to any technical question that we may have about the consideration of regulations. I do wish to make regulations that will work well with established building regulations and won't interfere with the possibility of Homer adopting a building code.

Staff Recommendation
Have a discussion and make recommendations regarding general regulations and standards that will be considered for adoption and/or further study

Attachments

Draft Coastal Bluff Stability Analysis
Draft Homer Map 1 Shoreline Change Analysis
Draft Homer Map 2 Coastal Bluff Stability
Final Latter Homer Bluff Considerations DGGS

Report of Investigation 202X-X

COASTAL BLUFF STABILITY ASSESSMENT FOR HOMER, ALASKA

Richard M. Buzard and Jacquelyn R. Overbeck

Published by
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
2022

Cover. Coastal bluff by the Sterling Highway, Homer, Alaska.

COASTAL BLUFF STABILITY ASSESSMENT FOR HOMER, ALASKA

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State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys

STATE OF ALASKA
Mike Dunleavy, Governor

DEPARTMENT OF NATURAL RESOURCES
Corri A. Feige, Commissioner

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
Steve Masterman, State Geologist and Director

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COASTAL BLUFF STABILITY ASSESSMENT FOR HOMER, ALASKA

Richard M. Buzard[1] and Jacquelyn R. Overbeck[1]

Abstract

We evaluate the stability of coastal bluffs in Homer, Alaska, using aerial imagery and modern elevation data. We produce maps of historical shoreline change and an alongshore bluff instability hazard score. Shoreline change is calculated by comparing the bluff top and toe positions in historical and modern orthorectified aerial imagery. Since 1951, Homer's coastal bluffs have eroded at an average rate of -1.0 ft/yr (-0.29 m/yr). Key indicators of bluff instability are historical shoreline change rates, bluff slope and height, vegetation, existing erosion protection structures, and water drainage. Most of the Homer coastline has a low to medium bluff instability hazard score. These coastal hazard products can guide decisions to reduce risk.

INTRODUCTION

Coastal bluff failure poses a hazard to the City of Homer (Baird and Pegau, 2011; Kenai Peninsula Borough, 2019; Salisbury, 2021). To assess this hazard, the Alaska Division of Geological & Geophysical Surveys (DGGS) created this report, associated maps, and GIS layers and data tables. This project is funded by the Federal Emergency Management Agency (FEMA) Cooperating Technical Partners (CTP) Program. This report is suitable to guide potential future updates to the FEMA Multi-Hazard Risk MAP analysis for Homer, should such an analysis be launched, and provide critical technical information for the next update of the Homer Local Hazard Mitigation Plan and future development plans or policies.

BACKGROUND

Geologic and Coastal Setting

The City of Homer, near the southwestern end of the Kenai Peninsula, is characterized by a prominent spit that extends into Kachemak Bay referred to locally as "Homer Spit" (Kenai Peninsula Borough, 2019; fig. 1). West of Homer Spit, bluffs near the coast rise to 800 ft (240 m) above mean sea level (MSL). The predominate rock type (the Kenai Group) comprises layers of poorly consolidated sands, silts, and clays, with intergraded beds of medium- to low-grade coal (Barnes and Cobb, 1959). Coal beds dip less than 10 degrees away from the shoreline and act as aquicludes, resulting in suspended water tables. The bluffs are partially vegetated with shrubs and trees. Exposed bluffs display visible groundwater seeps at coal beds. Properties at the top of the bluff overlook Kachemak Bay and Cook Inlet, with unimpeded views of the Kenai Mountains to the south and the volcanic Aleutian Range to the west. Coastal bluffs east of the spit are typically below 100 ft (30 m) above MSL and have numerous drainage channels. Residences and other infrastructure are built on the hilltops from Diamond Creek to past East End Road.

The majority of the Homer coastline consists of gently sloping (1 to 15 degrees) beaches of sand, pebbles, and cobbles (Kenai Peninsula Borough, 2021). Homer has semidiurnal tides with a great diurnal range of 18.4 ft (5.62 m; National Oceanic and Atmospheric Administration Center for Operational Oceanographic Products and Services [NOAA CO-OPS], 2020a; table 1). The local tidal datum was established in 2019, but the nearby Seldovia tide gage has been in operation since 1975 and has a similar datum (NOAA CO-OPS, 2020b; table 1). The highest water level recorded

[1]Alaska Division of Geological & Geophysical Surveys, 3354 College Rd., Fairbanks, Alaska 99709-3707.

in Seldovia reached 25.3 ft (7.72 m) above mean lower low water (MLLW) on November 5, 2002. Since 1964, relative sea level has fallen 1.8 ft (0.56 m; NOAA CO-OPS, 2020b).

Understanding Bluffs, Coastal Bluffs, and Erosion Rates

Bluffs are landforms that are steepened by erosion processes including wind, water, weathering,

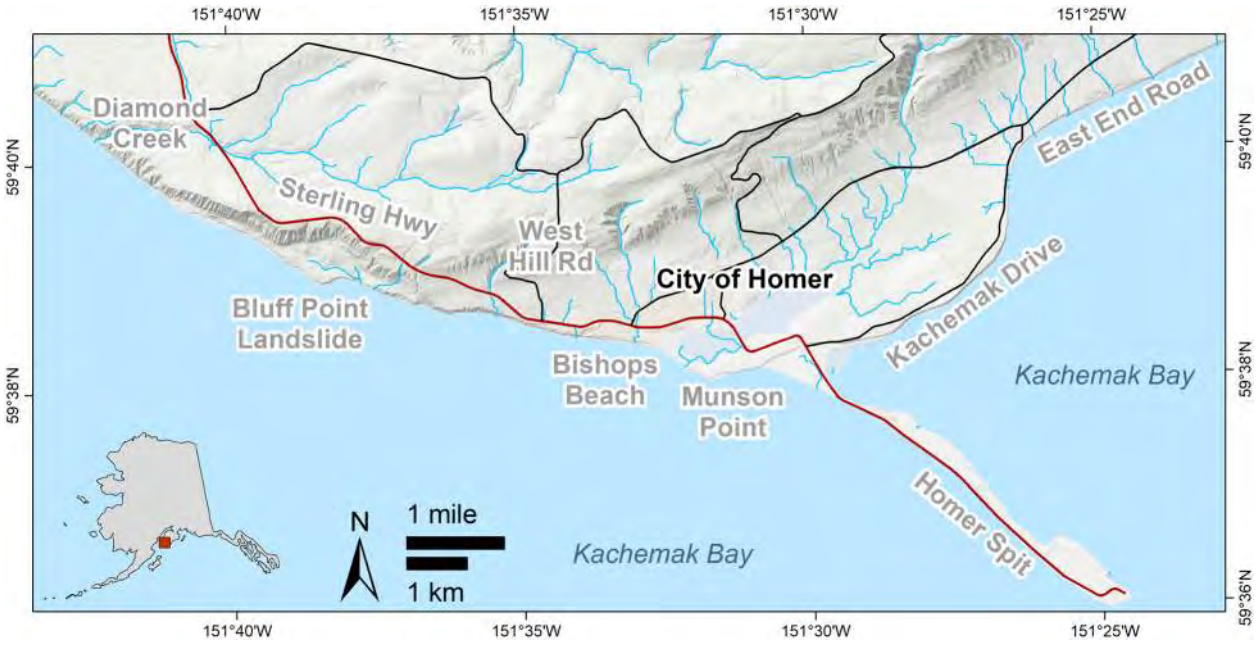

Figure 1. The area of interest for coastal bluff stability analysis includes the City of Homer and surrounding area. The hillshade elevation model shown was collected by Salisbury and others (2021).

Table 1. Tidal datums for Homer, Alaska (Coal Point; station 9455558), and nearby Seldovia (station 9455500).

Datum	Datum abbreviation	Homer ft (m) above MLLW	Seldovia ft (m) above MLLW
Mean Higher-High Water	MHHW	18.432 (5.618)	18.041 (5.499)
Mean High Water	MHW	17.592 (5.362)	17.231 (5.252)
Mean Tide Level	MTL	9.626 (2.934)	9.462 (2.884)
Mean Sea Level	MSL	9.734 (2.967)	9.554 (2.912)
Mean Diurnal Tide Level	DTL	9.216 (2.809)	9.091 (2.771)
Mean Low Water	MLW	1.657 (0.505)	1.696 (0.517)
Mean Lower-Low Water	MLLW	0.000 (0.000)	0.000 (0.000)
North American Vertical Datum of 1988	NAVD88	5.095 (1.553)	5.161 (1.573)
Great Diurnal Range	GT	18.432 (5.618)	17.231 (7.072)
Mean Range of Tide	MN	15.935 (4.857)	7.766 (6.308)
Highest Astronomical Tide	HAT	N/A	23.110 (7.042)

and tectonic motion. Bluffs and steep slopes are often the focus for hazard assessments because they can gradually or rapidly erode and have the potential for massive failure (Highland and Bobrowsky, 2008). Several factors can contribute to destabilize a slope, including earthquakes, undercutting, increased load (such as from groundwater or surface water flooding), stratigraphy and aquicludes, or weak vegetation (Hampton and Griggs, 2004; Highland and Bobrowsky, 2008; Kokutse and others, 2016).

There is not a quantitative definition for a coastal bluff. "Coastal bluff" is a general term to describe a steep slope that is eroded by coastal processes like tides, waves, and currents (Hampton and Griggs, 2004). Coastal bluffs (and lake and riverine bluffs) can erode faster than inland bluffs due to frequent undercutting from water bodies. Coastal areas are also natural end points for watershed drainage, so ground and surface water accumulation may be higher than in inland areas (Heath, 1983).

Erosion of composite coastal bluffs (containing more than one type of material) commonly occurs in a two-step cycle of undercutting and steepening (toe erosion) via wave action, then mass movement (top erosion; Maine Geological Survey, 2015; fig. 2). The typical speed of this paired failure can dictate the proper method to assess a hazard: if there is annual to sub-decadal erosion, the hazard is described using long-term linear erosion rates (Himmelstoss and others, 2018). If erosion occurs rarely, such as on centennial or longer timescales, then it becomes more appropriate to describe hazards using probability or categorical hazard levels (such as Hapke and Plant, 2010). This is especially the case for extreme mass movements like deep-seated landslides (Varnes, 1978; Salisbury, 2021).

Coastal Bluff Erosion and Stability in Homer

The majority of Homer's coastal boundary comprises bluffs. Using sets of aerial images from 1951 to 2003, Baird and Pegau (2011) calculate average erosion rates of 2.6 ft/yr (0.8 m/yr) west of the spit and 2.0 ft/yr (0.6 m/yr) east. The period of greatest erosion occurred after March 27, 1964, when the magnitude 9.2 Good Friday earthquake caused an average 3.5 ft (1.1 m) of subsidence in the region (Stanley, 1968). High tide mostly submerged the spit, and waves reached the toes of many coastal bluffs (Gronewald and Duncan, 1965). Due to the unprecedented wave action, bluffs eroded as much as 8 ft (2.4 m) back in just 6 months (Stanley, 1968). Other than this major event, bluff erosion in Homer has been a slow process relative to many Alaska communities (Overbeck and others, 2020). Still, several structures are near eroding bluffs and have potential to be exposed to erosion in the coming decades.

METHODS

This analysis focuses on two goals: (1) calculate historical bluff erosion, and (2) estimate current bluff stability. Historical bluff erosion is computed using orthorectified aerial imagery and the Digital Shoreline Analysis System (DSAS; Himmelstoss and others, 2018). Bluff stability is estimated by combining variables that factor into instability: height, slope angle, vegetation, drainage, erosion history, and shoreline armoring.

Lidar-derived elevation models are critical for this analysis. In 2019, DGGS collected lidar over Homer and created a bare earth digital terrain model (DTM) and digital surface model (DSM) with a ground sampling distance (GSD) of 1.6 ft (0.5 m; Salisbury and others, 2021; fig. 1). DGGS also collected oblique alongshore imagery. In the same year, the U.S. Army Corps of Engineers (USACE) collected topobathymetric lidar from the Homer spit northwest to Diamond Creek, creating a DTM with 3.3-ft (1.0 m) GSD (OCM Partners, 2021). USACE also created two orthomosaics (at high tide and low tide) with 2-inch (0.05 m) GSD.

Identifying Coastal Bluffs and Study Extent

The extent of the DGGS lidar is used as the study area boundary (fig. 1). All slopes with toes reaching a coastal area are examined for this study. We extract the Mean High Water (MHW) line

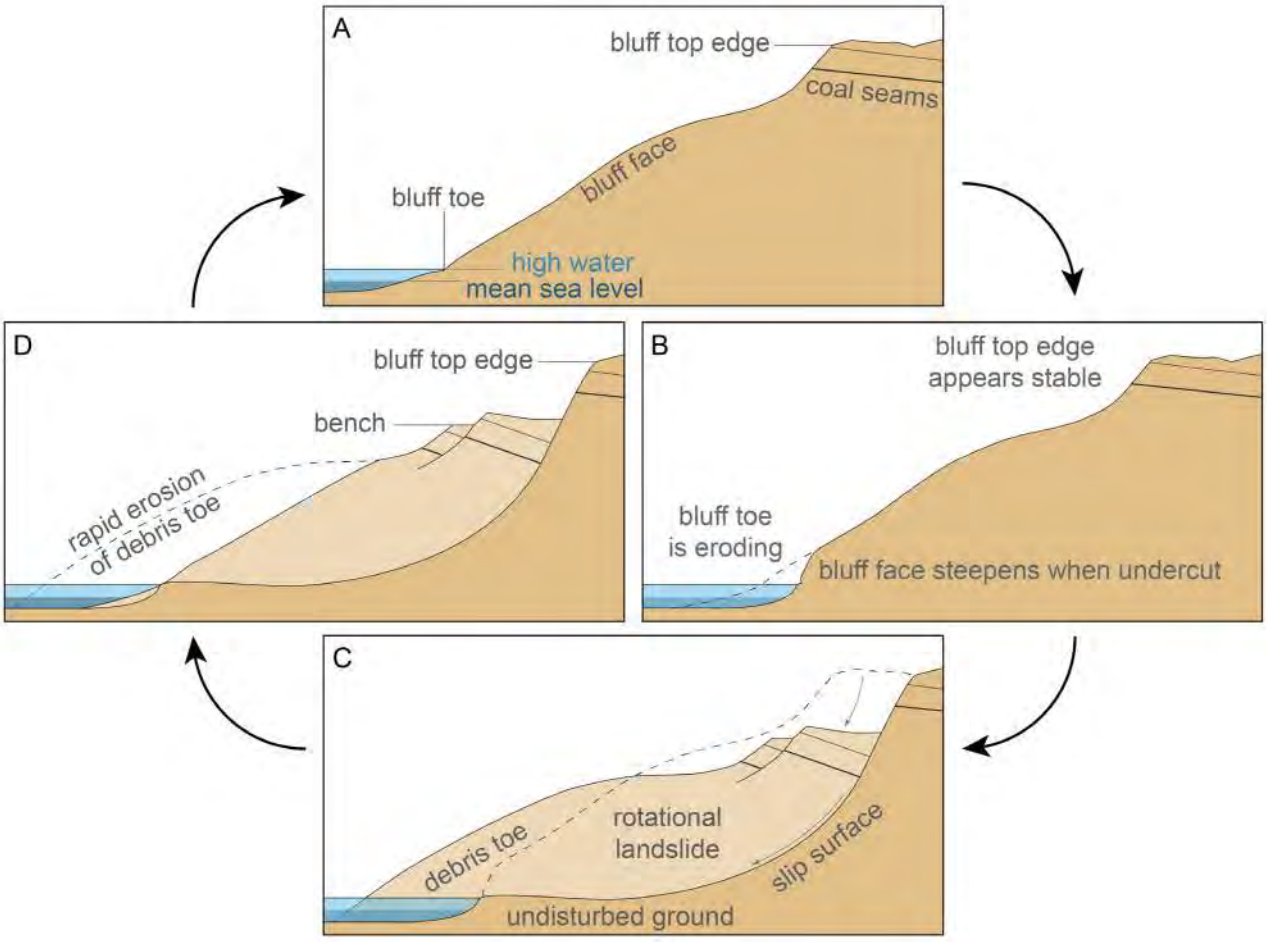

Figure 2. This schematic expands the two-step (top and toe) coastal bluff erosion cycle into four phases. **A.** The bluff is being eroded and undercut at the toe by storm-driven waves. **B.** Although the bluff top edge remains stable, the angle between the toe and top is steepening, leading to unstable conditions. **C.** A landslide (rotational slump) occurs and debris flows toward the ocean, lowering the blocks at the former bluff top edge along the slip surface. **D.** The debris in the intertidal and storm tide zone is eroded relatively quickly. Erosion slows because the remaining bluff is outside the intertidal zone. The new bluff face is at a shallower angle than before, and the cycle renews.

(12.50 ft [3.809 m] NAVD88) using the DGGS DTM and smooth it to contour the coastline. Along this line, we delineate the 2019 bluff toe and top using a combination of digital elevation models (DEM), orthomosaics, and oblique aerial imagery. The toe is generally defined as the seaward extent of a slope where a break to relatively flat land occurs (often a sediment transition), land continues down to the MHW line, and along that transect there exists no topography higher than the bluff toe (fig. 3). The bluff top edge is identified as the seaward extent of relatively flat land where a slope break or scarp occurs. For complex slopes with benches, the bluff top edge is landward of the benches (fig. 3). These manually delineated bluff features define the envelope where bluff face characteristics are measured.

Historical Shoreline Change Analysis

Traditionally, shoreline change is calculated by matching two aerial images taken at different times, delineating shorelines, and measuring the distance between them (Baird and Pegau, 2011; Overbeck and others, 2020). The coastal bluff erosion history in Homer has been calculated many times using this method, as recently as 2016 (City of Homer, 2021). We received the shorelines and imagery from 1951 to 2003 that were used and found two major

Figure 3. Oblique image of a coastal bluff with delineated toe (blue) and top edge (maroon). The right side shows how delineations are made for a complex section. The bluff has a bench (black dashed lines), so the delineated top edge is landward of this bench. In this example, there is a building on the bench that is seaward of the bluff top edge (far right side).

components that have caused significant errors: (1) some of the image sets are not orthorectified, and (2) delineations do not consistently follow the same features through time in all areas (switching between bluff top and toe). The affected images and shorelines are for the years 1951, 1961, 1968, 1975, and 1996. The orthorectified 2003 image is adequate. For these reasons, we source raw aerial imagery to orthorectify, delineate shorelines, and compute shoreline change using the DSAS tool (Himmelstoss and others, 2018). The orthoimagery dates are 1951/1952, 1964, 1985, 2003, 2011, and 2019 (table 2). The time steps between image collections are 12 or 13, 21, 18, 8, and 8 years, respectively.

Image Corrections

Orthometric corrections are vital for evaluating erosion of tall, steep bluffs. Buzard (2021) explains the historical aerial image orthorectification process. Historical aerial photos are initially collected with a low distortion frame lens pointed nadir. A simple method to display these images in a map is to shift and scale them to match features on the landscape. This method, called "georeferencing" or "georectification," may appear adequate from a distance, but the perspective from the image center causes offsets at finer scales (termed "relief displacement;" Crowell and others, 1991). Offsets increase near high-angle features, like bluffs, and

Table 2. Imagery used for shoreline delineations include color (RGB), color-infrared (CIR), and black and white (BW).

Date	Type	Orthomosaic pixel size (m)	Source
2019 JUL 17	RGB	0.05	OCM Partners (2021)
2011	RGB	0.75	GeoNorth BDL
2003	RGB	1.00	Baird and Pegau (2011)
1985 AUG 27	CIR	1.88	Alaska High Altitude Program
1964 APR 14	BW	0.55	Unknown
1951/1952	BW	1.14	U.S. Air Force

cause significant inaccuracy to bluff delineations. To allow for accurate measurements across the horizontal geographic plane on the image, the image must be orthorectified. Orthorectification is the process by which the perspective of an entire image is corrected to nadir: anywhere one looks in the orthorectified aerial image will appear as if looking straight down. Orthorectification can be accomplished using a DEM acquired near the same time or performing photogrammetric or structure-from-motion techniques on a collection of overlapping images. An orthorectified product is called an orthoimage or orthomosaic.

Shoreline Change Rate Calculations

The USGS created the DSAS tool to compute shoreline change by casting virtual transects perpendicular to an alongshore baseline and measuring the distance between shorelines on each transect (Himmelstoss and others, 2018). We space transects 16.4 ft (5 m) apart and calculate shoreline change rates separately for the bluff top edge and bluff toe. The average of these rates is used for the final change rate. This method summarizes total bluff erosion and is less susceptible to episodic events related to the bluff erosion cycle (Buzard and others, 2020). Where at least three shorelines are present, we calculate the weighted linear regression rate of change (WLR) and associated 90 percent confidence interval (WCI90). Otherwise, the end point rate of change (EPR) is calculated. These metrics describe the long-term erosion trend using an annualized linear rate of change in distance per year.

Shoreline Delineation

We delineate the bluff top and toe in each orthoimage. Slow and episodic bluff erosion complicates shoreline erosion calculations that rely on only one feature. For example, if the bluff toe eroded between two images and a study only calculates bluff top change, the study will incorrectly identify that bluff as stable when it is steepening and getting closer to a mass movement. Likewise, if a mass movement did occur over the study period, the bluff top edge may suggest far faster rates of erosion than will be seen in the future. Tracking the top and toe can determine what stage of the erosion cycle a bluff is in and improve understanding of current erosion hazards.

Bluff toes are generally clearly identifiable as the seaward extent of a bare or vegetated slope. Bluff tops are more subjective because some areas have partial slides or benches, leading to multiple edges. The chosen bluff top edge must represent the seaward extent of land that is neither part of a previous landslide nor a bench on a slope (fig. 3). We view the 2019 lidar to ensure the correct bluff top edge is chosen, but only use imagery for these delineations to maintain consistency. Interpretations of historical aerial imagery are aided by the DSMs produced by the orthorectification process. Where vegetation made visual interpretation challenging, the slope is visualized to identify steep slope breaks (fig. 4). This method helps to

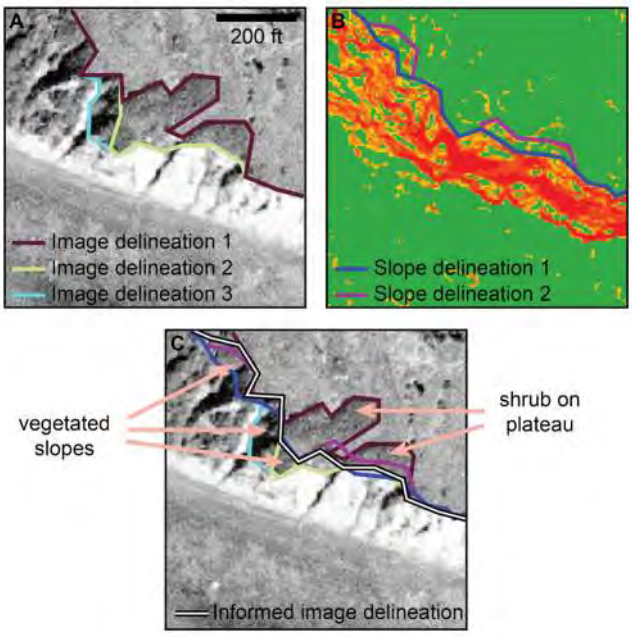

Figure 4. A. The orthoimage in 1951 has vegetation growing down the slope, making the bluff top edge challenging to identify. The three colored lines are separate interpretations of where the bluff top edge could be. **B.** The steep slope map is derived from the digital surface model created during the orthorectification process. The bluff top edge and toe are close to where steep slope angles (red) meet shallow slopes (green). **C.** A new delineation is made on the orthoimage, assisted by the interpretations from the slope map.

maintain consistent tracking of the bluff top edge and toe, especially around benches and complex bluffs. The shoreline delineations are still made using the orthoimage.

This study has one digitizer. Digitizing precision uncertainty represents the consistency with which the digitizer can interpret and trace a feature in an image. To compute digitizing precision, sections of the bluff toe totaling 3.3 miles (5.3 km) in length are delineated three times on the BDL. We cast transects at 16.4-ft (5 m) spacing perpendicular to these lines to measure the distance between them. Digitizing precision (U_d) is calculated by taking the mean of the maximum distance between the three lines (L_1, L_2, L_3) on each transect (equation 1).

Equation 1:

$$U_d = \sum_{i=1}^{n} \frac{max\left(|L_{1i} - L_{2i}|, |L_{1i} - L_{3i}|, |L_{2i} - L_{3i}|\right)}{n}$$

U_d = digitizer uncertainty

L_n = distance to baseline

The total uncertainty (U_t; equation 2) represents the positional accuracy of the delineated shorelines relative to real-world coordinates (table 3). Total uncertainty is high because all images are referenced to the BDL that has a total horizontal uncertainty of 6.3 ft (1.92 m). The total uncertainty relative to the BDL (U_r; equation 3) represents the positional accuracy of delineated shorelines relative to each other (table 4). This is a more appropriate metric for estimating uncertainty of delineations on imagery that are referenced relative to the same image.

Equation 2:

$$U_t = \sqrt{U_o^2 + U_p^2 + U_d^2}$$

Equation 3:

$$U_r = \sqrt{U_i^2 + U_p^2 + U_d^2}$$

U_t = total uncertainty of shoreline delineation

U_o = total uncertainty of image

U_r = relative uncertainty of shoreline delineation

U_t = relative uncertainty of image

U_p = pixel size

Coastal Bluff Stability Assessment

Long-term, annualized erosion rates may not adequately identify potential instability. We assess current coastal bluff stability by identifying combinations of variables that contribute to instability (similar to Maine Geological Survey, 2015). The chosen variables are erosion rate, slope angle, vegetation, water drainage, and erosion mitigation (fig. 5). (See "Study Limitations" for a discussion about these and other possible variables.) Each

Table 3. Total uncertainty of image orthorectification (U_o) and shoreline delineation (U_t). All values are in meters.

Year	Total uncertainty	Pixel size	Uncertainty to control	Uncertainty to BDL	Total image uncertainty	Digitizer uncertainty
	U_t	U_p	$U_{o,source}$	U_i	U_o	U_d
2019	**1.06**	0.05	0.07	1.92	0.07	1.06
2011	**2.32**	0.75	1.92	-	1.92	1.06
2003	**3.61**	1.00	1.92	2.69	3.30	1.06
1985	**4.20**	1.88	1.92	3.05	3.60	1.06
1964	**2.43**	0.55	1.92	0.89	2.12	1.06
1951/1952	**3.65**	1.14	1.92	2.68	3.30	1.06

Table 4. Relative total uncertainty of shoreline delineation (U_t). All values are in meters.

Year	Total uncertainty	Pixel size	Uncertainty to BDL	Digitizer uncertainty
	U_t	U_p	U_i	U_d
2019	**2.19**	0.05	1.92	1.06
2011	**1.30**	0.75	-	1.06
2003	**3.06**	1.00	2.69	1.06
1985	**3.74**	1.88	3.05	1.06
1964	**1.49**	0.55	0.89	1.06
1951/1952	**3.10**	1.14	2.68	1.06

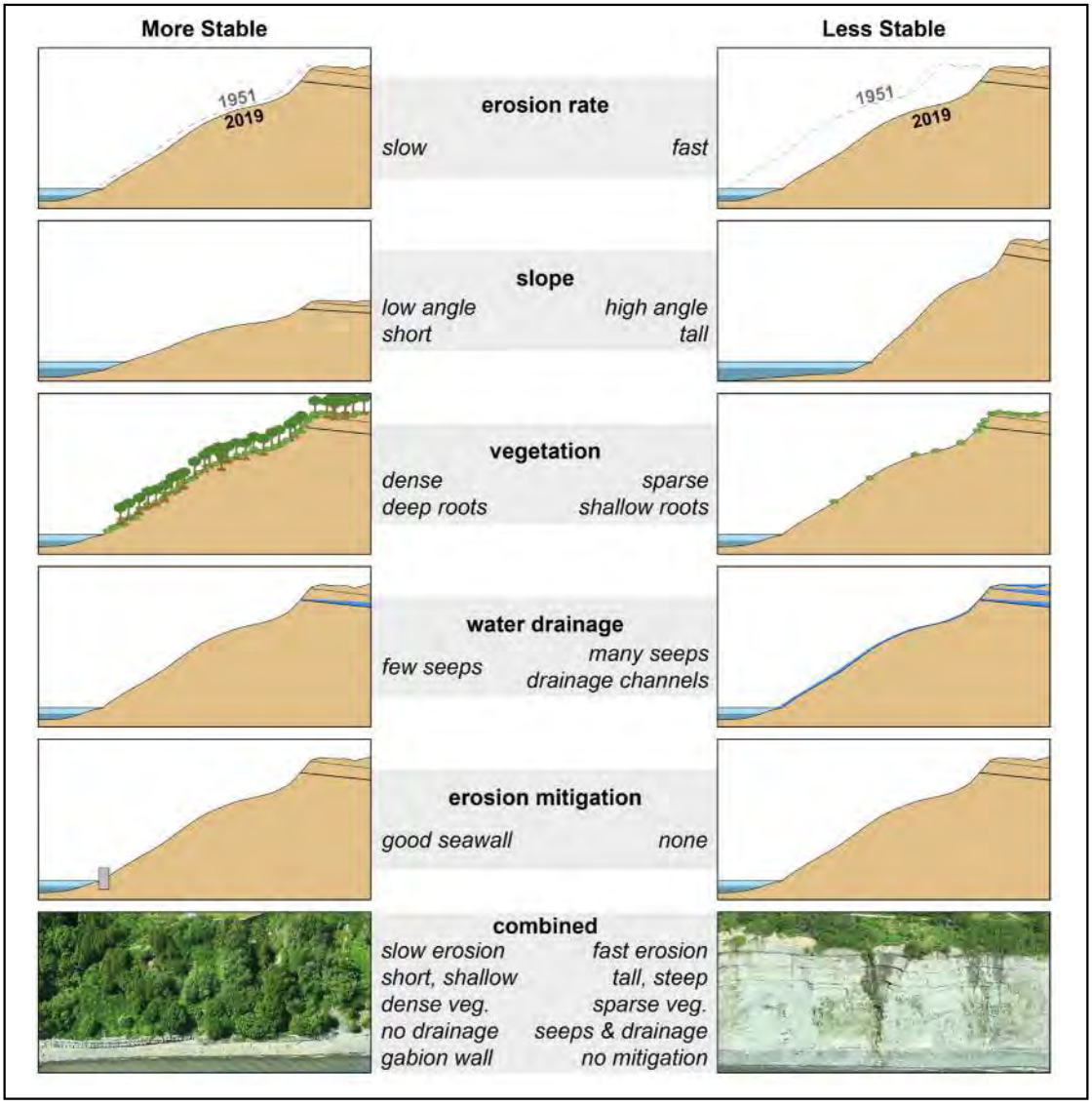

Figure 5. Conceptual diagram of bluff instability variables. The combination of variables determines the overall stability.

variable is evaluated using four instability categories: very low, low, medium, and high. The categories are combined for a total instability hazard score (fig. 5). Coastal slopes are manually identified using the delineations of the bluff top and toe from the DGGS DTM. Transects are cast perpendicular to the bluff toe at 16.4-ft (5-m) spacing along 14 miles (22 km) of shoreline. Variables are computed along each transect.

Instability Due to Erosion Rate

Coastal zone management often uses linear regression erosion rates to define coastal setback zones and erosion hazard areas (Crowell and others, 2018; Perello, 2019). We multiply the average erosion rate of the bluff top and toe by 50 years to symbolize possible future erosion distance based on observed change over the past 60 to 70 years. Fifty years is chosen because structures are commonly designed with 50-year design life (Val and others, 2019). Instability categories are based on coastal setback values of 15 and 40 ft (4.6 and 12 m; table 5). These setback distances are commonly used by homeowners or builders in Homer in compliance with existing city zoning. For example, if erosion rates suggest between 15 and 40 ft (4.6 and 12 m) of erosion will occur in the next 50 years, the location has a medium instability score in the erosion category.

Instability Due to Slope and Height

Greater slope angle increases the probability of a mass movement occurring (Highland and Bobrowsky, 2008; Kokutse and others, 2016). We use factor of safety (FOS) results to determine safe and unsafe slope angles. Salisbury (2021) calculates

Table 5. Instability category thresholds for 50 years of bluff erosion (E_{50}) based on historical erosion rates.

Instability category	Erosion distance (ft)
High	$E_{50} > 40$
Medium	$15 < E_{50} \leq 40$
Low	$0 < E_{50} \leq 15$
Very low	$E_{50} = 0$

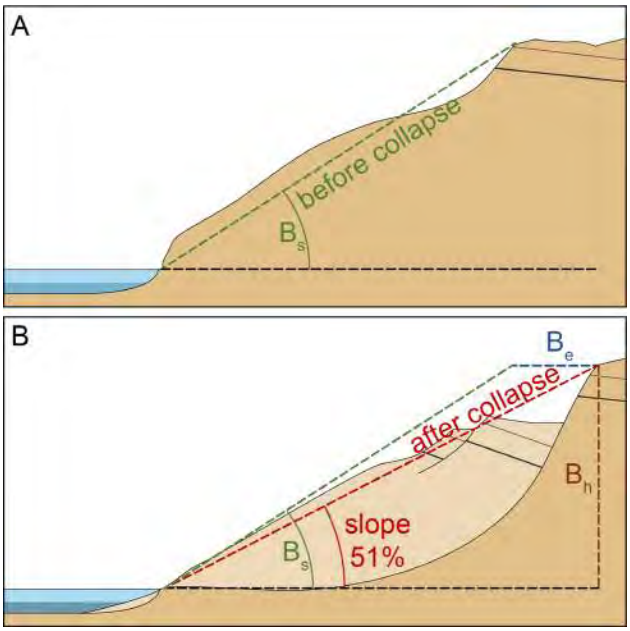

Figure 6. A. The current slope angle between the top and toe (B_s) is reduced after a mass movement **B.** Bluff erosion (B_e) is a function of height (B_h) and change from B_s to 51 slope percent. Taller and steeper bluffs experience greater horizontal erosion.

that, in Homer, silty sand slopes below 27 degrees tend to have an FOS greater than 1.5, meaning they have lower likelihood of failure. Kokutse and others (2016) find a similar slope angle threshold of 27 degrees for sand, silt, and clay slopes, like Homer's coastal bluffs. Rotational landslides are common modes of mass movement in Homer (Reger, 1979; Berg, 2009), so we use this as the failure type. We assume any slope greater than 27 degrees has some likelihood of failure, and if it fails in a rotational landslide the post-movement slope will be 27 degrees (51 percent slope) hinging roughly about the toe (Bishop, 1955; Chowdhury and Xu, 1994; Jiang and others, 2017; fig. 6). On each profile, we calculate the slope percent from toe to top (B_s) and subtract 51 percent slope to determine the angle change (equation 4).

In the context of hazards to infrastructure on the bluff, the greatest concern is the inland distance that the mass movement will reach. The erosion distance (B_e) is proportional to the height (B_h) and the change in slope (Bishop, 1955; fig. 6,

equation 4). Instability categories are based on coastal setback values of 15 and 40 ft (4.6 and 12 m; table 6).

Equation 4:

$$B_e = B_h \times (B_s - 0.51)$$

B_e = horizontal bluff erosion due to slope failure

B_h = bluff height

B_s = average bluff slope percent (as a fraction)

Table 6. Instability category thresholds for bluff erosion (B_e) due to slope failure.

Instability category	Erosion distance (ft)
High	$B_e > 40$
Medium	$15 < B_e \leq 40$
Low	$0 < B_e \leq 15$
Very low	$B_e = 0$

Instability Due to Lack of Vegetation

Exposed slopes are often used as a proxy for instability because they can imply recent failure and/or frequent erosion (Salisbury, 2021). Deforestation is commonly a contributing factor to landslides (Highland and Bobrowsky, 2008). Vegetation improves slope stability primarily through soil cohesion via root tensile strength and reduced soil moisture via evapotranspiration and reduced infiltration (Wu, 1984). Vegetation also reduces erosion from wind and surface runoff. Kokutse and others (2016) show that the FOS of non-reinforced slopes is increased by up to 19 percent by trees, 14 percent by shrubs, and 7 percent by grasses. This increase is due to the root matrix increasing soil cohesion. However, heavy precipitation can increase sediment pore pressure, reduce the tensile strength of roots, and increase surface load, leading to shallow landslides (Hales and Miniat, 2017). The increased surcharge from trees can improve stability, except on very steep slopes (Nilaweera and Nutalaya, 1999; Kokutse and others, 2016). Despite these scenarios, increased vegetation is considered a net-positive for slope stability (Wu, 1984).

The root properties influencing soil cohesion are roughly proportional to vegetation height (Kokutse and others, 2016). We quantify the instability due to lack of vegetation using a function of vegetation height and coverage, similar to Maine Geological Survey (2015; table 7). On slope profiles, we calculate vegetation height as the difference between the DGGS DSM and DTM. We use mean vegetation height on each profile to generalize the type (grass, shrub, and tree). In Alaska, vegetation is classified as a small tree when it reaches 12 ft (4 m) in height (among other variables related to canopy and trunk width; Little, 1953). However, willow—a large shrub common to Homer (Ager, 1998)—is considered a tree due to its size and likeness to trees (Viereck and Little, 1972). Therefore, we consider vegetation height exceeding 5 ft (1.5 m) to be trees and large shrubs (Viereck and Little, 1972). Per Viereck and Little (1972), we classify heights below 2 ft (0.6 m) as grasses and small shrubs. While the average vegetation height calculation includes the entire profile, we had to limit percent coverage to vegetation at or above 3.3 ft (1.0 m; medium shrub) to reduce overestimations due to DEM noise.

Table 7. Instability category thresholds for vegetation type and coverage. Ties between categories average, rounding to the less stable category. For examples, a slope with trees (low) and 25 to 49 percent coverage (medium) is in the medium category. A slope with shrubs (medium) and greater than 75 percent coverage (very low) is in the low category.

Instability category	Vegetation type and coverage
High	Grass or less than 25 percent coverage
Medium	Shrubs or 25 to 49 percent coverage
Low	Trees or 50 to 75 percent coverage
Very low	Trees and greater than 75 percent coverage

Instability Due to Lack of Erosion Protection

Existing erosion protection structures can reduce erosion rates and prevent undercutting of coastal bluffs. Complex engineered structures such as seawalls and gabions tend to prevent erosion better than simple structures like riprap or piled debris (USACE, 2004; Rella and Miller, 2012). During the 2019 lidar survey, DGGS also collected alongshore oblique aerial imagery. We orthorectify and roughly georeference these data to create high-resolution 3D models in Agisoft Metashape. Using these models and other imagery, we delineate lengths of shoreline armoring and give a qualitative score of their current condition (good, fair, or poor). Instability is categorized as a function of armoring type and current condition (table 8). Erosion protection structures can have significant detrimental effects, especially to natural sediment dynamics and beach nourishment (Ruggiero, 2010). We include existing erosion protection because it is an important factor for assessing current instability. We do not express or imply whether existing or new structures are appropriate solutions for bluff instability hazards.

Table 8. Instability category thresholds for erosion protection.

Instability category	Erosion protection condition and type
High	None, or poor riprap
Medium	Poor seawall/gabion, fair riprap
Low	Fair seawall/gabion, good riprap
Very low	Good seawall/gabion

Instability Due to Drainage

Precipitation, groundwater, and streams lead to slope instability. Surface runoff causes erosion, confining layers cause suspended water tables, and increased pore fluid pressure reduces soil cohesion (Harp and others, 2006; Bukojemsky and Scheer, 2007). The water table generally contours surface topography, and lakes and streams are surface expressions of the water table (Heath, 1983; Winter and others, 1998). We follow the assumption that areas where water collects have more groundwater flow and greater potential for related hazards.

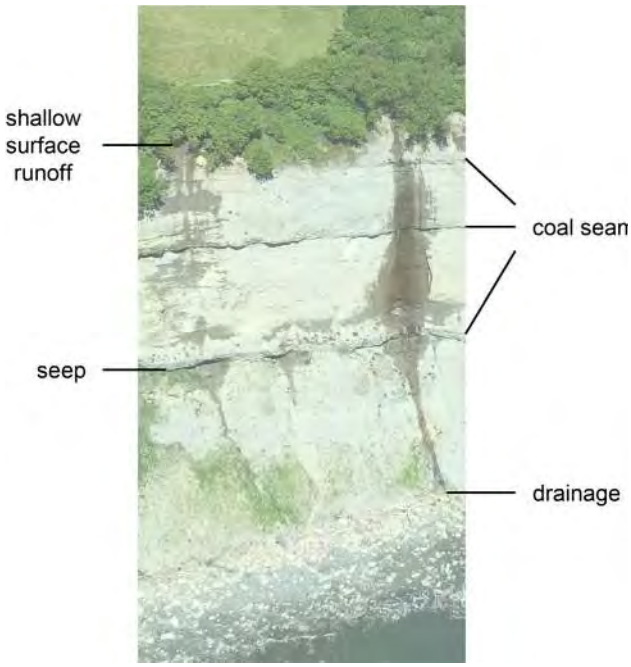

Figure 7. This 200-ft coastal bluff in Homer has surface runoff causing a continuous stream that drains to the beach. Groundwater also seeps from coal seams and other changes in the stratigraphy. Water causes channeling on the bluff face and undercuts coal seams, leading to instability.

We identify surface and groundwater expressions on the bluff slope using 3D models and imagery (fig. 7). However, many areas are obscured by vegetation, so water expressions may not be visible. In addition, the imagery only provides a snapshot in time, and conditions may have been unseasonably wet or dry. To consistently map drainage, we correlate observed hydrologic features with the flow accumulation through each transect based on the DTM. Flow accumulation represents the area of contributing streams toward a single point on the land surface within a user-defined catchment area. We identify flow channels on the DGGS DTM, correct the DTM to allow for flow through culverts under roads, then calculate the direction and accumulation of flow using ArcGIS hydrology tools. We correlate maximum flow accumulation and visible water expressions on each transect.

Shallow surface runoff and groundwater seeps tend to have lower flow accumulation than visible drainage streams and creeks. Half of all shallow surface runoff zones and seeps have flow accumulation below 27,000 ft² (2,500 m²), so this is used as a lower cutoff to identify areas at very low drainage. As flow accumulation increases to 200,000 ft² (18,500 m²), surface runoff and seeps transition to visible drainage channels. This is used as the lower threshold for medium drainage (where running water is actively causing minor erosion). Well-developed surface drainage channels primarily have flow accumulation upward of 540,000 ft² (50,000 m²), and transition to creeks as flow increases. This flow accumulation value is used for the high drainage category (table 9). The value's magnitude is somewhat arbitrary because it is limited by the user-defined catchment; hence, we correlate the relative magnitude with observed hydrologic conditions.

Table 9. Instability category thresholds for drainage.

Instability category	Drainage indicators
High	Creeks, streams, continuous flow of water causing erosion
Medium	Flow of water from seeps and runoff causing minor erosion channels on bluff and beach
Low	Seeps and runoff exist but are not causing beach erosion
Very low	Seeps and runoff are rarely present

Combining Instability Variables

Instability variables are combined into one metric to determine the hazard posed by a combination of factors that destabilize slopes. No two categories are strongly correlated (table 10). Weights are not applied, but we give special consideration for areas with coastal armoring. Like vegetation, armoring can stabilize slopes and prevent erosion (Rella and Miller, 2012). For this reason, we use the most stable score between vegetation and armoring. For example, a seawall in good condition with no vegetation scores "very low" in the vegetation category. Similarly, we adjust the erosion score to the lesser of erosion and armor. This adjustment means an area with historically rapid erosion still scores "very low" if a seawall in good condition now exists. If an area has no armoring but very slow erosion, it still scores "very low." These modifications are only applied to the calculation of combined instability hazard scores; the original individual values are still available in the geodatabase. After these adjustments, combined instability is calculated using the average score rounded to the less stable score. The

Table 10. Correlation between instability variables. Values closer to 1 are strongly positively correlated (as variable 1 increases, variable 2 increases). Values of 0 are not correlated. Values closer to -1 are strongly negatively correlated (as variable 1 increases, variable 2 decreases).

	Armoring	Erosion	Slope	Vegetation	Drainage	Combined
Armoring	1					
Erosion	0.02	1				
Slope	0.19	0.08	1			
Vegetation	-0.17	0.42	0.26	1		
Drainage	0.12	-0.04	-0.18	-0.18	1	
Combined	0.41	0.56	0.52	0.54	0.21	1

average calculation involves four category values: drainage, slope and height, the most stable score between vegetation and armoring, and the most stable score between erosion and armoring.

RESULTS

Coastal bluff hazards are assessed using a historical shoreline change analysis and by combining bluff instability variables into a categorical hazard map. The shoreline change maps are more representative of the effects of long-term erosion trends. The bluff stability map communicates the potential for slope failure that may not be reflected in the historical erosion record.

Historical Shoreline Change Analysis (Map Sheet 1: Shoreline Change [1951 to 2019])

Shoreline change rates are between 1.0 and -3.9 ft/yr (0.3 and -1.2 m/yr; tables 11, 12). Erosion rates are greatest around the Bluff Point landslide

Table 11. Coastal bluff characteristics by region in feet and slope percent. Mean values are bolded. Bluff height is the difference between the top and toe elevation. Slope angle is between the bluff top and toe. Slope angle standard deviation (SD) is shown as a range about the mean because slope percent does not scale linearly with degrees. Negative shoreline change is erosion, positive is seaward movement of the shoreline (such as by accretion, aggradation, or mass movements).

	Bluff Height (ft)				Slope Angle (percent)				Shoreline Change Rate (ft/yr)			
	Mean	SD	Min.	Max.	Mean	Mean ± SD	Min.	Max.	Mean	SD	Min.	Max.
Diamond Crk	**310**	82	186	473	**31**	23 to 39	18	51	**-0.5**	0.3	-1.2	0.3
Bluff Pt	**79**	53	17	485	**74**	41 to 121	17	184	**-1.7**	1.0	-3.7	0.8
Downtown	**139**	75	12	276	**87**	39 to 179	22	205	**-1.0**	0.5	-2.7	0.7
Munson Pt	**16**	5	1	28	**64**	40 to 94	12	114	**-0.8**	1.3	-3.9	0.8
Kachemak Dr	**55**	23	10	89	**73**	44 to 113	24	317	**-0.5**	0.6	-2.7	0.7
East End Rd	**68**	16	26	113	**56**	31 to 87	17	128	**-1.1**	0.4	-3.2	0.7

Table 12. Coastal bluff characteristics in meters and degrees.

	Bluff Height (m)				Slope Angle (degrees)				Shoreline Change Rate (m/yr)			
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Diamond Crk	**94**	25	57	144	**17**	4	10	27	**-0.15**	0.09	-0.37	0.09
Bluff Pt	**24**	16	5	148	**37**	14	10	61	**-0.52**	0.30	-1.13	0.24
Downtown	**42**	23	4	84	**41**	20	12	64	**-0.30**	0.15	-0.82	0.21
Munson Pt	**5**	2	0	9	**33**	11	7	49	**-0.24**	0.40	-1.19	0.24
Kachemak Dr	**17**	7	3	27	**36**	12	13	72	**-0.15**	0.18	-0.82	0.21
East End Rd	**21**	5	8	34	**29**	12	10	52	**-0.34**	0.12	-0.98	0.21

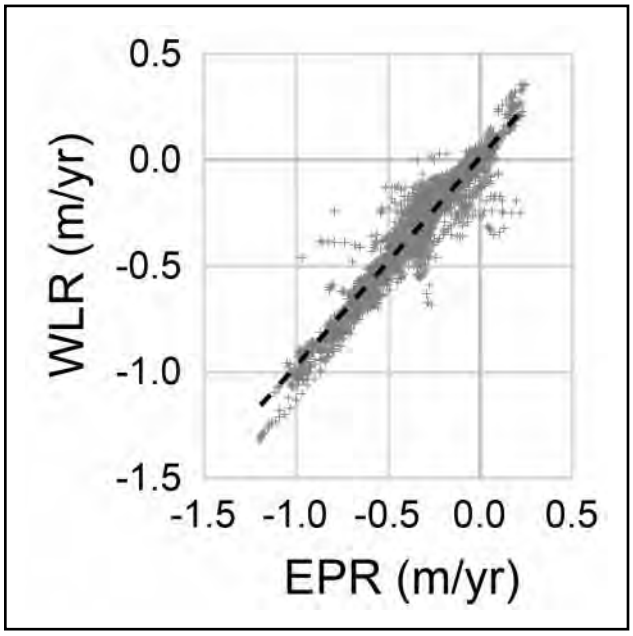

Figure 8. The end point rate (EPR) and weighted linear regression (WLR) shoreline change rate are highly correlated (slope = 0.99, R^2 = 0.92). EPR uses only the first and last shoreline. WLR uses all shorelines weighted by uncertainty.

area, Mount Augustine Drive, Bishops Beach, the seawall at Munson Point, and various sections near East End Road. Historical erosion is relatively slow or stable in the Diamond Creek area and along the section of Kachemak Drive near the airport runway. Bluff toe erosion often outpaces bluff top edge erosion from the Bluff Point landslide area to Bishops Beach, suggesting bluff steepening. The most significant toe erosion occurred after the 1964 earthquake (also observed by Stanley, 1968). Although this was a period of heightened erosion, it did not deviate significantly from the long-term change rate: the WLR rates of change are similar to EPR for both tops and toes (fig. 8). This finding suggests annualized erosion rates appropriately communicate erosion hazards in Homer, although erosion should not be expected on an annual basis. For example, if a shoreline eroded on average 3 ft/yr (1 m/yr), it may have remained stable for most of a 10-year period and eroded in one or a few episodes that total 30 ft (10 m).

Bluff Stability Assessment (Map Sheet 2: Coastal Bluff Stability)

Five variables are combined to visualize coastal bluff instability. Tall, steep bluffs with little vegetation, high drainage, rapid erosion, and no erosion protection have the highest hazard score. The area between the Bluff Point landslide and Bishops Beach is found to be the least stable. Munson Point, where the seawall now exists, is generally the most stable in all categories except historical erosion.

DISCUSSION

This coastal hazard assessment covers historical shoreline change and current bluff stability. In this section, we summarize findings and observations by location, then discuss study limitations.

Summary of Findings by Location

We break down results for six regions of Homer: Diamond Creek, Bluff Point Landslide Area, Downtown, Munson Point, Kachemak Drive, and East End Road (fig. 9; tables 11–13). Figures 10–12, 14, and 15 are screenshots from the oblique image-derived 3D model. This is a research tool to visualize the bluff complex for qualitative analysis, but many features and structures appear skewed due to insufficient overlap and camera angle.

Diamond Creek

The coastal bluffs of the Diamond Creek area reach from 250 to 500 ft (75 to 150 m) above MSL with an average slope of 17 ± 4 degrees (23 to 39

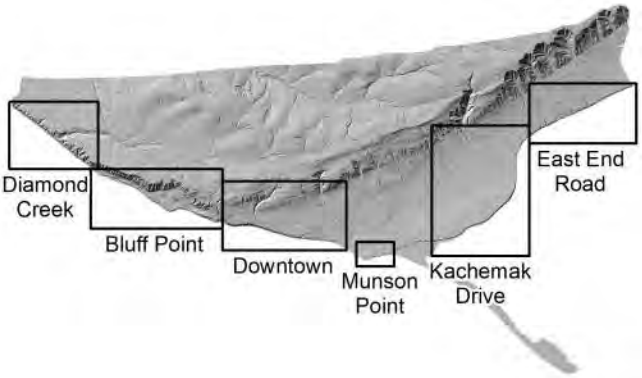

Figure 9. Discussion of results is divided into these six regions.

Table 13. Average coastal bluff instability by region. Scores range from 0 (very low instability) to 3 (high instability).

	Combined Instability	Combined Instability Score	Armor	Erosion	Slope	Veg.	Drainage
Diamond Crk	**Medium**	**1.8**	3.0	2.0	1.6	1.3	1.1
Bluff Pt	**Medium**	**2.0**	3.0	2.6	1.4	1.8	0.9
Downtown	**Medium**	**2.3**	3.0	2.7	2.0	2.4	0.7
Munson Pt	**Very Low**	**0.3**	1.2	1.4	0.8	1.8	0.3
Kachemak Dr	**Low**	**1.4**	2.8	1.7	1.3	1.5	0.4
East End Rd	**Medium**	**1.8**	3.0	2.8	0.8	1.9	0.7

Figure 10. Looking northeast at the coastal bluffs of Diamond Creek. The bluffs are tall, exposed, and undercut, leading to higher instability. This is a screenshot from our oblique image-derived 3D model.

Figure 11. Looking northwest at the Bluff Point landslide area. The coastal bluffs are the seaward-most bluffs in this screenshot from our oblique image-derived 3D model. Unlike the larger bluffs in the background, these coastal bluffs are mostly unvegetated and experience significant erosion.

percent). They are typically exposed, with grass near the coast and denser vegetation on the flanks leading to a plateau above (fig. 10). Water seeps and surface water runoff are common. Much of the area has a low to medium bluff instability score, mainly due to fast erosion rates and high drainage.

Bluff Point Landslide Area

The Bluff Point landslide area is most notable for the tallest coastal relief in Homer, reaching up to 800 ft (240 m) above MSL. The lower landscape is formed from a widespread landslide deposit (Reger, 1979). The entire bluff complex is influenced by coastal processes over geologic timescales. However, Reger (1979) explains that the inland bluffs are relatively stable because wave action only reaches the deposit. Therefore, we did not consider the larger landward bluffs to be coastal bluffs. The landslide deposit is so large that there are structures and small roads built upon it, and it has its own coastal bluffs about 30 to 100 ft (10 to 30 m) tall (fig. 11). These slopes are the second steepest in Homer, averaging 74 percent (36 degrees). This region has the fastest average erosion in Homer of -1.7 ft/yr (0.52 m/yr), reaching up to -3.7 ft/yr (-1.1 m/yr). The combined instability score of 2.0 (medium) is largely driven by these rapid erosion

Figure 12. Looking east at the steep, exposed bluffs near Mount Augustine Drive in the oblique image-derived 3D model. The bluffs gradually shorten and become less steep toward Bishops Beach.

rates and the lack of vegetation on slopes. Despite steep slopes, the hazard due to slope failure is lower because they are relatively short (there is less inland erosion due to slope failure).

Downtown

Coastal bluffs gradually transition from tall, steep, and exposed bluffs around Mount Augustine Drive to short and vegetated slopes at Bishops Beach (fig. 12). This region has a high coastal bluff instability score due to tall, steep slopes, considerable erosion, and little to no vegetation. Even though the Bishops Beach area has much shorter bluffs, there are still hazards due to rapid erosion. In general, the exposed bluffs have greater erosion at the toe than the top, indicating bluff steepening. The greatest toe erosion occurred between 1951 and 1964, likely in the aftermath of the earthquake (Stanley, 1968).

Munson Point

Munson Point has very low coastal bluff instability due to relatively short slopes and a seawall (fig. 13). Before the seawall, this area had the fastest erosion in Homer (-3.9 ft/yr, -1.2 m/yr). The area received the lowest combined bluff instability score of all regions. This is due to the short bluffs, little drainage, and significant armoring preventing further erosion.

Kachemak Drive

The coastal bluffs along Kachemak Drive have low combined instability. There is relatively slow erosion to stable shorelines, and the area with the greatest erosion is now protected by gabion seawalls. The bluffs average 55 ft (17 m) tall with slopes around 35 degrees (73 percent). Some sections of the bluffs are densely vegetated, others exposed (fig. 14). No major streams run through this area. There are still some areas with medium to high instability due mainly to steepness, height, and lack of vegetation. Overall, this region has the second lowest instability score (table 13). Although erosion rates are slow, some structures are very close to the bluff edge.

East End Road

The bluffs near East End Road have medium instability. They average 68 ft (21 m) tall with an angle of 56 percent (29 degrees), which is short and shallow relative to western Homer. However, erosion rates average -1.1 ft/yr (-0.34 m/yr), the second fastest in Homer. There is no armoring and most bluffs have light vegetation or are bare. Drainage channels and groundwater seeps are common (fig. 15). These factors compound to elevate the instability score.

Figure 13. A. This 2019 photo looking northwest at Munson Point (left) shows the seawall protecting grassy and exposed bluffs. **B.** This closeup photo shows how water comes right up to the seawall and would surely undercut the bluffs.

Figure 14. Looking west toward the partially vegetated bluffs near Kachemak Drive in the oblique image-derived 3D model.

Figure 15. Looking west toward the grassy-to-exposed bluffs and a densely vegetated creek near East End Road in the oblique image-derived 3D model. Exposed slopes show groundwater flow.

Study Limitations

This assessment is based on remotely sensed products and semi-automated techniques. This approach allows for a consistent metric to be applied across broad scales, but it is less accurate at small scales because it is unsupervised. The results are appropriate for regional-scale assessments of hazards, but localized interpretations should be made with critical judgement.

Coastal bluffs can become destabilized by several compounding environmental factors (Hampton and Griggs, 2004). When deciding which bluff stability variables to include, we consider available data, relative influence of the variable, and whether it may be correlated with other data. For example, high winds erode bluffs, but the magnitude can be relatively small compared to erosion from wave action. Including wind as a parameter may have little to no influence on the results. In addition, by measuring observed shoreline change over decades, we summarize all major eroding forces. If we include specific drivers (such as wind or wave activity) as a separate variable from historical erosion, the two may be correlated enough to bias the combined instability score. Similarly, lithology is an important factor in bluff stability. Lithology influences slope, height, drainage, vegetation cover, and how quickly a bluff erodes. Homer's coastal bluffs have similar lithology throughout (sands, silts, and clays; Barnes and Cobb, 1959; Salisbury, 2021). Due to the influence of lithology on so many variables and its homogeneity in the study area, we assume lithology is adequately represented. Ultimately, including the subtler influences of instability could improve this analysis, but they likely already factor into the existing variables.

Certain aspects of this study are automated; others are manually determined. We originally attempted an automated bluff top and toe detection using the method described by Palaseanu-Lovejoy and others (2016). The results were mostly accurate but required numerous minor fixes. Given the relatively small study area, it became faster and more accurate to delineate the bluff manually rather than correct the automated delineation. USGS recently published the Cliff Feature Delineation Tool that also follows an automated method (Seymour and others, 2020). We tested the USGS tool on our dataset and found the results unfavorable. The processing tool we built proved most useful for analyzing slope, vegetation, and drainage statistics in a small area while allowing easy manual corrections using visual interpretations.

Shoreline change analyses have well-documented limitations related to data collection, analysis methods, and non-linear change drivers (Crowell and others, 2018; Overbeck and others, 2020). When using erosion rates, some important factors to consider are changes in drivers of erosion over time. Relative sea level fall (as is documented in Seldovia; NOAA CO-OPS, 2020b) can result in fewer wave impact hours, slowing erosion of the bluff toe. Changes in prevailing wind direction and intensity could change the wave climate, although only minor changes in winds have been measured in Homer (explore climate data at uaf-snap.org). Hydrographic changes, such as river channel migration or

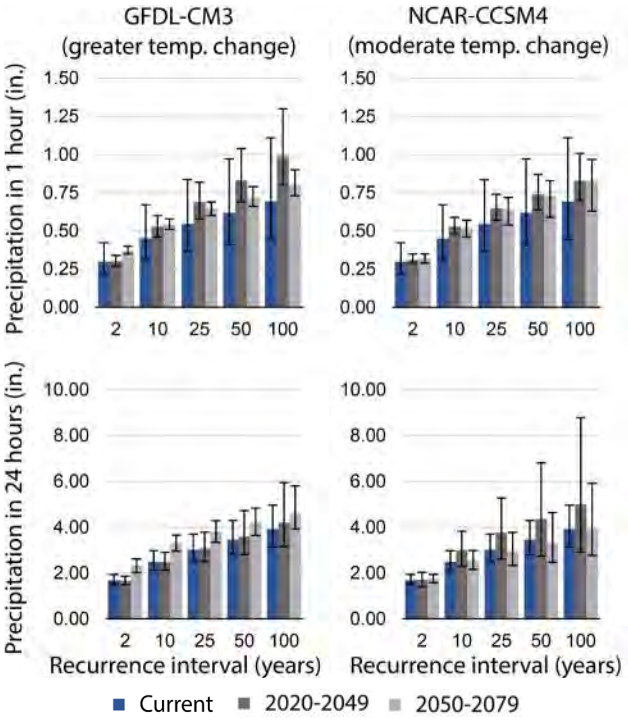

Figure 16. Current (blue) and future predicted (grayscale) precipitation trends in Homer, Alaska. The two columns show results from climate models predicting greater temperature change (left) and moderate temperature change (right). The rows show the current and predicted precipitation patterns in 1-hour (top) and 24-hour (bottom) periods. The Y axis is the total precipitation in inches. The X axis is the recurrence interval, from a 1- in 2-year event to a 1- in 100-year event. Modeled precipitation is similar to current conditions, especially considering the level of uncertainty. Data provided by uaf-snap.org.

drainage infrastructure, can bring unprecedented change to an area. Engineered structures may age or be damaged, repaired, or newly installed, changing coastal dynamics in the immediate area as well as nearby coastlines (Rella and Miller, 2012). These examples underscore the important considerations to make when using erosion rates.

Landslides can cause erosion outside the normal rate. Two major triggers for coastal bluff landslides are earthquakes and intense rainfall (Highland and Bobrowsky, 2008). Remarkably, the 1964 earthquake did not trigger major coastal landslides in Homer (Waller, 1966), but subsidence led to undercutting and swift erosion rates in the following years (Stanley, 1968). Climate model trends suggest a slight increase in extreme precipitation events in Homer, but there is no significant departure from current conditions (fig. 16). Regardless, current precipitation trends are enough to trigger landslides in Homer (Homer News, 2013). (See Salisbury [2021] for a full discussion on landslide susceptibility in Homer.)

Observations of 2009 Landslide in the Bluff Point Landslide Area

After completing this assessment, we found evidence that the 2009 landslide in the Bluff Point landslide area likely complicated erosion rates while providing insights into the connection between the coastal and inland bluffs. Between July 2 and July 3, 2009, two flanks collapsed in the Bluff Point landslide area and the beach uplifted as much as 15 ft (4.6 m), indicating a rotational slump occurred (Berg, 2009). Reger (1979) explains how these coastal bluffs are the eroded toes of rotated slump blocks from one or multiple ancient landslides. There are wide, underground shear planes connecting the inland bluffs to the coastal bluffs and beach (Berg, 2009). After a rotation, the uplifted area erodes. This process redistributes stress in the slump block back toward the bluff until another rotation occurs (fig. 2). The history of coastal erosion likely played a major role in destabilizing the bluff.

The 2009 landslide occurred across 800 ft (250 m) of shoreline, but comparisons of the 2008 and 2019 lidar reveal that the 2,500 ft (760 m) of coastal bluffs was translated seaward as far as 80 ft (25 m; fig. 17). The coastal bluffs remained mostly intact. Berg (2009) identified fissures in the slide mass that indicated active creeping. This suggests that the mass is debutressing from the inland bluff, leading to greater instability (B. Higman, written comm., 2021). Salisbury (2021) estimates that as far as 1,200 ft (366 m) inland from the bluff top edge is highly susceptible to a continued, retrogressive failure of the existing deep-seated rotational landslide block.

Where the Sterling Highway comes closest to the bluff edge (fig. 17, profile C), we did not find evidence of rotation from the 2009 landslide. The

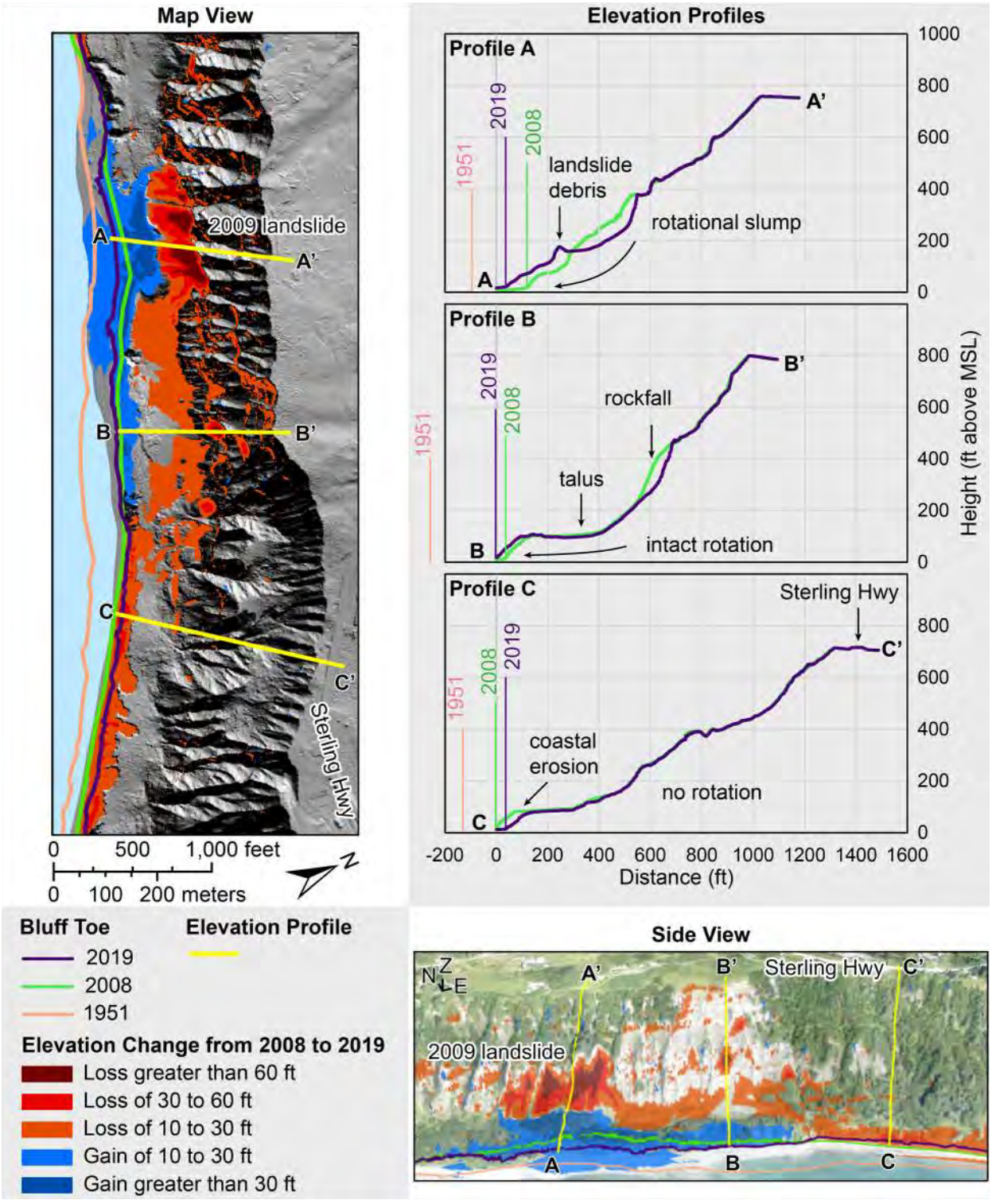

Figure 17. Map View and Side View of the region where the 2009 landslide occurred. The vertical change between the 2008 and 2019 lidar DTMs shows where the inland portion of the slump block lowered (warm colors) and rotated, uplifting the seaward section (cool colors). The bluff toe moved seaward between 2008 (green) and 2019 (purple). This is most apparent along profile A where the flank collapse occurred. On profile B, a smaller rockfall left a wide talus debris fan, and the coastal bluffs migrated seaward while remaining intact (carrying upright vegetation with them). Southeast of this area the rotation appears to end, and profile C has regular coastal erosion (also indicated by warm colors).

erosion history is similar to the nearby failure area, but the bluff is less steep. Continued erosion and bluff steepening decreases stability.

CONCLUSION

We assess coastal bluff stability for the Homer region using a shoreline change analysis and a combined coastal bluff instability score. Results indicate slow and ongoing erosion is steepening bluffs and encroaching on existing structures. Many bluffs have greater instability due to their height and slope, erosion at the toe, and lack of vegetation. The coastal bluff stability products highlight existing hazards and are tools to guide decisions to improve community safety.

ACKNOWLEDGMENTS

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DRAFT Shoreline Change (1951 to 2019)

Homer, Alaska

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Shoreline Change Rate

	meters/year	(feet/year)
Erosion	-1.2 to -1.0	(-3.9 to -3.3)
	-1.0 to -0.3	(-3.3 to -1.0)
Stable	-0.3 to 0.3	(-1.0 to 1.0)
Accretion		

Transect length is the shoreline change envelope, which is the distance between the two farthest-apart shorelines at that location.

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

website: dggs.alaska.gov

N

0 1 Mile

0 1 Kilometer

1:50,000

Projection: NAD83 (2011) UTM Zone 5N. Orthoimagery from the Alaska High Resolution Imagery available from agc.dnr.alaska.gov/imagery_services.html

The bluff top and toe are delineated from historical photographs collected between 1951 and 2019. Using the Digital Shoreline Analysis System developed by the U.S. Geological Survey, the measured distance between shorelines through time determines the linear rate of shoreline change at shore-perpendicular transects. The transect length indicates the distance between the nearest and farthest bluff toe between 1951 and 2019. The shoreline change envelope is colored by the shoreline change rate (meters/year and feet/year), with hot colors representing erosion and cool colors representing accretion. The average linear rate of the bluff top and toe is used for the visualized change rate. Linear rates of shoreline change are simplified and do not accurately reflect shoreline erosion and accretion at all locations.

This work is funded by the Federal Emergency Management Agency. The Alaska Division of Geological & Geophysical Surveys is a Cooperating Technical Partner.

DRAFT Coastal Bluff Stability

Homer, Alaska

Report of Investigation 2021-X
Buzard and Overbeck, 2021
Sheet 2 of 2

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

website: dggs.alaska.gov

N

0 1 Mile

0 1 Kilometer

1:50,000

129

Projection: NAD83 (2011) UTM Zone 5N. Orthoimagery from the Alaska High Resolution Imagery available from agc.dnr.alaska.gov/imagery_services.html
Coastal bluff vulnerability represents the potential for and impacts of slope failure. Vulnerability is estimated using slope angle, height, historical erosion, existing shoreline protection, vegetation, and drainage patterns. Red and orange areas tend to have faster erosion rates, less vegetation and protection, and taller and/or steeper bluffs.Green and blue areas generally have shorter and less steep slopes and more vegetation and/or protection. Some green and blue areas may not technically be coastal bluffs. Light blue areas are generally creekbeds or flanks.

This work is funded by the Federal Emergency Management Agency. The Alaska Division of Geological & Geophysical Surveys is a Cooperating Technical Partner.

THE STATE of ALASKA
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DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

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Homer Planning Commission &
City of Homer

November 24, 2021

RE: Considerations for coastal bluff definitions and coastal setbacks Homer, Alaska

The Alaska Division of Geological & Geophysical Surveys (DGGS) is charged by Alaska state statute to determine the potential geologic hazards that impact Alaska's people and infrastructure. DGGS, with a letter of support of the Homer Planning Commission received a competitive grant from the Federal Emergency Management Agency to conduct a coastal bluff stability analysis of the City of Homer. In addition, DGGS will provide considerations and data to the Homer Planning Commission that would inform the Commission should they seek changes to the Homer City Code. This letter outlines the current policy and how policy language relates not only to the current physical state of coastal bluffs but also descriptions of coastal setback policies from other states and how existing data may be used as tools in creating new policies. This letter is not meant to persuade policy change recommendations.

Many resources are available from the NOAA Coastal Zone Management program and various state management program counterparts outside of Alaska, as well as user guides for implementing land use regulations due to natural hazards. A great resource is the Oregon Landslide Hazard Land Use Guide (Sears and others, 2019), which encourages: making use of technical information and assistance, clearly linking the implementation of provisions (zoning code, building code, etc.) to technical information, and referring to documentation and maps in provisions, among other goals. These recommendations clearly state the importance of utilizing geologic and geographic information in the development and enforcement of land use regulations and provide guidance on implementing suggestions beyond what this document could accomplish.

DGGS conducted a remote sensing analysis of historical shoreline change and coastal bluff stability of Homer. The analysis has three primary components:

1. Computations of physical parameters that describe Homer bluff morphology (including bluff top edge, toe, and slope)
2. Historical shoreline change assessment with updated (from Baird and Pegau, 2011) methods for image processing to decrease uncertainty, re-identification of shorelines, and added imagery from historical and recent aerial imagery collections.
3. Coastal bluff stability map using a metric which considers historical erosion rate, horizontal distance of bluff failure from 2019 slope to a uniformly defined stable position, vegetation type and cover, presence of existing erosion protection, and drainage of surface and groundwater runoff.

The full analysis (Buzard and Overbeck, in prep) is in preparation and will be available in draft upon request of this commission and to the public upon final publication.

Regulations across the U.S. define coastal bluffs in many ways, usually mechanistically, geometrically, or some combination of both. The current definition of a coastal bluff in the Homer City Code is written such that the code does not identify any coastal bluffs in Homer (Table 1). Because of this issue, bluff parameters and applicable geometric and mechanistic definition examples from other states are described below (Tables 1 & 2).

Table 1. Homer City Code definitions for coastal bluffs and bluff parameters measured at Homer.

Jurisdiction	Source	Description
City of Homer	https://www.codepublishing.com/AK/Homer/#!/html/Homer21/Homer2144.html	**Steep Slope:** *starts at 45%* Buildings are not allowed to be built on these slopes unless approved by City Engineer.
	https://www.codepublishing.com/AK/Homer/cgi/defs.pl?def=25	**"Bluff"** means an abrupt elevation change in topography of at least 15 feet, with an average slope of not less than 200 percent (two feet difference in elevation per one foot of horizontal distance). *In Homer, most coastal bluffs have slopes between 31 and 87 percent.*
	https://www.codepublishing.com/AK/Homer/cgi/defs.pl?def=45	**"Coastal bluff"** means a bluff whose toe is within 300 feet of the mean high water line of Kachemak Bay. *The coastal bluff must first be defined as a bluff, which the current coastal bluffs in Homer do not satisfy. Then a measured distance must be made between the bluff toe and the mean high water line, however, a bluff toe is not defined.*
None	Measurements from Buzard and Overbeck (in prep)	In 2019, bluff parameters were measured from lidar and quality controlled with coincident aerial imagery to interpret bluff toe, bluff top edge and benches along the coast of Homer. **Bluff toe** - generally defined as the seaward extent of a slope where a slope break to relatively flat land occurs (often a sediment transition), land continues down to the MHW shoreline. **Bluff top edge** - the seaward extent of relatively flat land where a slope break or scarp occurs. For complex slopes with one or more benches, the bluff top edge is landward of the benches. **Bench** - a platform mid-slope of a larger slope complex that typically shows exposed earth upslope.

Table 2. Example definitions of coastal bluffs in other states.

California	Code of Regulations 10-5.2204 4 CCR § 13577 https://govt.westlaw.com/calregs/Document/I2EA4E8D32D044C78BF258B4F0DA30B08?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)	(h) Coastal Bluffs. Measure 300 feet both landward and seaward from the bluff line or edge. Coastal bluff shall mean: (1) those bluffs, the toe of which is now or was historically (generally within the last 200 years) subject to marine erosion; and (2) those bluffs, the toe of which is not now or was not historically subject to marine erosion, but the toe of which lies within an area otherwise identified in Public Resources Code Section 30603(a)(1) or (a)(2). Bluff line or edge shall be defined as the upper termination of a bluff, cliff, or seacliff. In cases where the top edge of the cliff is rounded away from the face of the cliff as a result of erosional processes related to the presence of the steep cliff face, the bluff line or edge shall be defined as that point nearest the cliff beyond which the downward gradient of the surface increases more or less continuously until it reaches the general gradient of the cliff. In a case where there is a steplike feature at the top of the cliff face, the landward edge of the topmost riser shall be taken to be the cliff edge. The termini of the bluff line, or edge along the seaward face of the bluff, shall be defined as a point reached by bisecting the angle formed by a line coinciding with the general trend of the bluff line along the seaward face of the bluff, and a line coinciding with the general trend of the bluff line along the inland facing portion of the bluff. Five hundred feet shall be the minimum length of bluff line or edge to be used in making these determinations.
New Jersey	7:7-9.29 https://www.nj.gov/dep/rules/rules/njac7_7.pdf	(a) A coastal bluff is a steep slope (greater than 15 percent) of consolidated (rock) or unconsolidated (sand, gravel) sediment which is adjacent to the shoreline or which is demonstrably associated with shoreline processes. 1. The waterward limit of a coastal bluff is a point 25 feet waterward of the toe of the bluff face, or the mean high water line, whichever is nearest the toe of the bluff. 2. The landward limit of a coastal bluff is the landward limit of the area likely to be eroded within 50 years, or a point 25 feet landward of the crest of the bluff, whichever is farthest inland. 3. Steep slopes, as defined at N.J.A.C. 7:7-9.32, are isolated inland areas with slopes greater than 15 percent. All steep slopes associated with shoreline processes or adjacent to the shoreline and associated wetlands, or contributing sediment to the system, will be considered coastal bluffs.
Michigan	https://www.govinfo.gov/content/pkg/CZIC-gb459-5-g8-g786-1979/html/CZIC-gb459-5-g8-g786-1979.htm	1. Bluffline means the line which is the edge or crest of the elevated segment of the shoreline above the beach which normally has a precipitous front inclining steeply on the lakeward side.
Connecticut	Gen. Stat. Ann. § 22a-93	Coastal bluffs and escarpments means naturally eroding shorelands marked by dynamic escarpments or sea cliffs which have slope angles that constitute an intricate adjustment between erosion, substrate, drainage and degree of plant cover.

Maine	Ch. 1000, 38 M.R.S.A § 435-449 https://www.law.cornell.edu/regulations/maine/06-096-Me-Code-R-Ch-1000	For principal structures, water and wetland setback measurements shall be taken from the top of a coastal bluff that has been identified on Coastal Bluff maps as being "highly unstable" or "unstable" by the Maine Geological Survey pursuant to its "Classification of Coastal Bluffs" and published on the most recent Coastal Bluff map. If the applicant and the permitting official(s) are in disagreement as to the specific location of a "highly unstable" or "unstable" bluff, or where the top of the bluff is located, the applicant may at his or her expense, employ a Maine Registered Professional Engineer, a Maine Certified Soil Scientist, a Maine State Geologist, or other qualified individual to make a determination. If agreement is still not reached, the applicant may appeal the matter to the board of appeals.

The purpose of coastal setbacks are to avoid coastal bluff erosion or mass wasting impacting infrastructure over a design life or home mortgage period. Currently in Homer, structures may not be built closer than 40 feet from the top of a coastal bluff, and not closer than 15 feet from the toe (less common). Through the analysis of Buzard and Overbeck (in prep), we find scenarios where erosion or bluff failure may encroach further than 40 feet over a 30-year timeframe. DGGS uses two different methods for computing forecast erosion distances, both of which have inherent uncertainties. The first method assumes the historical erosion rates continue over a 30-year timeframe (multiply the erosion rate by 30 years to determine distance). The second method assumes a bluff could erode due to slope failure from its current height and slope to a slope with a low risk of failure (similar to Kokutse and others [2016] for sand, silt, and clay slopes as described in Salisbury [in prep]; Figure 1). Such events may occur over decadal to centennial timescales (or longer), so the measured erosion rates may not reflect this phenomenon.

$$B_e = B_h \times (B_s - 0.51)$$

B_e = Horizontal bluff erosion due to slope failure
B_h = Bluff height
B_s = Average bluff slope percent (as a fraction)

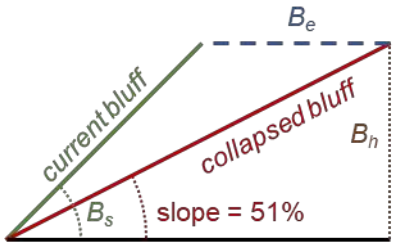

Figure 1. Equation and schematic of bluff relaxation computation from Buzard and Overbeck (in prep).

Erosion distances using both methods are mapped by parcels within the City of Homer (Figures 2 & 3). The mapped erosion distance for each parcel boundary is determined by taking the maximum erosion distance (for either the 30-year forecast-Figure 2 or the slope failure distance-Figure 3) and applying that distance to the entire parcel. To evaluate the overlap in either methods, we map them both, showing only the parcels with erosion greater than 40 ft (from either method; Figure 4). Using these methods, we find that a total of 69 parcels (36% of all parcels on coastal bluffs) have computed erosion distances greater than 40 ft somewhere along the parcel. These values can be utilized to determine whether changes to the coastal setback distance are needed in any future updates to the Homer City Zoning Code.

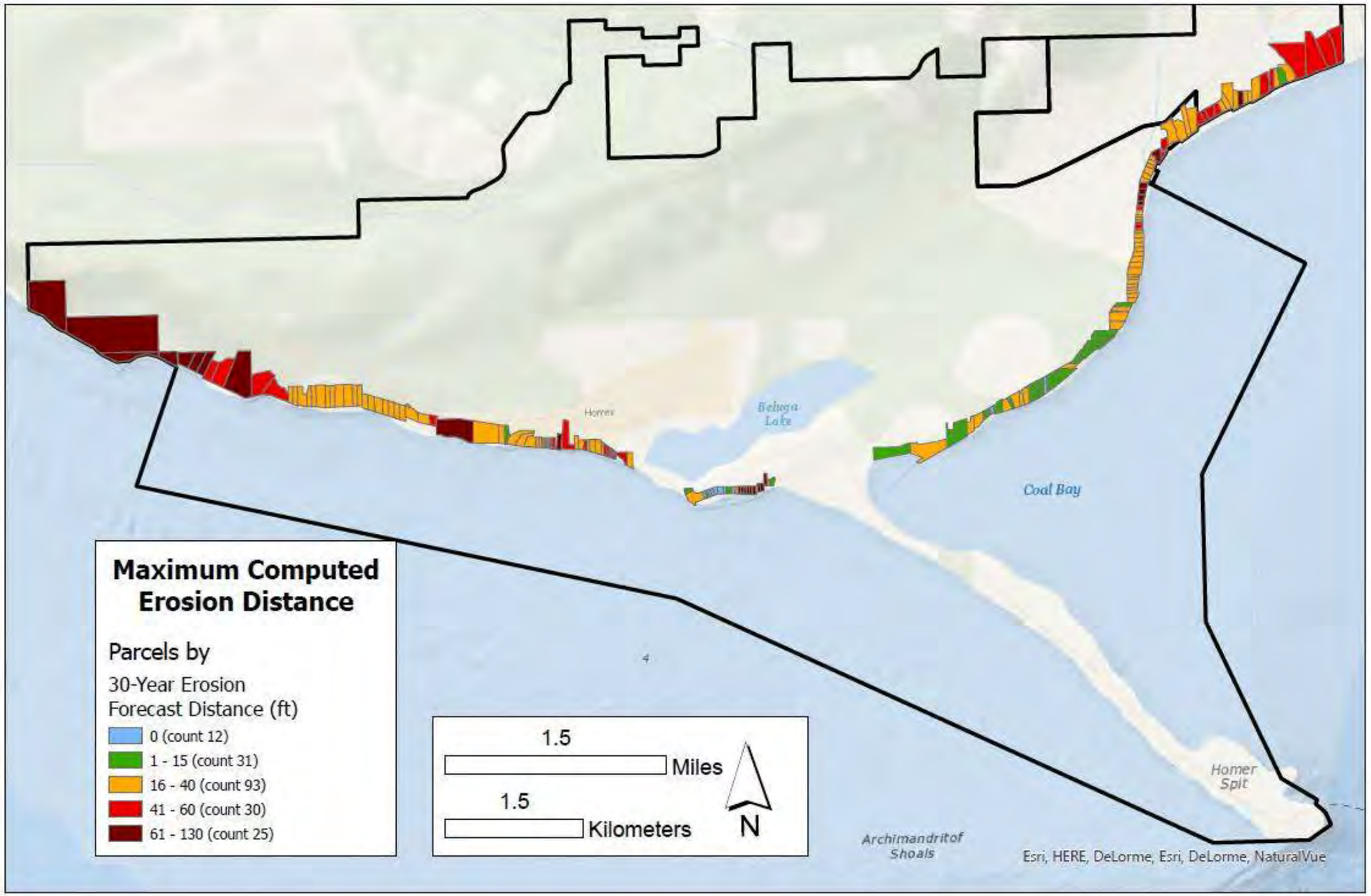

Figure 2. City of Homer parcels on coastal bluffs are symbolized by the maximum 30-year erosion forecast distance for coastal bluff erosion. This map shows 55 total parcels with a maximum erosion distance greater than 40 ft. The total number of parcels on coastal bluffs are 191, resulting in 29% of parcels having at least some section of their bluffs with an erosion distance greater than 40 ft. This City of Homer boundary is shown as a thick black boundary. Parcels are not differentiated between developed and undeveloped.

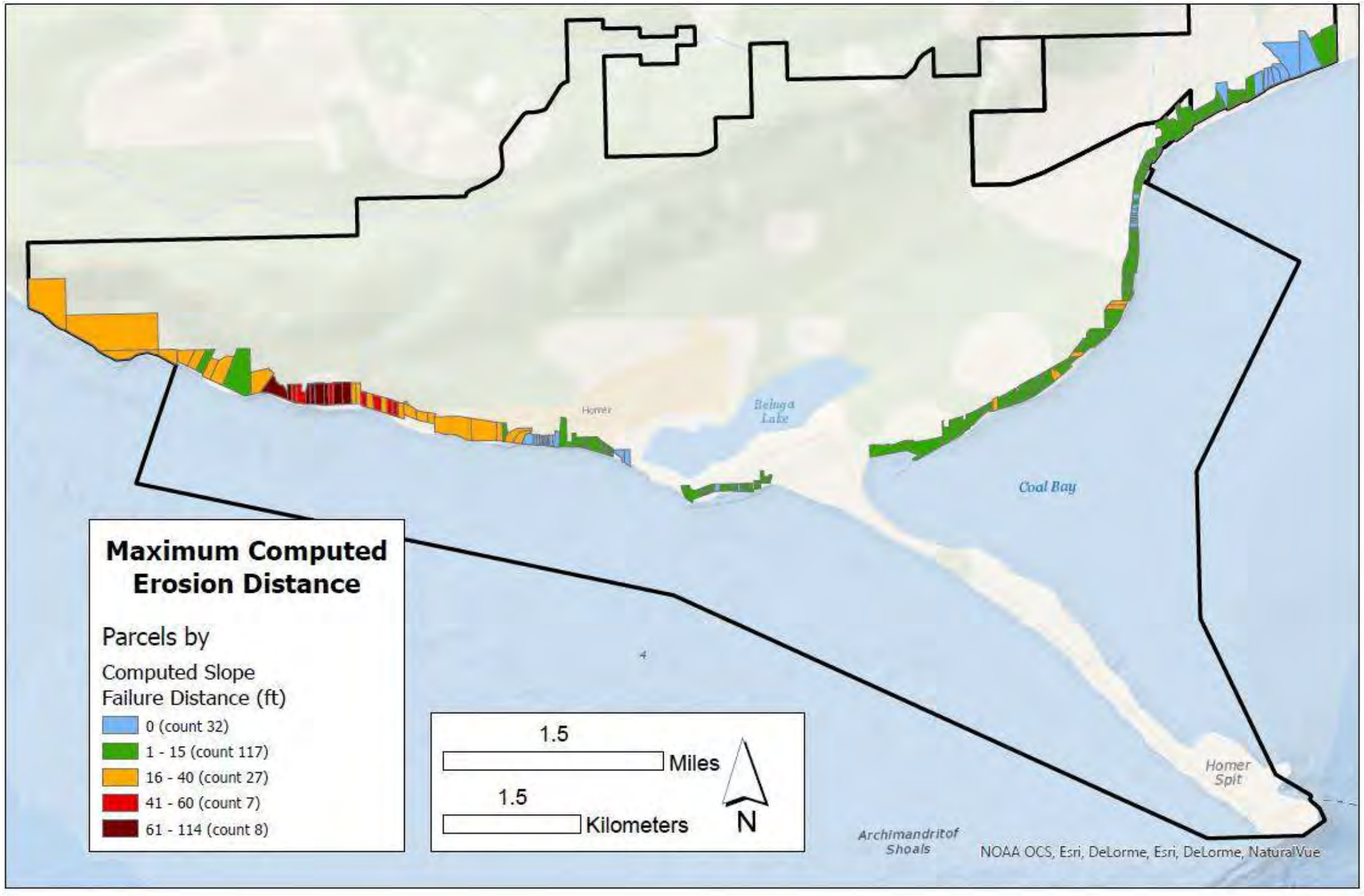

Figure 3. City of Homer parcels on coastal bluffs are symbolized by the maximum slope failure distance for coastal bluff erosion. This map shows 15 total parcels with a maximum erosion distance greater than 40 ft. The total number of parcels on coastal bluffs are 191, resulting in 8% of parcels having at least some section of their bluffs with an erosion distance greater than 40 ft. This City of Homer boundary is shown as a thick black boundary. Parcels are not differentiated between developed and undeveloped.

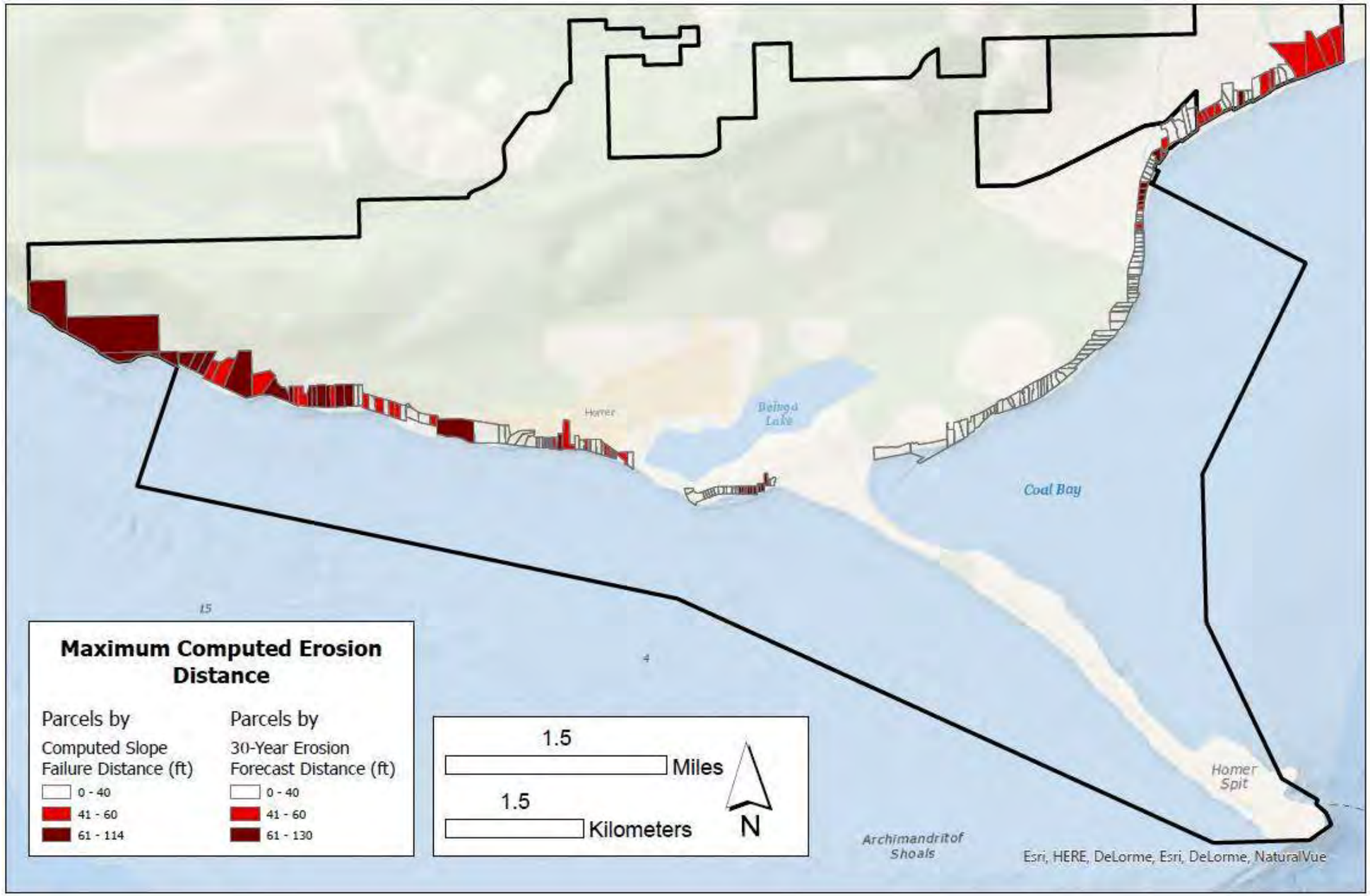

Figure 4. City of Homer parcels on coastal bluffs are symbolized by either the maximum 30-year erosion forecast distance or the computed slope failure distance for coastal bluff erosion. This map shows 69 total parcels with a maximum erosion distance greater than 40 ft. The total number of parcels on coastal bluffs are 191, resulting in 36% of parcels having at least some section of their bluffs with an erosion distance greater than 40 ft. This City of Homer boundary is shown as a thick black boundary. Parcels are not differentiated between developed and undeveloped.

Other states in the U.S. have well developed policies for coastal setback determinations or building restrictions due to erosion zonation. Examples from other states are compared to the current Homer City Zoning Code (Table 3).

In general, most states utilize a metric that is either defined at a set distance from a regulatory boundary (e.g., 150 feet from the ordinary high water mark) or by a timeline in which historical erosion rates are forecast to impact an area (e.g., a 30-year timeline with an erosion rate of 1 foot per year would make the setback 30 feet). Regulations become far more complex not only due to options for authorities to adjust policy among county or municipal boundaries (one county to the next may have a different policy) but also because greater limitations may be applied for areas considered at high erosion risk or ecologically important. These types of designations are expressed both linearly along the shoreline and as mapped zones (areas or polygons).

Table 3. Coastal setback examples from other states and parameters relevant to Homer coastal bluffs.

Homer City Zoning Code	
21.44.030 Slope development standards	No structure may be closer than 40 ft from the top of a coastal bluff, and not closer than 15 feet from the toe.
Homer Bluff Parameters from Buzard and Overbeck (in prep) City of Homer Boundaries	
Shoreline change analysis	Shoreline change rates range from 1 to 3.7 feet per year. Based on historical rates of shoreline change, 55 parcels (29%) are expected to undergo greater than 40 ft of erosion over a 30-year period.
Coastal bluff stability analysis	Horizontal bluff erosion due to slope failure ranges from zero to 114 feet, with 15 parcels (8%) with computed slope failure distances greater than 40 ft.
Combined	Combining these methods, there is only one parcel with overlap, resulting in 69 parcels (36%) with computed erosion distance greater than 40 ft.
Coastal Setback Examples from Other States	
Minnesota (outside high erosion areas)*	For non-erosion hazard areas: 75 feet from ordinary high water line elevation. 50 ft from shoreland in City of Duluth.
Minnesota (in North Shore Management Board Zone high risk erosion area)*	The annual erosion rate times 50 plus 25 feet from the top edge of the eroding bluff. 125 feet where annual erosion rate is unknown (based on 1989 map).
Michigan*	Determined by 30 (readily moveable structure) or 60 (non-readily moveable structure) year projected recession lines. Calculated as the recession rate ft/yr * 30 or 60 (depending on structure type) plus 15 ft. The state statute mandates that the erosion hazard line (EHL) be measured in reference to vegetation, which can be complicated due to various disturbances and fails to take the geomorphology of the site in account.
Ohio*	Required permitting in coastal erosion area. Defined using transects limitations on building in the defined area which represents the 30-year linear trend forecast of erosion. Mandatory updating of maps every 10 years.
Maine	All new principal and accessory structures shall be set back at least one hundred (100) feet, horizontal distance, from the normal high-water line of great ponds classified GPA and rivers that flow to great ponds classified GPA, and seventy-five (75) feet, horizontal distance, from the normal high-water line of other water bodies, tributary streams, or the upland edge of a wetland, except that in the General Development I District the setback from the normal high-water line shall be at least twenty five (25) feet, horizontal distance, and in the Commercial Fisheries/Maritime Activities District there shall be no minimum setback. In the Resource Protection District the setback requirement shall be 250 feet, horizontal distance, except for structures, roads, parking spaces or other regulated objects specifically allowed in that district in which case the setback requirements specified above shall apply.
Washington	Up to individual counties. Most examples are quite complex, including multiple buffer zone types (characterized zone—ecological function, human alteration, open space, public access, forecast rate, and single value). A minimum setback of 150 feet.

**see full text reference from Perello (2019)*

The geospatial datasets used to assess the coastal bluffs in Homer will be made available to the public so that physical features, metrics, and erosion rates (with uncertainties) described in this paper can be referenced.

For additional information or to gain access to the report of investigations on Homer Coastal Bluff Stability, please contact Jacquelyn Overbeck, information below.

Regards,

Jacquelyn Overbeck
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Coastal Hazards Program Manager
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Division of Geological & Geophysical Surveys
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jacquelyn.overbeck@alaska.gov

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Sears, Tricia R., Lahav, Marian, Burns, William J., and McClarey, Justin, October 2019, Landslide hazards land use guide for Oregon communities: Oregon Department of Conservation and Development and Oregon Department of Geology and Mineral Industries. https://www.oregon.gov/lcd/Publications/Landslide_Hazards_Land_Use_Guide_2019.pdf

A. Staff Report 22-01, City Planner's Report

City Planner Abboud reviewed his staff report that was included in the packet. He commented further on the following:

- Appeal to dismiss the withdrawn CUP application was moved to Hearing Officer
- Looking at Tax Foreclosures on Kachemak Drive
- He recorded a presentation which the link was provided in his report in the packet
- Still working on the permitting software
- Worked a bit on the Hazard Mitigation Plan update
- Reviewed the proposed Rural Residential Rezone update
- EDC December meeting update
- Multi-use Community Center update

City Planner Abboud responded to Commissioner Venuti regarding status of data on the asbuilts provided by builders. He noted that notices have been sent out and they are preparing to send out a stronger reminder. He will provide some statistics in his next report.

Commissioner Conley requested clarification on the presentation materials regarding the homelessness.

City Planner Abboud stated he will email commissioners the link.

Commissioner Bentz requested an update on the hazard mitigation planning process timeline.

City Planner Abboud facilitated questions and answers on the following:

- status update on the number of asbuilts submitted
  - City Planner will provide statistics in the next meeting packet
- Clarification on the Homeless Coalition Presentation materials
  - City Planner will provide a link to the Commissioners
- Hazard Mitigation Planning Process timeline
  - This is not his timeline but he is hoping to be completed in a couple of months but it depends on the other parties involved, City Planner will try to get that information nailed down

PUBLIC HEARINGS

PLAT CONSIDERATION

PENDING BUSINESS

A. Staff Report 22-03 Coastal Bluff Analysis

Chair Smith Introduced the item by reading of the title and invited City Planner Abboud to provide his report.

City Planner Abboud reviewed his staff report and what has been discussed by the Commission:

- establishing a 40 foot setback from a bluff and needing input from the Commission on this distance
- allowance to bring in an engineer, needing additional input from Commission
- bringing the proposed code language for review by building professionals and engineering professionals

City Planner Abboud then facilitated discussion on the following:

- definition of coastal buff would mean along the water's edge and bluff top edge would be the inland and away from the water
- needing to cross reference to make sure that they do not have a definition already
- review of the steep slope again to make sure that they are covered inland
- time frame to use should be based on the use of the 30 year planning since that is what was used for the data and science
- 40 foot setback is used as a building code guide and 60 foot get them where they want to be on the DNR land in the area of Baycrest Overlook
- Obtaining data on the average of how long a family stays in a home, thirty years works for the financing but not everyone stays in their home for thirty years and not guiding this based on mortgages and insurance
- Keeping the data relative to the dynamics of the structure and not the habit of the persons who occupy it
    - there are only a handful of structures that could be 50 years old, but structures that were built 20 years ago are substantially different than those built 35 years ago
    - Homer does not have a building code
    - review of other studies they would figure their measure and add 10 feet
    - How long should they give a structure pertaining to expected life of a structure
        - Dependent on how they were built, examples of structures that were constructed prior to the 1964 earthquake are still standing and structurally sound while there are many built in the 1970's that have multiple problems as they were built by individuals who did not have the necessary knowledge.
        - 30 years is the minimal time
- Different areas of Homer have experience various rates of erosion such as towards the west experienced 1.7 feet per year loss compared to the east along Kachemak Drive or East End have ½ a foot or less each year and using a overall instability as a metric using the data in the study. Referring to the Table 13 on page 42 of the packet.
    - Checking back with Ms. Overbeck on rates that were used in the table
    - Munson Point was provided as an example that the setback would not need to be increased from the standard due to the low instability score due to the preventative measures
- Clarification on the area of "downtown" that is being referred to was requested
- There are some areas along Kachemak Drive that lost 20 feet in one year, it was interesting that it has such a low score
- Review of communities in the United States shows that there are no set standards, each community has different regulations
- Establish an unattainable distance so that there will be no building in the future and then there will never be a failure

- Regulations that limit the use of private property to the effect that it deprives the property of any value amounts to a taking and is something to consider.
- Checking on the element of rising sea levels and increase in the strength of storms is something to consider
    - There is probably some consideration but the sea levels and glacier retreat has been really small increments and calculated in millimeters, City Planner Abboud will double check that data with Ms. Overbeck
    - Current land level is outpacing the sea level rise but the increasing frequency and intensity of coastal storms addresses that but considering that we have been looking at data that addresses the past does not lend itself for what they may experience in the future and that faster erosion rates could be experienced.
    - That supports the increase by 10 feet because Mother Nature is not going to get better and difficult to predict.

B. Staff Report 22-05, Storage Container Dwellings

Chair Smith introduced the item and requested City Planner Abboud to provide his staff report.

City Planner Abboud provided a summary of the Staff Report 22-05 and noted the prior discussions conducted by the Commission. He noted that a recommendation was made for Commissioner's to work with staff to produce some proposed code but there was none received by the planning department.

City Planner Abboud noted that Commissioner Venuti requested this item to be on the agenda through the Chair and then requested Commissioner Venuti to speak to the topic.

Commissioner Venuti provided a history of his experience and certifications as well as licensures and how long he has worked in the construction industry. He acknowledged that not everyone can afford a $300,000-$500,000 home and that recycling a container into a dwelling may be appealing to some people. Commissioner Venuti proceeded to provide his reasons for not allowing the use of shipping containers as dwellings for the following reasons:

- safety and health hazards with materials used in shipping containers
- aesthetics
- there is no standards for construction
- there are no requirements for inspection
- Not appropriate structure to be used in the urban or residential zones of the city where residents are heavily invested using more conventional means
- Use of shipping containers he believes will devalue the neighboring properties
- Community Design Manual does not support the use shipping containers

VENUTI/HIGHLAND MOVED THAT THE CITY OF HOMER LIMITS THE USE OF SHIPPING CONTAINERS CONVERTED INTO HOMES TO THE CENTRAL BUSINESS DISTRICT, MARINE COMMERCIAL DISTRICT AND EAST END MIXED USE DISTRICT.

Discussion ensued by the Commission on the following points:

- Toxicity and safety requirements, are what would be found in Building Code which the City does not have;

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Staff Report PL 22-07

TO: Homer Planning Commission
FROM: Rick Abboud, AICP, City Planner
DATE: 2.2.22
SUBJECT: Coastal Bluff Analysis

Introduction

No decisions were made about regulations of coastal properties at the last meeting. I did contact Jaci with DGGS and inquired about the Coastal Bluff Stability map when it was suggested by the Commission to investigate if it would be proper to use the map as a modifier of setback policy. She did offer to go into further details if needed. I also could find no source of data regarding the length of occupancy of coastal structures. Please refer to your last packet for the study and maps or request another copy from the office.

Analysis

I do want to reinforce the use of our current code as a starting point. After study of the Coastal Bluff Stability map, I have found that the information supports the suggestion of making tighter code to perform as it was intended to when adopted. As the Stability map indicates, the areas suggested to be regulated with a 40' setback match the very low to medium risk. The particular lots that have greater computed future erosion rates (in the areas proposed to have a 40' setback) are already mostly fully developed and would not be expected to support near shoreline developments.

As one progresses from the Saltwater Drive areas to the west the vulnerability index is found to frequent the high vulnerability designation, where it was suggested to support a 60' setback due to the higher forecasted rates of erosion or possible slope failure.

Current Code

Current Code regulates on the basis of being "Located within 40 feet of the top or within 15 feet of the toe of a steep slope, bluff, coastal bluff or ravine", HCC 21.44.020(a)(2).

> HCC 21.44.030(c), Setbacks. Subject to the exceptions to setback requirements in HCC 21.44.040, all development activity is subject to the following setback requirements:

1. No structure may be closer to the top of a ravine, steep slope or noncoastal bluff than the lesser of:

a. Forty feet; or

b. One-third of the height of the bluff or steep slope, but not less than 15 feet.

2. No structure may be closer than 15 feet to the toe of a bluff other than a coastal bluff.

3. **No structure may be closer than 40 feet to the top of a coastal bluff and closer than 15 feet to the toe of a coastal bluff.**

"Coastal bluff" means a bluff whose toe is within 300 feet of the mean high water line of Kachemak Bay.

"Bluff" means an abrupt elevation change in topography of at least **15 feet**, with an average slope of not less than **200 percent** (two feet difference in elevation per one foot of horizontal distance).

The real issue with this that we have erosion issues regardless of the height of the bluff. We have a study that projects probable annual erosion rates. I would like to think of the coastline in term of a continuous coastal bluff, regardless of height.

We already require dwellings to be located at least 40' from the top of the 'bluff' that is within 300' of the bay, it is just that the definition of bluff is nearly non-applicable in Homer. Places that have been proposed to maintain a 40' setback from the 'bluff' is in keeping with the intent of locating dwellings from what is the current extent of the bay landward. I do not find this number controversial or inconsistent with the current intent of the code.

Additionally, a 40' setback from slopes is a rule of thumb distance required in the current International Building Codes (IBC). The rule is 40' or 1/3 the height of the bluff. While this may be a good rule of thumb for a noncoastal bluff, it further supports the contention that 40' should be the minimum distance from our eroding coastline, since the height of the bluff and relation to the annual erosion rate is somewhat nebulous and we have a study that refines our specific hazards.

It is not shocking, in the least, to current or prospective property owners to suggest that they keep developments 40' from the bluff transitions. I do believe that a 60' setback from the edge of the riskier lands to the west is reasonable where little developmental pressures are found.

Bluff Edge

The issue with the code not prescribing the 40' setback consistently is that our definition of Coastal Bluff is basically non-existent in Homer, due to the poor match of physical description of our shoreline. This definition may work better in a place that only has a concern with tall bluffs, as mentioned above, our eroding shoreline is moving regardless of the height or steepness of the bluff.

After some professional input, we have drafted some language from our study and other descriptions that would better address the unique features of the Homer Shoreline. It may need some further revision as it is tested.

> *Bluff Edge – The bluff top edge is identified as the seaward extent of relatively flat land where a slope break or scarp occurs. The chosen bluff top edge must represent the seaward extent of land that is neither part of a previous landslide nor a bench on a slope"*

I would like to further consult and test the concept to consider some finer elements, but I believe it is a good basis of thought. I never thought that a description of this feature would be so challenging. But, it is apparently something that everyone struggles with, as you may see when looking at the examples from other coastal communities. Our coast is dynamic and somewhat unique. The one issue I wish to bring to a professional is considering the limit of the definition to describe the landward extent and just how applicable that is to Homer, as our current code describes a limit of 300' from the shore.

Staff Recommendation

I would like a recommendation to draft up regulations for the Commission to review and for the public to provide input.

Attachments

Please refer to the study and maps found in the last packet or request them from the office if they are inaccessible.

Mr. Lakey responded to questions from the Commission on his location in relation to the applicants, if he had viewed the drainage plan contained in the packet, if he had reported the issues to Public Works Department and where the actual drainage ditch and how the flow of water is dispersed.

Mr. Gill responded to Commissioner Venuti that he would be willing to coordinate and work to address any drainage issues during his ground prep.

Commissioner Barnwell commented that they should require a drainage plan analysis incorporated into these types of situations especially in higher density situations and poor soils. He believed that with the data that is available he is wondering why they do not have that requirement currently.

City Planner Abboud responded that is code and they do not have off-site improvements; he then provided an explanation of what possible solutions and assured the Commission that Public Works did review this project and there is more than one property owner with these drainage issues.

City Planner Abboud responded to Commissioner concerns on the proposed siding selection in regards to the design manual and that those requirements do not apply to residential zone.

Vice Chair Highland requested a motion and second.

BENTZ/BARNWELL MOVED TO ADOPT STAFF REPORT 22-06 AND RECOMMEND APPROVAL OF CONDITIONAL USE PERMIT 22-01 FOR TWO BUILDINGS CONTAINING THREE DWELLING UNITS TOTAL AT 373 MOUNTAIN VIEW DRIVE WITH FINDINGS 1-10 AND CONDITION 1:

1. OUTDOOR LIGHTING SHALL BE DOWNLIT PER HCC 21.59.030 AND THE CDM

There was a brief comment on the information provided on the density in response to the public comments received.

VOTE. YES. VENUTI, CONLEY, BARNWELL, BENTZ, CHIAPPONE, HIGHLAND

Motion carried.

PLAT CONSIDERATION

PENDING BUSINESS

A. Staff Report 22-07 Coastal Bluff Analysis

Vice Chair Highland Introduced the item by reading of the title and invited City Planner Abboud to provide his report.

City Planner Abboud reviewed his staff report and facilitated discussion on the following:

- stability map and modifier for a setback map
- the stability map may not be the best resource to use
- City code review should happen frequently due to the dynamic coast land
- Comparison of other like communities show different coastal communities nothing is similar

- it is very complex, there are varying degrees of possible slope failure which should have a greater setback such as 60 feet
- Erosion rates do not depend on a coastal bluff
- City code was not based general slope stability
- Support for the 40 foot setback is a good point to start with
- description and definition for bluff edge
- different features and issues on Baycrest
    - o different benches
    - o rotational issues
    - o historical landslides or slough

City Planner Abboud requested direction from the Commission to come up with code language.

Further discussion ensued on the definition clarification of coastal bluff, multiple benches, concerns on the scarp under West Hill location, setting threshold on the coastal erosion, requiring readily moveable structures, it would be dependent on the time of application since it changes all the time; using the LIDAR information that is currently available, establishing a setback at 40 feet catches most if not all the predicted erosion; using the LIDAR information to develop the definition as well as the mapping will provide the best definition and most appropriate definition.

Further discussion ensued on the definition of coastal bluff and that it is not a defined line. Additional comments were made on the 40 feet from the top of a slope and 15 feet from the bottom is from the building code and that they were not established for a coastal bluff in Homer, Alaska. City Planner Abboud noted that it is reasonable and you would not be condemning the land, basing it off of building code at minimum you are not going against it in theory if you adopt a building code there would be no conflict, the Commission can decide more but he would not recommend less.

BENTZ/ VENUTI MOVED TO REQUEST PLANNING STAFF DRAFT REGULATIONS AND BRING BACK TO THE MARCH 16TH MEETING FOR REVIEW BY THE COMMISSION.

Commissioner Bentz requested this to be on a worksession so it can be reviewed and discussed.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

B. Staff Report 22-08, Storage Container Dwellings

Vice Chair Highland introduced the item and requested City Planner Abboud to provide his staff report.

City Planner Abboud stated that the Commission wanted to view language to ban the use of storage containers for dwellings. He noted that the best way in his opinion since they do not have building code was to amend the term dwelling. He noted that without a building department there was not a better way in his opinion. He confirmed that this would be an amended definition of the word dwelling currently used.

City Planner Abboud facilitated an in-depth discussion on the following points:

- aesthetics of the use of shipping containers as dwellings
- limitations on regulating the use of shipping containers until the city has a building department
- applying personal opinions to regulate on the way things look and would this then apply to other non-standard dwelling materials such as yurts.
- cost comparison of converting a shipping container compared to traditional builds
- possible toxicity that can pass on to persons who reside in a shipping container
- how near future is a building department and code
- Use of shipping containers can be done in other applications such as commercial, example Oyster Bar that was approved.
- Structural concerns using converted shipping containers

Deputy City Clerk Krause reminded the Commission that this topic was postponed at the January 5, 2022 regular meeting reading the motions on the floor limiting the use of shipping containers as dwellings to the Central Business District, Marine industrial and East End Mixed Use District then the amendment was to remove the Central Business District. The current item before the Commission is to amending the definition which is another factor of the issue of using shipping containers as dwellings. So that issue will be on the February 16th agenda.

Commissioner Bentz restated her understanding of the discussion from the January meeting simplifying to to three points: the motion and amendment on the floor to limit the use of intermodal shipping containers, the amendment to city code regarding the definition of “dwelling” in relation to intermodal shipping containers and third for the Commission to explore adding building inspection services.

Vice Chair Highland did not recall that discussion but noted that they cannot move something that is not on the agenda.

Further discussion ensued on making motions to changing code and preference to address the issues through building inspections and adding building code and those types of city services and it would be very beneficial to the residents of Homer and use those instances as evidence to support the implementation of building code. Additional points made that typically residential structures are inspected but there is no way to know that at this time.

City Planner Abboud requested that the issue of building code be kept separate from these issues.

Vice Chair Highland restated the topics that would be coming before commission at the February 16th meeting and they can then bring back this item as well.

Commissioner Bentz would like to see proposed code language on limiting shipping containers since they have a motion on the floor.

City Planner Abboud expressed hesitancy in writing the language that Commissioner Bentz requested for the motions on the floor and that the Commission has not expressed solid support for the current recommendation he has presented to address the situation. He further expressed that he did not believe that it was a preferred choice on how to construct a dwelling.

Commissioner Conley requested a worksession on this topic to discuss and review all the options and to get a thorough understanding of the issues.

Commissioner Barnwell supported the idea of worksession instead of trying to make a decision in this limited time period.

Vice Chair Highland requested confirmation that City Planner Abboud had enough direction to proceed with the Building Code aspect of this by the commission.

City Planner Abboud confirmed.

Deputy City Clerk Krause requested a motion to postpone amending the definition from the Commission if they were not acting on it at this meeting.

BENTZ/VENUTI MOVED TO POSTPONE THIS ITEM TO THE FEBRUARY 16, 2022 REGULAR MEETING.

There was no further discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

NEW BUSINESS

A. Staff Report 22-09 Maximum Parking Allowance for Large Retail

Vice Chair Highland introduced the item by reading of the title.

City Planner Abboud reviewed his staff report for the Commission.

Discussion was facilitated and focused more on the issues that were brought forward by the changes in the Safeway parking lot on the following:

- requirements for parking lots for commercial establishments
- design factor
- number of entrances
- looking at minimums
- making logical allowances for what is really necessary on site
- parking lots are really expensive
- reducing the percentage is the simplest method
- removal of landscape requirements
- accommodating snow removal and storage

BENTZ/CONLEY MOVED TO STRIKE LINE A PARKING LOTS FOR LARGE RETAIL AND WHOLESALE DEVELOPMENT SHALL NOT EXCEED THE MINIMUM NUMBER OF SPACES REQUIRED BY CHAPTER 21.55 BY MORE THAN 10 PERCENT.
There was no further discussion.

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Staff Report PL 22-12

TO: HOMER PLANNING COMMISSION
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: FEBRUARY 16, 2022
SUBJECT: COASTAL BLUFF REGULATION

Introduction

The Commission requested that our discussion of coastal setback be brought to a work session. If you do not have access to the DGGS study from previous packets, please request copies from the office.

Analysis

My last staff report focused on analyzing our current code and what the expectations were, namely setbacks based on the bluff composition. Our study indicates that we have forecasted erosion rates and bluff failures that are not tied hard and fast to just the height and current slope of the bluff. Coastal Homer is a dynamic feature and reminds me of the investments disclaimer that state, "past performance may not be an indicator of future results". Some areas may move faster and some slower.

What we do have is better information than we have ever had. We have historical measures of erosion that date back to 1954. Slope failure distance averages have been computed and brought into the equation. Both these measures have been forecasted out 30 years. I would expect, as time goes on, we will again get even better information and will have to take that into consideration at the time. This is something that should be scheduled for review every 5 years or as new information comes available.

I have suggested to apply a 40' setback for new structures along the east coastal areas, heading west to somewhere adjacent to Saltwater Drive or the West Hill areas (with exclusion of the spit). From these areas west I suggest at least a 60' setback. These setbacks provide improved measures of safety compared to our current regulations, while allowing for a reasonable use of the lots near the bay. By my measurements, no one would be prohibited from developing on existing lots. It also conforms well to meeting the distances of most of the existing improvements, of course there are a few structures closer than this and they would be allowed to continued, but may not be eligible for replacement in their current location if damaged greater than 50% of the replacement cost.

After we get a commitment on setbacks, I will further test our definitions and look for any snags that we may not have been expecting. The working definition of the setback is proposed to be from a description of 'bluff edge'

> *Bluff Edge – The bluff top edge is identified as the seaward extent of relatively flat land where a slope break or scarp occurs. The chosen bluff top edge must represent the seaward extent of land that is neither part of a previous landslide nor a bench on a slope.*

This is a dynamic definition that is similar in thought to those we use describing other slope or bluff and will change as conditions change. It is best to create a unique description, so it will not conflict with the use of terms found other places in code. In that vein, I will suggest something that eliminates the use of the term "bluff", as it has a unique definition that will conflict with other uses of the definition. Also, I will have to come up with a measure of distance from the bay that applies to the definition to separate it from features further inland, such as the Baycrest pull out areas far away from the bay. A measure of 300' is currently used in the definition of Coastal Bluff. I will further test this measure.

I believe that the suggested setbacks will serve Homer well and would not be a surprise or thought of as over-reach. Generally, the areas along the coast have been well developed and we would not expect much, if any, pressure to add to these sites. The lots that are left vacant have also not seen a great amount of development pressure.

Staff Recommendation
Provide a recommendation of coastal setbacks and locations. I will then test the ordinance with our coastal features and work up code language for review. This may need more time than the next meeting, so an open time of return would be appropriate.

Attachments
Refer to DGGS study previously provided or call for a copy.

Commissioner Highland noted that the Commission discussed this topic thoroughly and did not believe that there was anything additional to discuss.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

PLAT CONSIDERATION

PENDING BUSINESS

A. Staff Report 22-12 Coastal Bluff Analysis

Chair Smith Introduced the item by reading of the title and invited City Planner Abboud to provide his report.

City Planner Abboud reviewed his staff report at the worksession and provided a summary of what was discussed:

- work out issues insuring the setback is from the face or edge of the structure
- definition for "edge and maybe a measurement section to make sure this is not compromised by other measurements
- displaying 60 foot setbacks west of West Hill Road
- Shoring up definitions of bluff edge which include eliminating the word bluffs so it is not confused with regulations of other bluffs that they deal with
- adding a section or some definitions pertaining to the Marine Erosion and distance from the marine area that this will apply to
- possibly incorporating some measure of mean high water
- working with Commissioner Bentz to define the language for the above

Chair Smith noted that staff has requested motion for recommended setback and locations but was unsure if they were ready to do that at this time and requested further input from the Commission.

Commissioner Bentz stated that she agreed with the idea of a 40 foot setback for all areas of Homer east of West Hill and then a 60 foot setback for areas west of West Hill Road. She expressed that if they wanted to make the motion as a Commission about just that number of feet for the setback, and then opined that it would be useful to make a motion to request staff to provide an ordinance with proposed language for review at the next meeting. Ms. Benz further stated that just incorporating those key bullet points that City Planner Abboud just give us an overview of, in the language, will help and having it before us in a draft ordinance form will be really helpful as far as making decisions in the future.

City Planner Abboud stated that he was unsure if a draft ordinance could be ready by the March 2nd meeting as he will be taking some time off and Planning Staff will have other time commitments.

BENTZ/VENUTI MOVED TO RECOMMEND 40 FEET AS A SETBACK FOR LOCATIONS IN HOMER EAST OF WEST HILL AND THE STERLING HIGHWAY INTERSECTION AND 60 FEET SETBACK FOR LOCATIONS WEST OF THE INTERSECTION OF WEST HILL ROAD AND THE STERLING HIGHWAY.

Commissioner Bentz added that it is consistent with the data and the research that shows higher erosion rates in the western portion of City of Homer and lower erosion rates in the areas east of West Hill and that 40 foot setback is pretty consistent with the 30 year planning horizon and with other documentation that the Commission has been presented on this topic.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

BENTZ/BARNWELL MOVED TO REQUEST STAFF TO PROVIDE A DRAFT ORDINANCE OF PROPOSED LANGUAGE OF DEFINITION UPDATES FOR COASTAL BLUFFS FOR REVIEW AT THE STAFF'S CONVENIENCE OR WHEN READY.

There was a brief discussion on putting a time limit on the draft ordinance.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

B. Staff Report 22-13, Storage Container Dwellings

Chair Smith introduced the item and requested City Planner Abboud to provide his staff report.

City Planner Abboud stated that this was a subject thoroughly discussed by the Commission and there are motions on the floor pertaining to allowing container dwellings in the Central Business District, Marine Commercial and East End Mixed Use District and a draft ordinance on eliminating container dwelling city wide by definition and he looks forward to the Commission's guidance on what they wish to do.

Chair Smith requested clarification from the Clerk regarding the motions that were on the floor for consideration.

Deputy City Clerk Krause stated that there were two motions from the January 5, 2022 regular meeting, a main motion and amendment. The amendment will be dispensed with first then the main motion. She provided guidance on the procedure.

Chair Smith read the amendment into the record, VENUTI/HIGHLAND MOVED TO AMEND THE MOTION TO EXCLUDE THE CENTRAL BUSINESS DISTRICT FROM THE MOTION and opened the floor for discussion.

Chair Smith stated that since there was no discussion on the amendment, he requested objections to the motion before them amending the motion to exclude the CBD from the main motion.
Commissioner Venuti requested clarification on what they were voting on.

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Staff Report PL 22-31

TO: HOMER PLANNING COMMISSION
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: APRIL 20, 2022
SUBJECT: COASTAL BLUFF REGULATION

Introduction

After previous discussion with the Commission, I have a draft code for review. It is complete in concept, but may need technical review/revision. It is not in ordinance format at this time, but includes line numbers for reference.

Analysis

I am proposing regulation based on the results of the DGGS study. The study has not been published yet and we may need to wait until it is, so that we may refer to it as a basis for our regulation. There are several more points of concern that we may address in the future. For now, we are sticking to coastal setback, as our current code does not address it as intend (since we really don't have much in the way of "coastal bluff", by definition). Previous staff reports have reviewed the study and the need for coastal setbacks due to predictions of erosion, regardless of bluff types.

Regulatory line to measure of setback

I have struck the term "coastal bluff", as it incorporates the use of "bluff" which is a term that is useful in regulation of non-coastal applications and should not have a conflicting definition. It has been replaced with "coastal edge" (lines 1-4), a word that may be revised for better semantics later, but it gets the point across for now. This will be the line which will be used to measure setbacks. The definition is dynamic and is based off the language used in the study.

Transition of standards (lines 42-48)

The Commission expressed support for a 40 foot setback that transitions to a 60 foot setback. These setbacks were based on a 30 year estimated erosion rate. I believe that this is a good place to start and it will require 5 and 10 year reviews or after any significant events. While 30 years is not a particularly long look to the future, our estimates are only based off of seventy some years that has included a significant event that caused a good deal of erosion. Forty feet is a good minimum, as it will not cause conflict with a proposed building code, as it is a distance used to setback from slopes common in building codes.

The 40 foot regulation would start at the east end of town and commence to the north-south section line located just west of Soundview Avenue. This corresponds with the transition where the study indicated a change in the erosion rates. The spit will be excluded with the reference to Mile Post 175 (which unfortunately is not displayed on the Highway – it looks to be just a post w/o a sign right now). It is found on the borough parcel maps and is just past where the Bay Avenue lots extend into the mud of high and extreme tides. Spit development is regulated by FEMA flood regulations. Just past Soundview Avenue, structures will be required to maintain a 60' setback.

Exceptions

Exception to the setback may be approved when the site plan is approved by the City Engineer and a CUP is approved (lines 86-88).

I am also proposing to take the City Planner out of the business of approving erosion control methods (line 63) and determining if development activity is reasonably intended to stabilize the slope (line 84). This is best left to the City Engineer.

This proposed regulation is a good place to start that better prescribes setbacks than current regulation. It allows for reasonable development opportunity while assuring a better measure of safety.

Staff Recommendation

Review and comment. The ordinance may receive further technical review prior to consideration for a public hearing and will be brought back at a later meeting.

Attachments

Draft Ordinance

"Coastal ~~bluff~~**edge**" means ~~a bluff whose toe is~~ **the seaward extent of a relatively flat land where a slope break or scarp occurs that is adjacent and** within 300 feet of the mean high water line of Kachemak Bay. **The chosen coastal edge must represent the seaward extent of land that is neither part of a previous landslide nor a bench on a slope.**

Chapter 21.44
SLOPES & COASTAL DEVELOPMENT

21.44.010 Purpose and intent.

This chapter regulates development activity and structures in areas affected by slopes, bluffs, ~~coastal bluffs~~, ~~and~~ ravines, **and areas subject to coastal setback,** and provides the means for additional review and protection to encourage safe and orderly growth to promote the health, welfare and safety of Homer residents.

21.44.020 Applicability.

a. This chapter applies to all development activity that disturbs the existing land surface, including without limitation clearing, grading, excavating and filling in areas that are subject to any of the following conditions:

1. Lots with average slopes 15 percent or greater, bluffs, coastal bluffs and ravines;

2. Located within 40 feet of the top or within 15 feet of the toe of a steep slope, bluff, coastal ~~bluff~~ **edge** or ravine; and

3. Any other location where the City Engineer determines that adverse conditions associated with slope stability, erosion or sedimentation are present.

b. This chapter imposes regulations and standards in addition to the requirements of the underlying zoning district(s). [Ord. 08-29, 2008].

21.44.030 Slope development standards.

The following standards apply to all development activity on a site described in HCC 21.44.020:

a. No development activity, including clearing and grading, may occur before the issuance of a zoning permit under Chapter 21.70 HCC.

b. Area of Development.

1. Except where the City Engineer approves a site plan under HCC 21.44.050 that provides for a larger area of development, the area of development on a lot with an average slope:

a. Of 15 to 30 percent shall not exceed 25 percent of the total lot area.

b. Greater than 30 percent but less than 45 percent shall not exceed 10 percent of the total lot area.

2. The area of development on a lot with an average slope of 45 percent or greater shall not exceed the area of development described in a site plan approved by the City Engineer under HCC 21.44.050.

c. Setbacks. Subject to the exceptions to setback requirements in HCC 21.44.040, all development activity is subject to the following setback requirements:

1. No structure may be closer to the top of a ravine, steep slope or noncoastal bluff than the lesser of:

a. Forty feet; or

b. One-third of the height of the bluff or steep slope, but not less than 15 feet.

2. No structure may be closer than 15 feet to the toe of a bluff other than a coastal bluff.

3. ~~No structure may be closer than 40 feet to the top of a coastal bluff and closer than 15 feet to the toe of a coastal bluff.~~ **Structures shall be setback 40 feet the coastal edge from points starting from the eastern most extent of Homer adjacent to Kachemak Bay extending to the north south Section Line dividing Sections 19 & 24 Township 6 South Range 14 West Seward Meridian, and excluding all property South of Mile Post 175 of the Sterling Highway. All structures west of the section line shall be setback 60 foot from the coastal edge. No structure may be placed closer than 15 feet from the toe of a coastal edge.**

d. Natural Drainage. The site design and development activity shall not restrict natural drainage patterns, except as provided in this subsection.

1. To the maximum extent feasible, the natural surface drainage patterns unique to the topography and vegetation of the site shall be preserved. Natural surface drainage patterns may be modified only pursuant to a site plan approved by the City Engineer under HCC 21.44.050, and upon a showing that there will be no significant adverse environmental impacts on the site or on adjacent properties. If natural drainage patterns are modified, appropriate soil stabilization techniques shall be employed.

2. The site shall be graded as necessary to ensure that drainage flows away from all structures for a distance of at least 10 feet, especially where building pads are cut into hillsides.

3. The development activity shall not cause an adverse effect on adjacent land and surrounding drainage patterns.

e. Erosion Control.

1. Erosion control methods approved by the ~~**City Planner and**~~ City Engineer, including without limitation sediment traps, small dams and barriers, shall be used during construction and site development to protect water quality, control soil erosion and control the velocity of runoff.

2. Winter Erosion Control Blankets. If development on a slope is not stabilized by October 15th, erosion control blankets (or a product with equivalent performance characteristics) must be installed upon completion of the seasonal work, but no later than October 15th. The erosion control blankets shall remain in place until at least the following May.

3. Vegetation shall remain undisturbed except as necessary to construct improvements and to eliminate hazardous conditions, in which case it must be replanted with approved materials including ground cover, shrubs and trees. Native vegetation is preferred for replanting operations, and will be used where practicable.

4. Grading shall not alter the natural contours of the terrain except as necessary for building sites or to correct unsafe conditions. The locations of buildings and roads shall be planned to follow and conform to existing contours as nearly as possible. [Ord. 08-29, 2008].

21.44.040 Exceptions to setback requirements.

a. Any of the following may be located within a setback required by HCC 21.44.030(c):

1. A deck extending no more than five feet into the required setback.

2. An unoccupied accessory structure having a building area not greater than 200 square feet that is no closer than 15 feet to the top of any bluff or ravine.

3. A boardwalk, sidewalk, foot path or stairway that provides access to a beach, bluff or accessory structure, and that is located at or within three feet above ground level.

4. Development activity that the ~~**City Planner**~~ **City Engineer** determines is reasonably intended to stabilize an eroding coastal bluff.

b. No structure other than a structure described in subsection (a) of this section may be located in a required setback without a conditional use permit issued in accordance with Chapter 21.71 HCC and a site plan approved by the City Engineer under HCC 21.44.050. [Ord. 08-29, 2008].

21.44.050 Site plan requirements for slope development.

a. No permit for development activity for which HCC 21.44.030 or 21.44.040(b) requires a site plan may be approved unless the City Engineer approves a site plan for the development activity that conforms to the requirements of this section. The City Engineer shall accept or reject the plan as submitted or may require that specific conditions be complied with in order for the plan to meet approval.

b. The site plan shall be prepared by a qualified geotechnical engineer licensed to practice in the State of Alaska and shall include the following information:

1. The location of all watercourses, water bodies, and wetlands within 100 feet of the location of the proposed development activity.

2. The location of all existing and proposed drainage structures and patterns.

3. Site topography shown by contours with a maximum vertical interval of five feet.

4. The location of all proposed and existing buildings, utilities (including on-site well and septic facilities), driveways and streets.

5. The location of all existing vegetation types including meadow, forest and scrub lands, identifying all areas of vegetation that will be removed as well as vegetation to be preserved or replaced. Specifications for revegetation shall also be included.

6. Specific methods that will be used to control soil erosion, sedimentation, and excessive stormwater runoff during and after construction.

7. A description of the stability of the existing soils on site and a narrative and other detail sufficient to demonstrate the appropriateness of the development and construction methods proposed.

8. A grading plan for all areas that will be disturbed by the development activity.

9. A slope stability analysis including the following:

a. Summary of all subsurface exploration data, including subsurface soil profile, exploration logs, laboratory or in situ test results, and groundwater information;

b. Interpretation and analysis of the subsurface data;

c. Summary of seismic concerns and recommended mitigation;

d. Specific engineering recommendations for design;

e. Discussion of conditions for solution of anticipated problems;

f. Recommended geotechnical special provisions;

g. An opinion on adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes.

HIGHLAND/VENUTI MOVE TO OPEN DISCUSSION ON STAFF REPORT 22-29, TINY HOMES.

There was no discussion.

VOTE. NON-OBJECTION UNANIMOUS CONSENT.

Motion carried.

City Planner Abboud facilitated discussion on the following:

- Tiny homes on wheels then removing the wheels
- Code acceptance, standards established for construction
- Appearance difference between RV's and Tiny Homes
- Developing building code would have a requirement
- Developing planning code to address appearance
- Comparing codes for dwellings they look at adequate egress, etc.
- Shared link with the commissioners and there is no charge to view the webinar which was believed to be in May
- Commissioner Venuti stated he would have to read the requirements before supporting it
- If building code is implemented a person will have to follow the requirements as outlined in the code for the structure to be approved
- Making a decision sooner rather than later as they will be coming to Homer in the near future.
- Building costs increasing
- Continuing ambiguity on what exactly defines a tiny home
- There is language now
- Not realistic to assume that someone will build a tiny home on a 60K lot
- There is no demand at this time for placing tiny homes
- According to existing code tiny homes that are moveable are classified as RVs
- Cannot divorce from RVs at this time
- Appearance is nicer than a Connex
- Someone may want this as a ADU
- Not permanent dwelling, may be a place for this at this time
- Specifics of verbiage for RV

C. Staff Report 22-31, Coastal Bluff Regulations

Chair Smith Introduced the item by reading of the title.

City Planner Abboud reviewed Staff Report 22-31.

HIGHLAND/ BARNWELL MOVE TO OPEN DISCUSSION AND REVIEW ON STAFF REPORT 22-31, COASTAL BLUFF REGULATION.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

City Planner Abboud deferred to the Public Works Director in her role as the City Engineer as she was more knowledgeable and could provide additional information.

Public Works Director Keiser reported the findings within the area of coastal bluffs using the DGGS Study, describing the discovery of old coal mines after a request for water and sewer in the area and determined that the city could not put services in that area requested, the city reserves the right not to extend utilities in risky areas and that will limit development in and by itself due to the inability to get a DEC approved septic system or well; this will protect the city infrastructure. She expounded on the city working on regulations that will strengthen the address the drainage issues such as requiring stormwater plans and development activity plans on all developments regardless of size or volume of dirt moved to allow better tracking, the definition of coastal edge is a great start, noting that there will be adjustments as the science is presented and there may be action to come before the Commission in the future on the coal mining areas. She noted that the city is in the process of staffing up with training and outside consultants.

Discussion was facilitated on these points:

- Definition for coastal edge
- Existing or current erosion due to the possible coal mine shafts
- Appreciation to bringing the expertise of the City Engineer to speak on these topics

NEW BUSINESS

A. Staff Report 22-30, Homer Non-motorized Trails & Transportation Plan Implementation

Chair Smith introduced the item by reading of the title.

City Planner Abboud provided a review of Staff Report 22-30.

HIGHLAND/VENUTI MOVE TO OPEN DISCUSSION AND REVIEW ON STAFF REPORT 22-30 HNMTTP IMPLEMENTATION.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

Public Works Director Keiser responded to questions regarding the purpose of the supplement or implementation plan, stating that this document is not a substitute for the HNMTTP but a detailed implementation plan.

City Planner Abboud reported that this does not limit the City but is a tool to use and assist in designating the funding to get recommendations done.

Commissioner Highland noted that she was on the advisory body that drafted the 2004 plan and then expressed her ongoing concerns with development in the Beluga Slough area.

VENUTI/HIGHLAND MOVED THAT THE PLANNING COMMISSION SUPPORTS THE HOMER NON-MOTORIZED TRAILS AND TRANSPORTATION PLAN IMPLEMENTATION PLAN AND APPROPRIATE FUNDING TO EXECUTE.

Public Works Director Keiser suggested that the Commission withhold their recommendation till the Ordinance requesting the funding comes before the City Council.

VOTE. NO. SMITH, VENUTI, HIGHLAND, CONLEY, BARNWELL

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Staff Report PL 22-37

TO: HOMER PLANNING COMMISSION
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: MAY 18, 2022
SUBJECT: COASTAL SETBACKS

Introduction

The Planning Commission has reviewed a draft of the Coastal Bluff Stability Assessment for Homer developed by the State of Alaska Division of Geological & Geophysical Surveys (DGGS). After considering the study recommendations and draft code developed to address coastal erosion, we are holding a public hearing to receive comments on revised code language.

Analysis

Earlier staff reports and the DGGS study recognized that our current definition of 'coastal bluff' did not apply to the majority of the features found on the Homer coastline and our erosion hazard does not depend on the height of a coastal bluff alone. In order to provide a more useful measure of distance from the eroding hazard we are proposing a change in the term 'coastal bluff' and propose a definitive setback.

'Coastal bluff' is now referred to as 'coastal edge'. This change allows us to retain the definition of 'bluff' for use in non-coastal applications. The definition of coastal edge is dynamic in that it describes the manifestation of a feature associated active erosion near the coast. The draft ordinance replaces the term 'coastal bluff' found throughout code.

Setbacks from the 'coastal edge' are found on lines 92-98. This describes a 40' setback starting on the east extent of town, excludes the Spit, and continues until a transition to a 60' setback just west of Soundview Avenue (see attachment). This provides a recommended distance from the predicted 30 year erosion rate for the vast majority land likely to be developed. Since we rely on data that has "inherent uncertainties", we should reflect on our experiences every 5-10 years or after significant events to keep current.

A property owner may propose to build closer than the setback and would need to gain approval of a Conditional Use Permit with a site plan approved by the City Engineer under HCC 21.44.050. Other proposed changes include the exclusion of the City Planner in approving erosion control methods and determining development meant to stabilize an eroding bluff, this will be left to the City Engineer.

Staff Recommendation
Conduct a public hearing and make recommendation for adoption by the City Council.

Attachments
Draft Ordinance
Setback map

CITY OF HOMER
HOMER, ALASKA

Planning Commission

ORDINANCE 22-xx

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING TITLE 21.03.040 DEFINTIONS USED IN ZONING CODE, TITLE 21.44 SLOPES, TITLE 21.50.020 SITE DEVELOPMENT STANDARDS – LEVEL ONE, AND TITLE 21.50.020 SITE DEVELOPMENT STANDARDS – LEVEL TWO

WHEREAS, The State of Alaska Division of Geological & Geophysical Surveys (DGGS) provided a study entitled Coastal Bluff Stability Assessment for Homer Alaska; and

WHEREAS, The study provided information and technical assistance to improve regulation of the coastline susceptible to erosion; and

WHEREAS, The 2018 Homer Comprehensive Plan concludes that new strategies will be needed to protect the environment as the community grows – particularly regarding drainage, erosion, open space, climate change; and

WHEREAS, The 2018 Homer Comprehensive Plan identifies that a need exists for the community to take seriously the issue of allowing ongoing shoreline development; and

WHEREAS, The Homer Planning Commission has considered the recommendations for coastal bluff definition and coastal setback policies developed by the DGGS study; and

WHEREAS, The Homer Planning Commission has found that the proposed amendments provide better measures of safety for those developing in proximity to the coastline than current code.

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. Homer City Code Chapter 21.03.040 Definitions used in zoning code is hereby amended to read as follows:

"Coastal ~~bluff~~**edge**" means ~~a bluff whose toe is~~ **the seaward extent of a relatively flat land where a slope break or scarp occurs that is adjacent and** within 300 feet of the mean high water line of Kachemak Bay. **The chosen coastal edge must represent the seaward extent of land that is neither part of a previous landslide nor a bench on a slope.**

Section 2. Homer City Code Chapter 21.44 Slopes is hereby amended to read as follows:

Chapter 21.44 SLOPES **& COASTAL DEVELOPMENT**

21.44.010 Purpose and intent.

This chapter regulates development activity and structures in areas affected by slopes, bluffs, ~~coastal bluffs~~, ~~and~~ ravines, **and the coastal edge,** and provides the means for additional review and protection to encourage safe and orderly growth to promote the health, welfare and safety of Homer residents.

21.44.020 Applicability.

a. This chapter applies to all development activity that disturbs the existing land surface, including without limitation clearing, grading, excavating and filling in areas that are subject to any of the following conditions:

1. Lots with average slopes 15 percent or greater, bluffs, coastal ~~bluffs~~ **edge** and ravines;
2. Located within 40 feet of the top or within 15 feet of the toe of a steep slope, bluff, coastal ~~bluff~~ **edge** or ravine; and
3. Any other location where the City Engineer determines that adverse conditions associated with slope stability, erosion or sedimentation are present.

b. This chapter imposes regulations and standards in addition to the requirements of the underlying zoning district(s). [Ord. 08-29, 2008].

21.44.030 Slope development standards.

The following standards apply to all development activity on a site described in HCC 21.44.020:

a. No development activity, including clearing and grading, may occur before the issuance of a zoning permit under Chapter 21.70 HCC.

b. Area of Development.

1. Except where the City Engineer approves a site plan under HCC 21.44.050 that provides for a larger area of development, the area of development on a lot with an average slope:
    a. Of 15 to 30 percent shall not exceed 25 percent of the total lot area.
    b. Greater than 30 percent but less than 45 percent shall not exceed 10 percent of the total lot area.

2. The area of development on a lot with an average slope of 45 percent or greater shall not exceed the area of development described in a site plan approved by the City Engineer under HCC 21.44.050.

c. Setbacks. Subject to the exceptions to setback requirements in HCC 21.44.040, all development activity is subject to the following setback requirements:

1. No structure may be closer to the top of a ravine, steep slope or ~~**noncoastal**~~ bluff than the lesser of:

a. Forty feet; or

b. One-third of the height of the bluff or steep slope, but not less than 15 feet.

2. No structure may be closer than 15 feet to the toe of a bluff ~~**other than a coastal bluff**~~.

3.~~ No structure may be closer than 40 feet to the top of a coastal bluff and closer than 15 feet to the toe of a coastal bluff.~~ **Structures shall be setback 40 feet the coastal edge starting at the eastern extent of the City of Homer, adjacent to Kachemak Bay extending to the north-south Section Line dividing Sections 19 & 24 Township 6 South Range 14 West Seward Meridian, and excluding all property South of Mile Post 175 of the Sterling Highway. All structures west of the section line shall be setback 60 foot from the coastal edge. No structure may be placed closer than 15 feet from the toe of a coastal edge.**

d. Natural Drainage. The site design and development activity shall not restrict natural drainage patterns, except as provided in this subsection.

1. To the maximum extent feasible, the natural surface drainage patterns unique to the topography and vegetation of the site shall be preserved. Natural surface drainage patterns may be modified only pursuant to a site plan approved by the City Engineer under HCC 21.44.050, and upon a showing that there will be no significant adverse environmental impacts on the site or on adjacent properties. If natural drainage patterns are modified, appropriate soil stabilization techniques shall be employed.

2. The site shall be graded as necessary to ensure that drainage flows away from all structures for a distance of at least 10 feet, especially where building pads are cut into hillsides.

3. The development activity shall not cause an adverse effect on adjacent land and surrounding drainage patterns.

e. Erosion Control.

1. Erosion control methods approved by the ~~**City Planner and**~~ City Engineer, including without limitation sediment traps, small dams and barriers, shall be used during construction and site development to protect water quality, control soil erosion and control the velocity of runoff.

2. Winter Erosion Control Blankets. If development on a slope is not stabilized by October 15th, erosion control blankets (or a product with equivalent performance characteristics) must be installed upon completion of the seasonal work, but no later than October 15th. The erosion control blankets shall remain in place until at least the following May.

3. Vegetation shall remain undisturbed except as necessary to construct improvements and to eliminate hazardous conditions, in which case it must be replanted with approved materials including ground cover, shrubs and trees. Native vegetation is preferred for replanting operations, and will be used where practicable.

4. Grading shall not alter the natural contours of the terrain except as necessary for building sites or to correct unsafe conditions. The locations of buildings and roads shall be planned to follow and conform to existing contours as nearly as possible. [Ord. 08-29, 2008].

21.44.040 Exceptions to setback requirements.

a. Any of the following may be located within a setback required by HCC 21.44.030(c):

1. A deck extending no more than five feet into the required setback.

2. An unoccupied accessory structure having a building area not greater than 200 square feet that is no closer than 15 feet to the top of any bluff or ravine.

3. A boardwalk, sidewalk, foot path or stairway that provides access to a beach, bluff or accessory structure, and that is located at or within three feet above ground level.

4. Development activity that the ~~**City Planner**~~ **City Engineer** determines is reasonably intended to stabilize an eroding coastal ~~**bluff**~~ **edge**.

b. No structure other than a structure described in subsection (a) of this section may be located in a required setback without a conditional use permit issued in accordance with Chapter 21.71 HCC and a site plan approved by the City Engineer under HCC 21.44.050. [Ord. 08-29, 2008].

21.44.050 Site plan requirements for slope development.

a. No permit for development activity for which HCC 21.44.030 or 21.44.040(b) requires a site plan may be approved unless the City Engineer approves a site plan for the development activity that conforms to the requirements of this section. The City Engineer shall accept or reject the plan as submitted or may require that specific conditions be complied with in order for the plan to meet approval.

b. The site plan shall be prepared by a qualified geotechnical engineer licensed to practice in the State of Alaska and shall include the following information:

1. The location of all watercourses, water bodies, and wetlands within 100 feet of the location of the proposed development activity.

2. The location of all existing and proposed drainage structures and patterns.
3. Site topography shown by contours with a maximum vertical interval of five feet.
4. The location of all proposed and existing buildings, utilities (including on-site well and septic facilities), driveways and streets.
5. The location of all existing vegetation types including meadow, forest and scrub lands, identifying all areas of vegetation that will be removed as well as vegetation to be preserved or replaced. Specifications for revegetation shall also be included.
6. Specific methods that will be used to control soil erosion, sedimentation, and excessive stormwater runoff during and after construction.
7. A description of the stability of the existing soils on site and a narrative and other detail sufficient to demonstrate the appropriateness of the development and construction methods proposed.
8. A grading plan for all areas that will be disturbed by the development activity.
9. A slope stability analysis including the following:
    a. Summary of all subsurface exploration data, including subsurface soil profile, exploration logs, laboratory or in situ test results, and groundwater information;
    b. Interpretation and analysis of the subsurface data;
    c. Summary of seismic concerns and recommended mitigation;
    d. Specific engineering recommendations for design;
    e. Discussion of conditions for solution of anticipated problems;
    f. Recommended geotechnical special provisions;
    g. An opinion on adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes.

Section 3. Homer City Code Chapter 21.50.020 Site development standards – level one is hereby amended to read as follows:

21.50.020 Site development standards – Level one.

This section establishes level one site development standards.

a. Slopes. All development on a site affected by a slope of 15 percent or more, bluff, coastal **~~bluff~~** **edge** or ravine, as described in HCC 21.44.020, shall be subject to the requirements of Chapter 21.44 HCC in addition to the requirements of this section.

b. Drainage. All development activity on lands shall conform to the following:
1. Development shall provide a drainage system that is designed to deposit all runoff into either an engineered drainage system or into a natural drainage.
2. Where open-ditch construction is used to handle drainage within the development, a minimum of 15 feet shall be provided between any structures and the top of the bank of the defined channel of the drainage ditch.

3. When a closed system is used to handle drainage within the development, all structures shall be a minimum of 10 feet from the closed system.

c. Landscaping Requirements. All development activity on lands shall conform to the following:

1. Development activities shall not adversely impact other properties by causing damaging alteration of surface water drainage, surface water ponding, slope failure, erosion, siltation, intentional or inadvertent fill or root damage to neighboring trees, or other damaging physical impacts. The property owner and developer shall take such steps, including installation of culverts or buffers, or other methods, as necessary to comply with this requirement.

2. Upon completion of earthwork, all exposed slopes and all cleared, filled, and disturbed soils shall be protected against subsequent erosion by methods such as, but not limited to, landscaping, maintenance of native vegetative cover, or plantings to minimize invasive species.

3. All exposed, cleared, filled and disturbed soils shall be revegetated within nine months following the initiation of earthwork, or reseeded by the next August 31st. Native revegetation is acceptable if the site naturally revegetates within that nine-month period. If native revegetation is not successful within that nine-month period, the property owner and developer shall revegetate by other means no later than the end of that nine-month period.

4. Drainage can be stabilized by other means than vegetation, if approved in writing by the City Engineer.

d. A stormwater plan approved under Chapter 21.75 HCC is required for development that:

1. Creates more than 25,000 square feet of new impervious surface area on a lot;
2. Increases the total impervious surface area of a lot beyond one acre;
3. Includes grading, excavation or filling that cumulatively moves 1,000 cubic yards or more of material; or
4. Includes grading, excavation or filling that creates a permanent slope of 3:1 or more, and that has a total height, measured vertically from toe of slope to top of slope, exceeding 10 feet.

Section 4. Homer City Code Chapter 21.50.030 Site development standards – level two is hereby amended to read as follows:

21.50.030 Site development standards – Level two.

This section establishes level two site development standards.

a. Site Development.

1. Development shall not adversely impact other properties by causing damaging alteration of surface water drainage, surface water ponding, slope failure, erosion, siltation, or root damage to neighboring trees, or other adverse effects.

2. Upon completion of earthwork, all exposed slopes and all cleared, filled, and disturbed soils shall be protected against subsequent erosion by methods such as, but not limited to, landscaping, planting, and maintenance of vegetative cover.

3. All exposed, cleared, filled and disturbed soils shall be revegetated within nine months following the initiation of earthwork.

b. Slopes. All development on a site affected by a slope of 15 percent or more, bluff, coastal ~~**bluff**~~ **edge** or ravine, as described in HCC 21.44.020, shall be subject to the requirements of Chapter 21.44 HCC in addition to the requirements of this section.

c. Drainage.

1. Development shall provide a drainage system, as approved by the City, that is designed to deposit all runoff into either an engineered drainage system or into a natural drainage.

2. Where open-ditch construction is used to handle drainage within the development, a minimum of 15 feet shall be provided between any structures and the top of the bank of the defined channel of the drainage ditch.

3. When a closed system is used to handle drainage within the development, all structures shall be a minimum of 10 feet horizontally from the closed system.

4. Drainage can be stabilized by methods other than vegetation, if approved in writing by the City Engineer.

d. A development activity plan (DAP) approved by the City under Chapter 21.74 HCC is required if the project includes:

1. Land clearing or grading of 10,000 square feet or greater surface area;

2. The cumulative addition of 5,000 square feet or greater of impervious surface area from pre-development conditions;

3. Grading involving the movement of 1,000 cubic yards or more of material;

4. Grading that will result in a temporary or permanent slope having a steepness of 3:1 or greater and having a total slope height, measured vertically from toe of slope to top of slope, exceeding five feet;

5. Grading that will result in the diversion of an existing drainage course, either natural or human-made, from its existing point of entry to or exit from the grading site; or

6. Any land clearing or grading on a slope steeper than 20 percent, or within 20 feet of any wetland, watercourse, or water body.

e. A stormwater plan (SWP) approved under Chapter 21.75 HCC is required if the project includes:

1. An impervious surface coverage that is greater than 60 percent of the lot area (existing and proposed development combined);
2. The cumulative addition of 25,000 square feet or greater of impervious surface area from the pre-development conditions;
3. Land grading of one acre or greater surface area;
4. Grading involving the movement of 10,000 cubic yards or more of material;
5. Grading that will result in a temporary or permanent slope having a steepness of 3:1 or greater and having a total slope height, measured vertically from toe of slope to top of slope, exceeding 10 feet; or
6. Any land clearing or grading on a slope steeper than 25 percent, or within 10 feet of any wetland, watercourse, or water body.

f. Landscaping requirements. All development shall conform to the following landscaping requirements:

1. Landscaping shall include the retention of native vegetation to the maximum extent possible and shall include, but is not limited to, the following:

a. Buffers.

i. A buffer of three feet minimum width along all lot lines where setbacks permit; except where a single use is contiguous across common lot lines, such as, but not limited to, shared driveways and parking areas. Whenever such contiguous uses cease the required buffers shall be installed.

ii. A buffer of 15 feet minimum width from the top of the bank of any defined drainage channel or stream.

b. Parking Lots.

i. A minimum of 10 percent of the area of parking lots with 24 spaces or more shall be landscaped in islands, dividers, or a combination of the two;

ii. Parking lots with 24 spaces or more must have a minimum 10-foot landscaped buffer adjacent to road rights-of-way;

iii. Parking lots with only one single-loaded or one double-loaded aisle that have a 15-foot minimum landscaped buffer adjacent to road rights-of-way are exempt from the requirement of subsection (f)(1)(b)(i) of this section.

2. Topsoil addition, final grading, seeding, and all plantings of flora must be completed within nine months of substantial completion of the project, or within the first full growing season after substantial completion of the project, whichever comes first. Required landscaping will be maintained thereafter, with all shrubs, trees, and ground cover being replaced as needed.

Section 5. This Ordinance is of a permanent and general character and shall be included in the City Code.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA this _____day of _____, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

YES:
NO:
ABSTAIN:
ABSENT:

First Reading:
Public Hearing:
Second Reading:
Effective Date:


DIAMOND RIDGE
DIAMOND RIDGE
DIAMOND RIDGE
KACHEMAK
DIAMOND RIDGE RD
WEST HILL RD
SKYLINE
EAST HILL RD
MP 169
MP 170
MP 171
MP 172
MP 173
MP 174
MP 175
MP 1
MP 2
MP 3
T06S-R14W
T06S-R13W
HOMER
E PIONEER AVE
LAKE ST
OCEAN DR
KACHEMAK DR
60' setback
40' setback
40' setback
Proposed setback from coastal edge.
KBP Map Viewer, accessed 5.10.22

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

Staff Report PL 22-37

TO: HOMER PLANNING COMMISSION
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: MAY 18, 2022
SUBJECT: COASTAL SETBACKS

Introduction

The Planning Commission has reviewed a draft of the Coastal Bluff Stability Assessment for Homer developed by the State of Alaska Division of Geological & Geophysical Surveys (DGGS). After considering the study recommendations and draft code developed to address coastal erosion, we are holding a public hearing to receive comments on revised code language.

Analysis

Earlier staff reports and the DGGS study recognized that our current definition of 'coastal bluff' did not apply to the majority of the features found on the Homer coastline and our erosion hazard does not depend on the height of a coastal bluff alone. In order to provide a more useful measure of distance from the eroding hazard we are proposing a change in the term 'coastal bluff' and propose a definitive setback.

'Coastal bluff' is now referred to as 'coastal edge'. This change allows us to retain the definition of 'bluff' for use in non-coastal applications. The definition of coastal edge is dynamic in that it describes the manifestation of a feature associated active erosion near the coast. The draft ordinance replaces the term 'coastal bluff' found throughout code.

Setbacks from the 'coastal edge' are found on lines 92-98. This describes a 40' setback starting on the east extent of town, excludes the Spit, and continues until a transition to a 60' setback just west of Soundview Avenue (see attachment). This provides a recommended distance from the predicted 30 year erosion rate for the vast majority land likely to be developed. Since we rely on data that has "inherent uncertainties", we should reflect on our experiences every 5-10 years or after significant events to keep current.

A property owner may propose to build closer than the setback and would need to gain approval of a Conditional Use Permit with a site plan approved by the City Engineer under HCC 21.44.050. Other proposed changes include the exclusion of the City Planner in approving erosion control methods and determining development meant to stabilize an eroding bluff, this will be left to the City Engineer.

Staff Recommendation
Conduct a public hearing and make recommendation for adoption by the City Council.

Attachments
Draft Ordinance
Setback map

A. Staff Report 22-35, City Planner's Report

City Planner Abboud provided a summary of Staff Report 22-35. At his request for a volunteer, no Commissioners stepped forward to give the PC report to City Council at their May 23rd meeting. Chair Smith will provide a written report to the Clerk.

Commissioner Venuti commented on attending a webinar regarding Tiny Homes.

PUBLIC HEARINGS

A. Staff Report 22-36, An Ordinance of the City Council of Homer, Alaska, Amending Homer City Code 21.93 Administrative Appeals. City Clerk.

Chair Smith introduced the item by reading the title. He invited City Planner Abboud to speak to the memoranda provided.

City Planner Abboud spoke to Staff Report 22-36, highlighting the following:

- After the City Clerk has reviewed the revisions it was found that there were items that needed minor clarifications and procedures.
- Review of the draft ordinance which was provided in the Supplemental Packet

Chair Smith opened the public hearing, after verifying with the Clerk that there was no members of the public present on Zoom or present in the Chambers he closed the public hearing. He opened the floor to questions from the commission.

City Planner Abboud provided clarification on the date for the Public Hearing on the Rezone for Commissioner Barnwell in the previous item on the agenda.

Chair Smith commented on the action removing the responsibility from the Commission.

Chair Smith requested a motion and second.

HIGHLAND/VENUTI MOVED TO ADOPT STAFF REPORT 22-36 AND FORWARD A RECOMMENDATION THAT CITY COUNCIL APPROVE THE ORDINANCE AMENDING HOMER CITY CODE 21.93 ADMINISTRATIVE APPEALS TO CLARIFY GENERAL APPEAL PROCEDURES AND RELATED MATTERS.

There was no discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT.

Motion carried.

B. Staff Report 22-37, An Ordinance of the City Council of Homer, Alaska, Amending Title 21.03.040 Definitions Used in Zoning Code, Title 21.44 Slopes, Title 21.50.020 Site Development Standards - Level One and Title 21.50.020 Site Development Standards - Level Two Redefining Coastal Bluff and Setback Therefrom. Planning Commission.

Chair Smith introduced the item by reading of the title and deferred to City Planner Abboud.

City Planner Abboud provided a summary of Staff Report 22-37. He highlighted the following points:

- Review of the draft ordinance which was provided in the Supplemental Packet which provided the documentation that recommended changes fit well within the Comprehensive Plan guidelines

- Language has been amended to make it concise and easily understood
- Removed reference to the City Planner changing it to the City Engineer which is more appropriate.
- Amended the definition of "bluff"
- Included an attachment that provides a description of the area that they would recommend for setbacks

Chair Smith opened the public hearing, after verifying with the Clerk that there was no members of the audience present wishing to provide testimony on Zoom he closed the public hearing. He opened the floor to questions from the commission.

Commissioner Chiappone noted a correction to line 99 of the draft ordinance.

Chair Smith requested a motion and second after confirming with the Clerk that a motion was needed to amend the draft ordinance.

CHIAPPONE/HIGHLAND MOVED TO AMEND LINE 99 TO ADD THE WORD "FROM" AFTER THE WORD "FEET".

There was no discussion.

VOTE. (Amendment) NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

City Planner Abboud facilitated discussion on questions on the following

- provided explanation on clearing and grading and possibly bringing forth an ordinance
- site development and re-seeding or ground cover requirements shown on line 216 through 231 and Line 262.
- Line 306 the distance indicated of 10 feet from a water body being very short.

Deputy City Clerk Krause defined the phrase "in-situ" for the Commission at the request of Commissioner Highland, noting that it is usually hyphenated when used.

Chair Smith inquired if there were any additional questions or amendments from the Commission, hearing none he requested a motion and second.

HIGHLAND/VENUTI MOVED TO ADOPT STAFF REPORT 22-37 AND FORWARD A RECOMMENDATION THAT CITY COUNCIL APPROVE THE ORDINANCE AMENDING HOMER CITY CODE TITLE 21.03.040 DEFINITIONS USED IN ZONING CODE, TITLE 21.44 SLOPES, TITLE 21.50.020 SITE DEVELOPMENT STANDARDS – LEVEL ONE AND TITLE 21.50.020 SITE DEVELOPMENT STANDARDS – LEVEL TWO REFINING COASTAL BLUFF AND SETBACK THEREFROM.

There was no further discussion.

VOTE. (Main) NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

PLAT CONSIDERATION

PENDING BUSINESS


DIAMOND RIDGE
DIAMOND RIDGE
DIAMOND RIDGE
KACHEMAK
DIAMOND RIDGE RD
WEST HILL RD
SKYLINE
EAST HILL RD
MP 169
MP 170
MP 171
MP 172
MP 173
MP 174
MP 175
MP 1
MP 2
MP 3
T06S-R14W
T06S-R13W
HOMER
E PIONEER AVE
LAKE ST
OCEAN DR
KACHEMAK DR
60' setback
40' setback
40' setback
Proposed setback from coastal edge.
KBP Map Viewer, accessed 5.10.22

ORDINANCE REFERENCE SHEET
2022 ORDINANCE
ORDINANCE 22-33

An Ordinance of the City Council of Homer, Alaska, Amending the FY23 Capital Budget and Appropriating $11,838 from the General Fund Capital Asset Repair and Maintenance Allowance Fund to Replace Two Vending Stations at the Library.

Sponsor: City Manager/Library Director

1. City Council Regular Meeting June 13, 2022 Introduction

   Memorandum 22-102 from Library Director as backup.

CITY OF HOMER
HOMER, ALASKA

City Manager/
Library Director

ORDINANCE 22-33

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA, AMENDING THE FY23 CAPITAL BUDGET AND APPROPRIATING $11,838 FROM THE GENERAL FUND CAPITAL ASSET REPAIR AND MAINTENANCE ALLOWANCE (CARMA) FUND TO REPLACE TWO VENDING STATIONS AT THE LIBRARY.

WHEREAS, The Homer Public Library uses two automatic vending stations to collect payments for printing and photocopying services; and

WHEREAS, These vending stations are well past the end of their service lives, and one is no longer operational; and

WHEREAS, Two providers offered quotes to replace the machines, and the offer from Xerox includes supplying the machines, shipping and installing them, and providing tech support at reasonable rates.

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. The Homer City Council hereby amends the FY23 Capital Budget by appropriating $11,838 from the General Fund CARMA Fund as follows:

Fund	Description	Amount
156	General Fund CARMA	$11,838

Section 2.This ordinance is a budget amendment only, is not of a permanent nature and shall not be codified.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA this _____day of _____, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

YES:
NO:
ABSTAIN:
ABSENT:

Introduction:
Public Hearing:
Second Reading:
Effective Date:

City of Homer
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Homer Public Library
500 Hazel Avenue
Homer, AK 99603
library@cityofhomer-ak.gov
(p) (907)-235-3180
(f) (907)-235-3136

Memorandum 22-102

TO: Mayor Castner and Homer City Council

THROUGH: Rob Dumouchel, City Manager

FROM: Library Director Dave Berry

DATE: May 5, 2022

SUBJECT: Library Cash/Coin Boxes

The library has two vending stations, one connected to the public printers and one to the large photocopier. These stations accept payment in cash and coins, but not credit cards or phone debits. The current boxes were lease-to-own from Xerox and are now 100% City property. Xerox continues to provide tech support.

Both boxes have exceeded their design lifespans, and the one connected to the photocopier has been nonfunctional for months. Money for replacing them was included in the depreciation schedule that the library drafted in 2019. Those depreciation funds were later rolled into CARMA.

Here are the cost estimates:

	Xerox Corp.	Jamex MSRP
2 base units	$9,200	$6,200
Upgrading firmware and adding one feature (i.e. converting the units from printer or copier to handling both printing and copying)	$1,198	$698
2 years tech support	included	included
Additional 3 years tech support	$1,440	$2,688
Shipping and installation	included	$600
TOTAL	$11,838	$10,186

Xerox also offers a 60-month $1-out lease, at $236.76 per month, based on the same parameters above. Based on the fact that Xerox offers local service, we have an existing

maintenance contract with them, and they offer cheaper tech support over the long term, I recommend buying two machines from them.

RECOMMENDATION

Purchase two moneyboxes from Xerox, with a five-year tech support contract, as a one-time expenditure.

CITY OF HOMER
FINANCIAL SUPPLEMENT

PROJECT NAME	Replacing Library Vending Stations	DATE	06/08/2022
DEPARTMENT	Administration	SPONSOR	City Manager/Library Director
REQUESTED AMOUNT	$ 11,838		

DESCRIPTION	Homer Public Library uses two automatic vending stations to collect payments for printing and photocopying services. These vending stations are well past the end of their service lives, and one is no longer operational. Two providers offered quotes to replace the machines, and the offer from Xerox includes supplying the machines, shipping and installing them, and providing tech support at reasonable rates.

FUNDING SOURCE(S)	OPERATING	GF CARMA	GF FLEET CARMA	PORT RESERVES	WATER CARMA
	0%	100%	0%	0%	0%
	HAWSP	HART-ROADS	HART-TRAILS	PORT FLEET RESERVES	SEWER CARMA
	0%	0%	0%	0%	0%

FUNDING SOURCE 1: GF CARMA		FUNDING SOURCE 2:		FUNDING SOURCE 3:	
Current Balance	$ 2,719,903	Current Balance		Current Balance	
Encumbered	$ 896,040	Encumbered		Encumbered	
Requested Amount	$ 11,838	Requested Amount		Requested Amount	
Other Items on Current Agenda	$ 18,150	Other Items on Current Agenda		Other Items on Current Agenda	
Remaining Balance	$ 1,793,875	Remaining Balance		Remaining Balance	

FUNDING SOURCE 4:		FUNDING SOURCE 5:		FUNDING SOURCE 6:	
Current Balance		Current Balance		Current Balance	
Encumbered		Encumbered		Encumbered	
Requested Amount		Requested Amount		Requested Amount	
Remaining Balance		Remaining Balance		Remaining Balance	

ORDINANCE REFERENCE SHEET
2022 ORDINANCE
ORDINANCE 22-34

An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating $422,840 from the Sewer Capital Asset Repair and Maintenance Allowance Fund to Implement a Solution to the Broken Clarifier Belt at the Waste Water Treatment Plant.

Sponsor: City Manager/Public Works Director

1. City Council Regular Meeting June 13, 2022 Introduction

   Memorandum 22-103 from Public Works Director as backup.

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

ORDINANCE 22-34

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING THE FY22 CAPITAL BUDGET BY APPROPRIATING $422,840 FROM THE SEWER CAPITAL ASSET REPAIR AND MAINTENANCE ALLOWANCE (CARMA) FUND TO IMPLEMENT A SOLUTION TO THE BROKEN CLARIFIER BELT AT THE WASTE WATER TREATMENT PLANT.

WHEREAS, One of the two clarifiers tanks at the Waste Water Treatment Plant (WWTP) broke recently, requiring repair or replacement to keep the City's waste water treatment process operating; and

WHEREAS, To fix our problem, we need to find a vendor who understands our over 25 year old technology; and

WHEREAS, We issued a Task Order in the amount of $22,840 to one of our Term Contract Engineers, RESPEC Company, Inc., which has a mechanical engineer based in Homer, to help us research options and engineer a solution; and

WHEREAS, The estimated cost is $200,000 for each clarifier and engineering services in the amount of $22,840 for a total of $422,840.

NOW THEREFORE THE CITY OF HOMER ORDAINS

Section 1. The FY 22 Capital Budget is hereby amended by appropriating $422,840 from the Sewer CARMA Fund for the repair or replacement of the clarifier belts at the WWTP as follows:

Fund	Description	Amount
256-0379	Sewer CARMA	$422,840

Section 2. This is a budget amendment ordinance only, is not permanent in nature, and shall not be codified.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA, this __ day of_____, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

YES:
NO:
ABSTAIN:
ABSENT:

First Reading:
Public Hearing:
Second Reading:
Effective Date:

City of Homer
www.cityofhomer-ak.gov

Public Works
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Homer, AK 99603
publicworks@cityofhomer-ak.gov
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(f) 907-235-3145

Memorandum 22-103

TO: City Council
THROUGH: Rob Dumouchel, City Manager
FROM: Janette Keiser, PE, Director of Public Works
Todd Cook, Water/Sewer Superintendent
DATE: May 24, 2022
SUBJECT: WWTP Clarifier Belt Repairs

I. Issue: The purpose of this Memorandum is to request funding to repair or replace the chain driven clarifier skimming systems at the Waste Water Treatment Plant ("WWTP").

II. Background:

There are two clarifier tanks at the WWTP. Each tank is approximately 13' 11" X 75' X 12' and contains about 94,000 gallons of waste water. The purpose of the tanks is to separate the liquids from the solids in order to meet permit requirements for discharge to Kachemak Bay. The clarifiers and all associated equipment were originally installed in 1990. These operate in a corrosive environment 24 hrs a day. A clarifier is only removed from service for routine maintenance. After maintenance is performed the unit is returned to service. Removal of solids from the waste stream is a critical part of the waste water treatment process in order to operate with permit regulations and the protection of Kachemak Bay.

The addition of a polymer and dissolved air into the waste stream cause the solid to bind together and float. These solids are then skimmed from the surfaces of the clarifiers by a chain-driven "skimmer" units. The skimmer units are approximately 65 feet long and are moving continuously, much the same way a bicycle chain moves, driven by a sprocket at both ends of the chain. The chain contains links, rollers and pins, from which 13 ft long skimmer flights hang. There are 33 flights per clarifier. Regular maintenance includes filling automatic oiler units to lubricate the chain drive links and rollers, oil changes on the drive gear box. Semiannual inspection are performed by draining and cleaning the clarifier so the skimmer system and sludge collection system, on the floor of tank, can be visually inspected. Chain tension is also adjusted as needed. Due to the units being over 35 years old and constantly exposed to an extremely corrosive environment the crew has noted excessive wear on the rollers, links and support pin for the flights.

Over the weekend, the unthinkable happened. A flight support pin failed and one of the flights, fell into the clarifier tank and caused the whole assembly to malfunction. The operators quickly stopped the chain drive to assess the damage and concluded this is not an easy fix. With repair parts, the crew was able to return the clarifier to service in a day. Due the wear, this will become a regular occurrence at the WWTP. We are increasing the amount of lubrication used and cleaning of the system in hopes

of buying more time until more repair parts or a replacement system can be found. Because of the age of the system, parts are hard to locate. We are having a local shop machine replacement pins. Installing new/ fabricated parts into 35 year old links and flights will, again, only buy some time. The entire system needs to be replaced.

The chain-driven skimmer units that City of Homer uses are not as common as the round clarifier tanks, which use different configurations of skimmer units. To fix our problem, we need to find a vendor who understands our particular technology. We have no idea who this would be yet.

We issued a Task Order to one of our Term Contract Engineers, RESPEC Company, Inc., which has a mechanical engineer based in Homer, to help us research options and engineer a solution. Not only for our broken clarifier but also for the other one, which actually has a much higher rate of operating hours on it. We asked RESPEC to bracket the likely costs ASAP, so we could seek an appropriation for funding the fix. The estimated cost is $200,000 for each clarifier, for a total of $400,000. Engineering fees are Engineering fees are $22,840, for a total expenditure of are $422,840.

Funding should come from the Sewer CARMA Fund, which is very low at this time, because (1) we've been working on other repairs and (2) we have not included the 15% capital reserve fee in the water/sewer rates for the past two years. We intended to re-introduce this fee in June 2022 so we could built up the Sewer CARMA Fund so we have the money to address problems like this. This clarifier belt problem got ahead of us. This is a fiscal issue we need to fix. We are operating with only one clarifier now and the other one must not be in good shape either. While this is not yet an emergency, we are living on borrowed time.

III. Recommendation:

That the City Council appropriate funds from the Sewer CARMA Fund in the amount of $422,840 to implement a solution to the broken clarifier belts in the WWTP.

CITY OF HOMER
FINANCIAL SUPPLEMENT

PROJECT NAME	WWTP Clarifier Belts Repair or Replacement	DATE	06/08/2022
DEPARTMENT	Public Works	SPONSOR	City Manager/PW Director
REQUESTED AMOUNT	$ 422,840		

DESCRIPTION	One of the two clarifiers tanks at the Waste Water Treatment Plant (WWTP) broke recently, requiring repair or replacement to keep the City's waste water treatment process operating. We issued a Task Order in the amount of $22,840 to one of our Term Contract Engineers, RESPEC Company, Inc. to help us research options and engineer a solution. The estimated cost is $200,000 for each clarifier and engineering services in the amount of $22,840 for a total of $422,840.

FUNDING SOURCE(S)	OPERATING	GF CARMA	GF FLEET CARMA	PORT RESERVES	WATER CARMA
	0%	0%	0%	0%	0%
	HAWSP	HART-ROADS	HART-TRAILS	PORT FLEET RESERVES	SEWER CARMA
	0%	0%	0%	0%	100%

FUNDING SOURCE 1: SEWER CARMA		FUNDING SOURCE 2:		FUNDING SOURCE 3:	
Current Balance	$ 1,501,779	Current Balance		Current Balance	
Encumbered	$ 703,515	Encumbered		Encumbered	
Requested Amount	$ 422,840	Requested Amount		Requested Amount	
Other Items on Current Agenda	$ 150,000	Other Items on Current Agenda		Other Items on Current Agenda	
Remaining Balance	$ 225,424	Remaining Balance		Remaining Balance	

FUNDING SOURCE 4:		FUNDING SOURCE 5:		FUNDING SOURCE 6:	
Current Balance		Current Balance		Current Balance	
Encumbered		Encumbered		Encumbered	
Requested Amount		Requested Amount		Requested Amount	
Remaining Balance		Remaining Balance		Remaining Balance	

CITY OF HOMER
HOMER, ALASKA

City Manager

RESOLUTION 22-050

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA, ESTABLISHING A 2022 MIL RATE OF 1 MIL FOR THE OCEAN DRIVE LOOP SPECIAL SERVICE DISTRICT.

WHEREAS, The City of Homer may by ordinance, establish, alter, and abolish differential tax zones to provide and levy property taxes for services not provided generally in the City, or a differential levy than that generally provided in the City; and

WHEREAS, The City Council adopted Ordinance 11-49(S) to create the Ocean Drive Loop Special Service District to provide special services to the properties along the seawall to include operation, maintenance, repair, reconstruction, improvement, administration and other related activities conducted in the course of making and keeping the seawall operational for its intended erosion control purpose; and

WHEREAS, The District is funded by a property tax levied on the properties in the Special Service District; and

WHEREAS, HCC 15.10.020 provides that "The City Council shall annually set the mil levy pursuant to Section 9.04.040"; and

WHEREAS, HCC 9.04.040 states that the City Council must establish a mil rate no later than June 15TH of each year; and

WHEREAS, The armor rock revetment project that was completed on March 28, 2021 has required minimal maintenance and a reduced mil rate will accomplish projected annual maintenance requirements; and

WHEREAS, The mil rate established herein is in addition to the general real property tax mil rate.

NOW, THEREFORE, BE IT RESOLVED that the Homer City Council hereby establishes a 2022 mill rate of 1 mil for the Ocean Drive Loop Special Service District and authorizes the City Manager to so inform the Kenai Peninsula Borough.

PASSED AND ADOPTED by the Homer City Council this 13th day of June, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal Note: Acct. 808-375-4518

City of Homer
www.cityofhomer-ak.gov

Public Works
3575 Heath Street
Homer, AK 99603
publicworks@cityofhomer-ak.gov
(p) 907- 235-3170
(f) 907-235-3145

Memorandum 22-104

TO: Rob Dumouchel, City Manager

FROM: Janette Keiser, PE, Director of Public Works

DATE: May 31, 2022

SUBJECT: Ocean Drive Loop Special Service District

Issue: The purpose of this Memorandum is to recommend a maintenance budget and mil rate for the Ocean Drive Loop Special Service District.

Background:

The armor rock revetment project was completed on March 28, 2021. Since then, very little maintenance has been required. In late April, 2021, East Road Services did some maintenance work – picking up rocks that had slid off the revetment and tucking them back in place. This work cost under $2,000. We anticipate this kind of minimal maintenance work will be required from time to time, possibly annually.

Before the armor rock project was constructed, we used the Special Service District account to buy some shot rock and dredge spoils to fill sinkholes that had formed behind the wall. This work cost $29,073 for labor and $34,300 for materials, for a total of $63,373. We do not believe this level of effort will be needed anymore. A small contingency of $5,000 a year should cover minor issues at the top of the wall.

The annual maintenance requirements are projected to be:

• Inspections – twice/year at $500 each inspection	$1,000
• Replacing rock on revetment	$2,000
• Top of wall replenishment	$5,000
Total Estimated Annual Maintenance Costs	$9,000

There is currently $40,000 in the Special Service District Account, enough to cover over 4 years of maintenance costs at the current estimated rate. One mil generates just over $3,200, according to the Kenai Borough, which is more than enough to keep up with inflation. We do not need to collect more, at this time. If, after a couple of years, the situation changes and we're spending more on maintenance than what we've projected, we can adjust the rate accordingly.

Recommendation: We recommend a new assessment of 1 mil.

CITY OF HOMER
HOMER, ALASKA

City Manager

RESOLUTION 22-051

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA, ADOPTING THE CITY OF HOMER 2022 LOCAL HAZARDS MITIGATION PLAN UPDATE/REVISION.

WHEREAS, The Homer City Council recognizes the threat that natural and human generated hazards pose to its residents, their property, public infrastructure, and the health and safety of the community at large; and

WHEREAS, Planning for and implementing actions that avoid or mitigate the impacts of hazards before disasters occur reduces the potential for harm to people and property and saves taxpayer dollars; and

WHEREAS, An adopted Local Hazards Mitigation Plan is required as a condition for future grant funding to the City for hazard mitigation projects; and

WHEREAS, The plan adopts an updated schedule with the goal of preparing for a required update in no less than 5 years, which will allow the City to remain eligible to apply for federal funding for projects supported in the plan; and

WHEREAS, The City has provided notice of the draft plan revision and opportunities to comment to its local partners in disaster mitigation, has participated jointly in the planning process with the Borough and other units of government, and held a hearing to solicit comments from the public.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Homer, Alaska, hereby adopts the City of Homer 2022 Local Hazards Mitigation Plan.

PASSED AND ADOPTED by the Homer City Council this 13th day of June, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal note: N/A

City of Homer
www.cityofhomer-ak.gov

Planning
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Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

Memorandum 22-105

MEMORANDUM PL 22-08

TO: MAYOR CASTNER AND THE HOMER CITY COUNCIL
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: May 26, 2022
SUBJECT: CITY OF HOMER 2022 LOCAL HAZARD MITIGATION PLAN

I am pleased to present the updated City of Homer 2022 Local Hazard Mitigation Plan for your approval. Hazard mitigation planning reduces loss of life and property by minimizing the impact of disasters. The plan is required for the City to be eligible for federal funding of mitigation projects. Over past few months, we have worked with a consultant to assess risks posed by natural disasters and develop strategies to protect life and property in Homer from future hazard events.

Our efforts to update our plan started with an intent to apply for funding shared by FEMA (75%) and the State of Alaska (25%), in late 2019. After several delays including dealing with the response to COVID, the State assigned a contractor to work with the City at the beginning of this year. We formed a stakeholder group that included Council Member Erickson and started the process of evaluating our local hazard risk to our critical infrastructure. After completing a draft, the plan was reviewed by the Planning Commission and made available for public comment. The plan was then sent to the State and FEMA Region 10 and gained approval.

Once adopted by resolution of the City Council, the plan will be eligible to support requests for federal funds for approved projects.

Attachments:
Resolution
Final Plan
Staff report 22-22 and minutes
HMP Planning Flyer
Mitigation planning process

City of Homer
Local Hazard Mitigation Plan

CITY OF HOMER
2022 LOCAL HAZARD MITIGATION PLAN

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LIST OF ACRONYMS AND ABBREVIATIONS

ADGGS	Alaska Division of Geological and Geophysical Surveys
ADNR	Alaska Department of Natural Resources
ADOT&PF	Alaska Department of Transportation and Public Facilities
BRIC	Building Resilient Infrastructure and Communities
CFR	Code of Federal Regulations
DMA 2000	Disaster Mitigation Act of 2000
ENSTAR	ENSTAR Natural Gas Company
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
g	gravity
GIS	Geographic Information System
HCC	Homer City Code
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HUD	U.S. Department of Housing and Urban Development
LHMP	Local Hazard Mitigation Plan
LIDAR	light detection and ranging
NFIP	National Flood Insurance Program
PGA	peak ground acceleration
SFHA	Special Flood Hazard Area
SNAP	Scenarios Network for Alaska + Arctic Planning
STAPLEE	social, technical, administrative, political, legal, environmental, and economic
U.S.	United States
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

1.0 INTRODUCTION

1.1 CITY OF HOMER OVERVIEW

The City of Homer is a first-class city in the Kenai Peninsula Borough (Figure 1). The city is on the northern shore of Kachemak Bay, on the southwestern edge of the Kenai Peninsula. The Homer Spit is a distinguishing feature of the city, which extends 4.5 miles from the shoreline into the bay. Homer is 227 road miles south of Anchorage, at the southern terminus of the Sterling Highway. Homer comprises 24.2 square miles, with 13.9 square miles of land and 10.3 square miles of water.

Homer was incorporated in 1964. The city is governed by a city council composed of a mayor and council members. According to the 2020 United States (U.S). Census, the population of Homer is 5,522, up from 5,003 in 2010.

1.2 HAZARD MITIGATION PLANNING

As defined in Title 44 of the Code of Federal Regulations (CFR), Subpart M, Section 206.401, hazard mitigation is "any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards." As such, hazard mitigation is any work to minimize the impacts of any type of hazard event before it occurs. Hazard mitigation aims to reduce losses from future disasters. It is a process that identifies and profiles hazards, analyzes the people and facilities at risk, and develops mitigation actions to reduce or eliminate hazard risk. The implementation of the mitigation actions—which include short- and long-term strategies that may involve planning, policy changes, programs, projects, and other activities—is the end result of this process.

Over the past two decades, local hazard mitigation planning has been driven by a federal law, known as the Disaster Mitigation Act of 2000 (DMA 2000). On October 30, 2000, Congress passed the DMA 2000 (Public Law 106-390), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Title 42 of the United States Code Section 5121 et seq.) by repealing the act's previous mitigation planning section (409) and replacing it with a new mitigation planning section (322). This new section emphasized the need for state, tribal, and local entities to closely coordinate mitigation planning and implementation efforts. This new section also provided the legal basis for the Federal Emergency Management Agency's (FEMA's) mitigation plan requirements for the Hazard Mitigation Assistance (HMA) grant programs.

1.3 2022 LOCAL HAZARD MITIGATION PLAN SYNOPSIS

To meet the requirements of the DMA 2000, the City of Homer is updating its 2010 plan, which was included as an annex to the 2014 Kenai Peninsula Borough All-Hazard Mitigation Plan. In 2018, the City unofficially prepared an updated plan. Although the 2018 City of Homer All-Hazard Mitigation Plan was not fully enacted by FEMA, the 2018 plan serves as a reference document for this plan.

The goal of this planning process is to assess risks posed by hazards and to develop prioritized action plans to reduce risks in Homer. The 2022 Local Hazard Mitigation Plan (LHMP) is organized to follow FEMA's Local Mitigation Plan Review Tool (Appendix B), which demonstrates how hazard mitigation plans meet the DMA 2000 regulations. As such, specific planning elements of this review tool are in their appropriate plan sections.

The LHMP structure has been updated to include the following sections:

- **Section 1 Introduction**, which introduces the City of Homer and provides information on hazard mitigation planning.

- **Section 2 Planning Process**, which provides an overview of the planning process, starting with a timeline. It identifies planning team members and describes their involvement with the planning process. This section also details stakeholder outreach, public involvement, and continued public involvement. It provides an overview of the existing plans and reports, details how those documents were incorporated into the 2022 LHMP, and provides a plan update method and schedule. Supporting planning process documentation is provided in Appendix C.
- **Section 3 Hazard Identification**, which provides a description of each of the nine hazards addressed in this plan. Hazard figures are provided in Appendix A.
- **Section 4 Risk Assessment**, which provides hazard impact tables or descriptions for land area, population centers, and critical facilities. An overall summary of vulnerability for each hazard is also provided.
- **Section 5 Mitigation Strategy**, which provides a description of the City of Homer's mitigation goals, potential mitigation actions and projects, and prioritization process. A capability assessment, prioritized action plan, and the process to integrate the 2022 LHMP into other planning mechanisms is also addressed.
- **Section 6 Plan Review**, which provides an overview of development changes that have occurred since the 2010 plan, the progress in local mitigation efforts, and changes in priorities for mitigation actions.
- **Section 7 Plan Adoption**, which provides information about the formal adoption.
- **Section 8 Appendices**, which provides Appendix A (Figures), Appendix B (FEMA Documentation), and Appendix C (Planning Process).

2.0 PLANNING PROCESS

This section addresses Element A of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element A: Planning Process
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

2.1 OVERVIEW OF THE 2022 LHMP PLANNING PROCESS

The development of the 2022 LHMP was collaborative effort between the City of Homer, AECOM Technical Services, Inc., and a planning team. The planning process officially started in November 2021 and ended in April 2022. A timeline of the major planning tasks and milestones by month, including the times the planning team met, is provided in Table 2-1. A list of the planning team members and how they contributed to the development of the plan is provided in Table 2-2.

Table 2-1: LHMP Timeline

Date	Tasks	People Involved
November 2021	LHMP planning team meeting 1 (project overview) Initial information collected: hazards to be profiled, critical facility information	LHMP project manager, consultant, planning team
December 2021	Initial public outreach, via Facebook and newsletter	LHMP project manager
December 2021 and January 2022	Hazard profiles drafted	LHMP project manager, consultant
January 2022	Initial stakeholder outreach, via email	LHMP project manager
January 2022	Critical facilities map reviewed and approved	LHMP project manager, consultant
January 2022	Hazard figures created, hazard impact assessments drafted Draft mitigation actions developed	Consultant
February 2022	Planning team meeting 2 (draft mitigation actions reviewed)	LHMP project manager, consultant, planning team

Table 2-1: LHMP Timeline

Date	Tasks	People Involved
February 2022	Prioritization action plan developed Integration of LHMP into other planning documents determined	LHMP project manager, consultant, planning team
February and March 2022	Internal Draft LHMP	LHMP project manager, consultant, planning team
March 2022	Public Draft LHMP Follow-up public outreach and stakeholder involvement	LHMP project manager, consultant, public
April 2022	Final Draft LHMP	LHMP project manager, consultant, Alaska Division of Homeland Security and Emergency Management, FEMA Region X
[month, year]	Adoption of Final LHMP	LHMP project manager, City of Homer

Table 2-2: Planning Team

Name	Department/Agency and Title	Contribution
Rick Abboud, AICP	City Planner, City of Homer, LHMP project manager	Served as the LHMP project manager. Led planning team meetings; reviewed and commented on hazard figures, risk assessment tables, mitigation strategies, and the Internal Draft LHMP.
Robert Dumouchel	City Manager, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Jenny Carroll	Special Projects & Communications Coordinator, City of Homer	Reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Janna Davis	Safety Coordinator, Homer Electric Association, Inc.	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Shelly Erickson	City Council Member, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Janette Keiser	Public Works Director, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Mark Kirko	Fire Chief, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Scott Mullen	Support Services Director, South Peninsula Hospital	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.

2.2 OPPORTUNITIES FOR STAKEHOLDERS

On January 5, 2022, the LHMP project manager reached out to stakeholders via email (Appendix C) about the 2022 LHMP and invited them to participate in the planning process. Stakeholders included the Alaska Department of Homeland Security and Emergency Management (Hazard Mitigation Planner), Kachemak City (Mayor and Special Projects Manager), Alaska Department of Natural Resources (ADNR) Divisions of Forestry (Superintendent, Kenai Area Office) and Parks and Recreation (Forest Planner), Kenai Peninsula Borough (Borough Mayor), Friends of Kachemak Bay State Park (general), University of Alaska Anchorage Kachemak Bay National Estuarine Research Reserve (Manager), Kachemak Heritage Land Trust (general), Cook Inlet Regional, Inc. (general), Homer Airport (Manager), Kenai Peninsula School District (Director of Planning and Operations), Alaska Department of Transportation and Public Facilities (ADOT&PF) (Kenai Area Manager), and ENSTAR Natural Gas Company (ENSTAR) (Safety Manager). The Kachemak Bay National Estuarine Research Reserve offered assistance and resources about LHMP planning. The ADNR responded that they had concerns about potential tsunami threat from a glacier-caused landslide across Kachemak Bay. The ADNR is also a landowner along the Homer Spit, which is experiencing damage from erosion. The planning team spoke to them about their concerns and agreed to keep the ADNR informed of the LHMP process. The ADOT&PF also expressed concern about erosion along the Homer Spit and noted that they would like to participate in the planning process. In addition, ENSTAR expressed interest in participating in planning meetings.

The LHMP project manager reached out to the stakeholders again via email on March 24, 2022, inviting them to review and provide comments about the Public Draft LHMP (Appendix C). No comments were received.

2.3 PUBLIC INVOLVEMENT

On December 4, 2021, the City of Homer used their monthly emailed newsletter to announce to their public that they were beginning the LHMP update process and provided contact information for interested persons. No comments were received from the public. Also, on April 1, 2022, the City of Homer posted the draft plan on the city website with a function to make comments online. They used their monthly emailed newsletter to announce the Public Draft LHMP and comment period. No public comments were received. Copies of Homer's newsletters and a screenshot of the website posting are provided in Appendix C. All newsletters can also be found on the city's website.

2.4 REVIEW AND INCORPORATION OF EXISTING PLANS AND REPORTS

A list of the major relevant plans and reports reviewed and incorporated into the 2022 LHMP is provided in Table 2-3.

Table 2-3: Existing Plans and Reports

Plans and Reports	Information to be Incorporated into the 2022 LHMP
Alaska State Hazard Mitigation Plan (2018)	Information on statewide trends and the nature for all hazards are incorporated into the hazard profile and risk assessment sections.
Kenai Peninsula Borough All-Hazard Mitigation Plan (2014)	Information on borough-wide trends and the nature for all hazards are incorporated into the hazard profile and risk assessment sections.
City of Homer All-Hazard Mitigation Plan Update (unofficial) (2018)	Information on community trends and the nature for all hazards are incorporated into the hazard profile and risk assessment sections.

Table 2-3: Existing Plans and Reports

Plans and Reports	Information to be Incorporated into the 2022 LHMP
City of Homer and Kachemak City Community Wildfire Protection Plan (Kenai Peninsula Borough 2006)	This plan is in the process of being updated by the borough, but information is incorporated on wildfire history and recommendations brought into the mitigation strategy.
Homer Comprehensive Plan (City of Homer 2018)	Reviewed to ensure consistency. Document provided community background information, discussed community concerns around natural hazards.
Kenai Peninsula Borough Comprehensive Plan (2005)	Reviewed to ensure consistency. Document provided community background information, discussed community concerns around natural hazards.
City of Homer Emergency Operations Plan (2013)	Reviewed to ensure consistency. Document provided community background information, discussed community concerns around natural hazards.
2005 Homer Area Transportation Plan (City of Homer 2005)	Reviewed to ensure consistency. Document provided community background information, discussed community concerns around natural hazards.
Alaska Baseline Erosion Assessment: Study Findings and Technical Report (U.S. Army Corps of Engineers [USACE] 2009)	Background erosion information is incorporated into the hazard identification.
Kenai Peninsula Borough Risk Report: Kenai Peninsula Borough and the Incorporated Cities of Homer, Kachemak, Kenai, Seldovia, Seward, and Soldotna (FEMA 2017)	Background flood and earthquake information is incorporated into the hazard identification.
Coastal Change Analysis (Kachemak Bay Research Reserve 2016)	Historical information on coastal erosion is incorporated into the hazard profiles.
Landslide Hazard Evaluations for Multi-Hazard Risk Mapping in Homer, Alaska (Alaska Division of Geological and Geophysical Surveys [ADGGS] 2020 unpublished)	Information on current and historical landslide hazards in Homer are incorporated into the risk analysis and hazard profiles.
Updated tsunami inundation maps for Homer and Seldovia (ADGGS, 2018)	Tsunami hazard information into the hazard profile section and figure provided in Appendix A.
City of Homer Public Works Campus Tsunami Hazard Report: Risks, Mitigation Strategies, and Recommendations (Public Works Campus Task Force 2021)	Incorporated mitigation recommendations into the mitigation strategy.
Flood Risk Report: Lower Kenai Peninsula (City of Homer 2013)	Incorporated mitigation recommendations into the mitigation strategy.
Coastal Erosion Assessment of Sterling Highway Termini on Homer Spit (Memo from HDR to ADOT&PF 2019)	Information on coastal erosion is incorporated into the hazard profiles.

2.5 CONTINUED PUBLIC PARTICIPATION

A copy of the 2022 LHMP will remain available at the City of Homer Planning and Land Management website and the State of Alaska Division of Community and Regional Affairs online community planning

library. The LHMP project manager will use Homer's monthly emailed newsletter and the city website to notify the public of, and seek input on, any changes or updates to the 2022 LHMP, including prioritized action plan and the 2027 LHMP kickoff. The public can reach out to the Homer Planning Department with comments or questions at Planning@ci.homer.ak.us, which can be found on the city's website.

2.6 PLAN UPDATE METHOD AND SCHEDULE

The 2022 LHMP will be monitored, evaluated, and updated by a subset of the planning team, specifically the LHMP project manager in the Homer City Planning Department. Should the LHMP project manager no longer be involved with the LHMP, the project manager and/or the City Planner at the Homer Planning Department will select a new LHMP project manager to oversee the annual reviews and plan update.

The LHMP project manager will get input from specific planning team members as needed. They will complete the Annual Review Tracker every January and after any major disaster to ensure that the 2022 LHMP is relevant and effective in achieving the plan's goals. Annual review will be tracked in a table in this document (Table 2-4). FEMA-funded mitigation projects will continue to be tracked and reviewed using FEMA Mitigation Progress Report forms; progress summaries will be included in the Annual Review Tracker (Table 2-4) at the beginning of each year.

Four years after the 2022 LHMP's adoption:

- The Homer City Planning Department City Planner or designee will complete the Annual Review Tracker.
- The Homer City Planning Department City Planner or designee will reconvene the planning team and update membership, if necessary.
- The Homer City Planning Department City Planner or designee will review Table 2-4, which provides annual summaries of the disasters that have occurred; new permanent information that becomes available; implementation measures; and public outreach and response to determine the hazards to be included in the next LHMP.
- The Homer City Planning Department City Planner or designee will develop a new work plan.
- The Homer City Planning Department City Planner or designee—with support from the planning team—will begin the plan update process, which is expected to take up to 6 months.

Table 2-4: Annual Review Tracker

Year	Disasters that Occurred	Mitigation Actions Implemented	New Relevant Studies/Reports to Include in 2027 LHMP	Public Outreach Conducted	Changes Made to 2022 LHMP
2023					
2024					
2025					
2026					

3.0 HAZARD IDENTIFICATION AND RISK ASSESSMENT

This section addresses Element B of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element B: Hazard Identification and Risk Assessment
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement § 201.6(c)(2)(ii))
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement § 201.6(c)(2)(i))

Hazard identification consists of describing the nature of the hazard, location, disaster history, extent/severity, and probability of future events. Hazard identification profiles have been developed for each of the nine hazards addressed in Section 3.1 through Section 3.9: climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, volcano, wildfire. The hazards profiled for this LHMP are provided in alphabetical order; this order does not signify level of risk or hazard classification.

3.1 CLIMATE CHANGE

Table 3-1: Climate Change

Profile	Description
Nature	Climate is defined as the average statistics of weather, which includes temperature, precipitation, and seasonal patterns in a particular region. Climate change refers to the long-term and irrevocable shift in these weather-related patterns. The Fourth National Climate Assessment Report (2018) states that Earth's climate is now changing at a faster rate than at any time in the history of modern civilization, primarily due to human activities. The disruption in the climate is already impacting the way people live, the food they grow, their health, the wildlife, the availability of water, and much more. The impacts of global climate change are being felt today in the form of sea level rise and storm surge in coastal areas; increased riverine flooding and stormwater inundation; more frequent and prolonged higher temperatures (leading to heat events, wildfires, and permafrost thaw); and more severe and frequent extreme weather events. Changing climate conditions are more pronounced in the polar regions. Alaska is often identified as being on the frontline of climate change because it is warming faster than any other state and faces multiple issues associated with a changing climate. These climate change impacts include: • Retreat of sea ice, which will disrupt marine ecosystems and other animals (such as polar bears and walruses), impact local communities where sea ice is important for subsistence or tourism, and contribute to increased storm surge, coastal flooding, and erosion. • Increase of ocean temperature impacting marine ecosystems and Alaska's fisheries. • Flooding and erosion of coastal and river areas related to changes in sea ice and increase in storm intensity. • Increase in ocean acidification, which will impact marine organisms and thereby disrupting the marine food web. • Increase in the size and frequency of wildfires and droughts. • Thawing permafrost, melting glaciers, and associated effects on the state's infrastructure and hydrology. • Increase of health threats, such as injuries, smoke inhalation, damage to vital infrastructure, decrease of food and water security, and new infectious diseases. • Introduction of harmful or invasive species, with changing weather patterns and warming creating a change in the migration patterns. The City of Homer is vulnerable to an increase in ocean temperature; flooding and erosion of coastal areas; increase in ocean acidification; increase in the size and frequency of wildfires; increase of health threats, and introduction of invasive species.
Location	The entire area of the City of Homer is susceptible to climate change. Potential seal level rise, along with increased intensity of storm surge and coastal erosion, is threatening the Homer Spit.
History	According to the 2018 National Climate Assessment, the rate at which Alaska's temperature has been warming is twice as fast as the global average since the middle of the twentieth century. Statewide annual average temperatures from 1925 to the late 1970s were variable with no clear pattern of change. However, over the past 45 years (late 1970s to present), statewide annual average temperatures began to increase with an average rate of 0.7 degrees Fahrenheit (ºF) per decade. The temperature increase was especially strong in the Arctic due to the polar amplification of global warming. In Homer, the Alaska Climate Research Center has observed a change of annual average temperature from 34.9ºF in 1950 to 38.9ºF in 2020 (11% increase). During that period, the Alaska Climate Research Center also observed an increase of annual precipitation from 15.47 inches to 23.68 inches (29% increase). While historical precipitation and temperature changes in Alaska have been well documented over the past several decades, historical information on sea level rise is less known due to lack of tide gauges with extended records. Researchers believe that prior to 1990, sea level rise on a global

Table 3-1: Climate Change

Profile	Description
	scale was only 0.04 inches per year; however, for the 1993 to 2012 reporting period, sea level rise has been 0.12 inches per year.
Extent / Severity	The University of Alaska Fairbanks Scenarios Network for Alaska + Arctic Planning (SNAP) models climate data for mid-range global emissions. SNAP temperature models show that Homer will experience a temperature increase of 5.3ºF by the end of the century. Likewise, precipitation models show that for the same reporting period Homer will see an average rainfall increase of 2.8 inches (Table 3-2). Sea level rise is not modeled for the City of Homer, but any rise in sea level or storm surge intensity would threaten all land and water on the Homer Spit.
Recurrence Probability	Climate change is a significant and lasting change in the statistical distribution of weather patterns over periods of time ranging from decades to millions of years. It may be a change in average weather conditions or in the distribution of weather around the average conditions (i.e., more or fewer extreme weather events). According to the National Aeronautics and Space Administration, "the current warming trend is of particular significance because most of it is extremely likely (i.e., greater than 95% probability) to be the result of human activity since the mid-twentieth century and proceeding at a rate that is unprecedented over decades to millennia." The National Aeronautics and Space Administration also states that "scientists have high confidence that global temperatures will continue to rise for decades to come, largely due to greenhouse gases produced by human activities.

Table 3-2: Mean Annual Temperature and Precipitation Predictions

	2010-2019	2050-2059	2090-2099
Mean Annual Temperature	39.7°F	42.8°F	45.0°F
Mean Annual Precipitation	28.7 inches	29.6 inches	31.5 inches

3.2 EARTHQUAKE

Table 3-3: Earthquake

Profile	Description
Nature	An earthquake is a sudden motion or trembling caused by a release of strain accumulated in or along the edge of Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. Earthquakes usually occur without warning and can cause massive damage and extensive casualties in a few seconds. Common effects of earthquakes are ground motion and shaking; surface fault ruptures; and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can amplify ground motions. In addition to ground motion, several secondary hazards can occur from earthquakes, such as the following: • Surface Faulting: Surface faulting is the differential movement of two sides of a fault at Earth's surface. Displacement along faults—in terms of both length and width—varies but can be significant (e.g., up to 20 feet), as can the length of the surface rupture (e.g., up to 200 miles). Surface faulting can cause severe damage to linear structures including railways, highways, pipelines, tunnels, and dams. • Liquefaction: Liquefaction occurs when seismic waves pass through saturated granular soil, distorting its granular structure and causing some of the empty spaces between granules to collapse. Pore water pressure may also increase sufficiently to cause the soil to behave like a fluid for a brief period and cause deformations. Liquefaction causes lateral spreads (i.e., horizontal movements that are typically 10 to 15 feet, but can be up to 100 feet), flow failures (i.e., massive flows of soil that are typically hundreds of feet, but can be up to 12 miles), and loss of bearing strength (i.e., soil deformations causing structures to settle or tip). Liquefaction can cause severe damage to property. • Landslides/Debris Flows: Landslides/debris flows occur as a result of horizontal seismic inertia forces induced in the slopes by the ground shaking. The most common earthquake-induced landslides include shallow disrupted landslides such as rock falls, rockslides, and soil slides. Debris flows are created when surface soil on steep slopes becomes completely saturated with water. Once the soil liquefies, it loses the ability to hold together and can flow downhill at very high speeds, taking vegetation and/or structures with it. Slide risks increase after an earthquake during a wet winter. The two most common measures of earthquake intensity used in the United States are the Modified Mercalli Intensity scale, which measures felt intensity; and peak ground acceleration (PGA), which measures instrumental intensity by quantifying how hard the earth shakes in a given location. Magnitude is measured by the amplitude of the earthquake waves recorded on a seismograph using a logarithmic scale.
Location	Homer is in a region of high seismicity. It is above a boundary between segments of the earthquake-generating Alaska-Aleutian subduction zone—the Kodiak Island segment to the southwest and the Prince William Sound segment to the northeast. While the 1964 Great Alaska Earthquake ruptured both segments, findings from around the region suggest that the two segments may rupture independently. The nearest studied fault line to Homer is the Falls Creek-Ninilchik anticline, which is a quaternary fault (i.e., one event per 1,600,000 years) approximately 30 miles away. Several other fault lines lie around Homer and on the Kenai Peninsula but are not studied and no details are known.

Table 3-3: Earthquake

Profile	Description
History	As stated in the 2018 State of Alaska HMP, Alaska is one of the most seismically active regions in the world and is at risk of societal and economic losses due to damaging earthquakes. On average, Alaska has one "great" (magnitude of 8 or higher) earthquake every 13 years, one magnitude 7 to 8 earthquake every year, and six magnitude 6 to 7 earthquakes every year. In addition, earthquakes that occur on tectonic plate boundary faults near the coast can generate tsunamis that impact coastal communities, including Homer. The effects of the March 27, 1964 Great Alaska Earthquake (which had a magnitude of 9.2) in the Homer area were thoroughly documented after the event. Observations included general damage caused by tectonic subsidence; and earth flows, landslides, fissures, seiches, submarine landslides, and beach changes caused by strong ground shaking during the event. Most of the damage to the community occurred on Homer Spit as a result of 2 to 3 feet of tectonic subsidence. Since 2000, there have been 27 earthquakes with a magnitude of 5.0 or greater that occurred within 150 miles of the City of Homer. Two of those earthquakes had a magnitude of 7.0 or greater. Twenty-five of those 27 earthquakes occurred since the previous 2010 LHMP; the most recent earthquake was in December 2021.
Extent / Severity	The strength of an earthquake's ground movement can be measured by PGA. PGA measures the rate in change of motion relative to the established rate of acceleration due to gravity (g = 980 centimeters per second). PGA is used to predict the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (e.g., 10%, 5%, or 2%) of being exceeded in 50 years. The ground motion values are used for reference in construction design for earthquake resistance and can also be used to assess the relative hazard between sites when making economic and safety decisions. The current U.S. Geological Survey (USGS) seismicity model for Alaska was developed in 2007. The PGA values in Homer for a 5% probability of exceedance in 50 years are shown in Figure 2. Based on this model, there are 8,912.52 acres (100%) in the perceived "Severe" shaking zone, with moderate to heavy potential for damage. An earthquake risk assessment was conducted by FEMA in 2017. Two scenarios were analyzed: the first used the January 2016 M7.1 Old Iliamna earthquake event and estimated a loss of improved parcels of $3,303,266 (0.27%); the second simulated the M9.2 Great Alaska Earthquake and estimated a property loss of $56,997,792 (4.60%). The estimated value of structure loss is provided in Table 4-6.
Recurrence Probability	As shown in Figure 2, the seismic PGA for Homer has a 5% probability of severe shaking in Homer in the next 50 years. Based on these data, there is a 5% chance of an earthquake occurring in Homer that will exceed 49.18 PGA in 50 years.

3.3 EROSION

Table 3-4: Erosion

Profile	Description
Nature	Erosion is the wearing and transportation of land. Erosion is typically gradual land loss through wind or water scour. In developed regions, erosion undermines buildings and infrastructure. Erosion can be experienced from coastal, riverine, or wind sources. Erosion forces are embodied in waves, currents, and winds; surface and ground water flow; and freeze-thaw cycles may also play a role. Not all of these forces may be present at any particular location. In the U.S., Alaska is unique because of how permafrost thaw interacts with flooding and erosion to exacerbate the impacts of these hazards. Frozen ground can disintegrate under the compounding influences of permafrost thaw, flooding, and erosion in an escalating feedback loop that can result in damage that is much greater than would be expected from the individual processes alone. Coastal erosion is a common term used to describe the retreat of the shoreline along the ocean. It describes the attrition of land resulting in loss of beach, shoreline, or dune material from natural activity or human influences. Erosion rarely causes death or injury; however, it causes property destruction, prohibits development, and impacts community infrastructure. Erosion can occur rapidly as the result of floods, storms, or other events; or slowly as the result of long-term environmental changes such as melting permafrost. Erosion is a natural process, but its effects can be easily exacerbated by human activity. Coastal erosion can occur from rapid short-term daily, seasonal, or annual natural events such as waves, storm surge, wind, coastal storms, and flooding; or from human activities including boat wakes and dredging. The most dramatic erosion often occurs during storms, particularly because the highest energy waves are generated under storm conditions. Coastal erosion occurs over the area from roughly the top of the shore into the nearshore region to about 30-foot water depth. It is measured as the rate of change in the position or horizontal displacement of a shoreline over a period of time. Bluff recession is the most visible aspect of coastal erosion because of the dramatic change it causes to the landscape. As a result, this aspect of coastal erosion usually receives the most attention. Solifluction, the slow movement of water-saturated soils down a slope during freeze-thaw cycles is another contributor to coastal erosion and can cause slumping. Coastal erosion may also be due to multi-year impacts and long-term climatic change such as sea-level rise, lack of sediment supply, subsidence, or long-term human factors (e.g., aquifer depletion or the construction of shore protection structures and dams). Attempts to control erosion using shoreline protective measures such as groins, jetties, seawalls, or revetments can lead to increased erosion.
Location	The City of Homer experiences coastal erosion annually from winter storms and high storm surge, occurring along the entire coastline. Solifluction also contributes to coastal erosion, particularly on coastal discharge slopes. Particular areas of concern are the Homer Spit, the bluffs along sections of the Sterling Highway, and along the residential areas on Kachemak Drive and Ocean Drive Loop.
History	In 2019, ADOT&PF contracted HDR to conduct a site visit to the Homer Spit to observe the condition of the road along the spit. They noted that it is apparent that the spit is undergoing a long period of erosion, evidenced by the piling structures located on the spit, which are exposed an estimated ten feet more than the previous three years. Beach areas near the road terminus once used for camping and other recreation are now gone. Changes in storm patterns the past few years with milder summers and fewer strong southeasterly events may be affecting the sediment movement along the spit allowing greater erosion and less seasonal accretion. In 1992, the USACE constructed 1,000 feet of revetment, and extended it an additional 3,700 feet in 1998. It is suspected that placement of the rock sections by the USACE affected the supply of sediment, which impacted the overall littoral drift on the Spit. This caused beach lowering adjacent to the

Table 3-4: Erosion

Profile	Description
	rock revetment and further south along the spit. The USACE rock revetment appears exposed almost in its entirety, where in the past a greater portion of rock was buried. In 2005, the Kachemak Bay Research Reserve completed a study of erosion rates in Homer. The study provided an estimate of coastal bluff erosion rates based on a series of aerial surveys from 1951 to 2003. The study concluded that the average erosion rate along Homer's shoreline is approximately 0.3 to 1.2 meters per year. The researchers found that before, during, and right after the 1964 earthquake, erosion rates were faster than they had been since 1975 but slowed after that time. There is evidence that the rates have increased again in recent years.
Extent / Severity	As noted above, studies have shown that Homer's coastal bluffs have retreated on average 0.3 to 1.2 meters per year over the last 70 years. The Homer Spit is eroding approximately 10 feet every 3 years in some places, as noted above.
Recurrence Probability	Erosion will continue each year in Homer on the Homer Spit and the bluffs.

3.4 FLOOD

Table 3-5: Flood

Profile	Description
Nature	A flood occurs when the existing channel of a stream, river, canyon, or other watercourse cannot contain excess runoff from rainfall or snowmelt, resulting in overflow onto adjacent lands. In coastal areas, flooding may occur when high winds or tides result in a surge of seawater into areas that are above the normal high tide line. Secondary hazards from floods can include: • Erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features • Impact damage to structures, roads, bridges, culverts, and other features from high-velocity flow and debris carried by floodwaters (debris may also accumulate on bridge piers and in culverts, increasing loads on these features or causing overtopping or backwater effects) • Destruction of crops, erosion of topsoil, and deposition of debris and sediment on croplands • Release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed
Location	As shown in Figure 3, the areas most prone to flooding in the City of Homer are along nearly the entire shoreline, the low-lying areas surrounding and including Beluga Lake, and the entire Homer Spit. The flood map does not include risk from tsunami or sea level rise.
History	The City of Homer experiences flooding from rainfall runoff (late summer and early fall), snowmelt (spring and early summer), groundwater floods, and flash floods. Floods can also occur in fall and winter when temperatures vacillate between freezing and thawing. Precipitation in the form of rain on frozen ground has little to no drainage and causes flooding. Homer has experienced floods on several occasions in the last 20 years. Major events occurred in 2002, 2007, and (most recently) 2013, resulting in numerous bridges being washed out on the Kenai Peninsula and isolating Homer for several weeks while temporary repairs were made. Two of these events were declared disasters and resulted in disruptions to the economy by preventing the flow of goods and materials except by barge or airplane.
Extent / Severity	The magnitude of flooding that is used as the standard for floodplain management in the United States is a flood with a probability of occurrence of 1% in any given year. This flood is also known as the 100-year flood (i.e., base flood). The 100-year flood (1%) and the 500-year flood (0.2%) are considered Special Flood Hazard Areas (SFHAs) and identified on FEMA's Flood Insurance Rate Maps (FIRMs). The City of Homer FIRM (Figure 2) identifies 708.52 acres (7.95%) with a 1% annual chance of flooding. These areas are along the shoreline, around Beluga Lake, and encompass the Homer Spit. There are 113.46 acres (1.27%) with a 0.2% annual chance of flooding, which are on the Homer Spit.
Recurrence Probability	Floods can occur at any time in Homer but are most common in the spring and summer with heavy snowmelt and rainfall runoff, and in the fall and winter during freeze/thaw cycles. Based on previous occurrences of flood events in Homer, severe flooding is most likely to occur every 2 to 7 years.

3.5 LANDSLIDE

Table 3-6: Landslide

Profile	Description
Nature	Landslide is a general term for the dislodging and fall of a mass of soil or rocks along a sloped surface, or for the dislodged mass itself. The term is used for varying phenomena including mudflows, mudslides, debris flows, rock falls, rockslides, debris avalanches, debris slides, and slump-earth flows. Landslides may result from a wide range of combinations of natural rock, soil, or artificial fill. The susceptibility of hillside and mountainous areas to landslides depends on variations in geology, topography, vegetation, and weather. Landslides may also occur because of indiscriminate development of sloping ground or the creation of cut-and-fill slopes in areas of unstable or inadequately stable geologic conditions. Landslides often occur together with other hazards, which can exacerbate conditions as described below: • Shaking due to earthquakes can trigger events ranging from rock falls and topples to massive slides • Intense or prolonged precipitation that causes flooding can also saturate slopes and cause failures leading to landslides • Wildfires can remove vegetation from hillsides, significantly increasing runoff and debris flow potential • Landslides into a reservoir can indirectly compromise dam safety; a landslide can even affect the dam itself • Saturation by water is also a primary cause of landslides. Saturation can occur in the form of intense or prolonged rainfall, snowmelt, changes in groundwater levels, and surface water level changes along coastlines, earth dams, and banks of lakes. Another type of landslide occurs in areas cut by perennial streams; as floodwaters erode channel banks, rivers have undercut clay-rich sedimentary rocks along their southern bank, thereby destabilizing the ground and causing the ground above it to slide.
Location	In North America, there is an association between landslides and hilly terrain (particularly with slopes ranging from about 20 to 40 degrees). Areas on the mountainous terrain in the city which includes slopes greater than 20 degrees, are shown in Figure 4. The highest concentration of these slopes is along the bluffs running between Skyline Drive East End Road and on the west end of the city, just south of the Sterling Highway (Bluff Point). The Bluff Point landslide is well documented and shown in Figure 5.
History	The ADGGS has identified over 1,000 slope failure scars using aerial photographs and light detection and ranging (LIDAR) data from the Homer and Kachemak areas. At least one severe landslide occurred in Homer above Kachemak following the Great Alaskan Earthquake. Notable landslide failures in Homer since the 2010 LHMP include: • In 2013, heavy rains caused a 16-foot mudslide down Bear Creek Drive (3 miles east on East End Road). Uphill, when heavy rains saturated the narrow Bear Creek Canyon, it “let go,” which sent trees and debris down Bear Creek, jamming a culvert on the uphill side of East End Road. A disaster declaration was made for several rain-soaked areas in the Kenai Peninsula Borough. • In 2015, a landslide occurred along a stretch of Kachemak Drive near the Homer Airport. The slide resulted in the closure of Kachemak Drive approximately 0.5-mile from Homer Spit Road to the top of the hill by the old airport. The slide took out a 100-foot section of the east bound lane of Kachemak Drive, pushing clumps of spruce and alder trees into Mud Bay.

Table 3-6: Landslide

Profile	Description
Extent / Severity	No official landslide dataset exists for the City of Homer. However, in North America, there is an association between landslides and hilly terrain (particularly with slopes ranging from about 20 to 40 degrees). As such, the mountainous terrain in Homer that includes slopes greater than 20 degrees is at greatest risk of slide. Approximately 17% (1,504 acres) of Homer is in this hazard area.
Recurrence Probability	Shallow landslides can occur at any time but are more likely to happen when the ground is nearly saturated. However, deep-seated landslides are generally triggered by deep infiltration of rainfall (which can take weeks or months to occur) and therefore typically follow major storm events. It is assumed that the probability of a future landslide event will be highly tied to winter storm/rain events. Based on historical occurrences, severe winter storm conditions are likely in the City of Homer every 2 to 7 years.

3.6 SEVERE WEATHER

Table 3-7: Severe Weather

Profile	Description
Nature	Severe weather occurs throughout Alaska with extremes includes thunderstorms; lightning; hail; heavy and drifting snow; freezing rain/ice storm; extreme cold; and high winds. Severe weather events can include the following: • A winter storm is an event in which the main types of precipitation are snow, sleet, or freezing rain and be accompanied by high winds, cold temperatures, and storm surge. A winter storm can range from a moderate snow over a few hours, to blizzard conditions with blinding wind-driven snow that lasts several days. Some winter storms may be large enough to affect several states, while others may affect only a single community. In more temperate continental climates such as Homer, these storms are not necessarily restricted to the winter season and may also occur in the late autumn and early spring. • Heavy snow and rain occur frequently in coastal areas and snowfall can accumulate 4 inches or more in 12 hours or less. • Freezing rain and ice storms occur when rain or drizzle freezes on surfaces and can cause damage to powerlines, pipelines, and other infrastructure. • Extreme cold varies according to normal regional climate. Alaska's extreme cold usually involves temperatures between -20 and -50ºF. Excessive cold may accompany winter storms, occur after storms, or can occur without storm activity. • High winds in Alaska can equal hurricane force but are under a different classification because they are not cyclonic nor possess other hurricane characteristics. Strong winds occasionally occur over the interior due to strong pressure differences, especially where influenced by mountainous terrain; however, the windiest places in Alaska are generally along the coastlines.
Location	The entire Homer area is vulnerable to the effects of severe weather.
History	Notable severe weather events from 2000 through 2021 include: • In the spring of 2003, strong winds across the Kenai Peninsula resulted in widespread power outages, downed trees, and structural damage and fanned the flames of a 150-acre wildfire in Anchor Point. • In November 2011, a series of major windstorms caused widespread power outages threatening life and property. Power was disrupted to 17,300 homes and businesses. Public infrastructure, commercial property, and personal property damages were reported throughout the borough. • In February 2014, a strong low in the southwest Gulf of Alaska produced strong wind in in the Kachemak Bay Area. The strong wind caused widespread damage from Kenai to the Homer area. Heavy snow fell in the Kachemak Bay area, combined with high wind and blizzard conditions. • In December 2019, a southerly jet stream brought several low-pressure systems to Southcentral Alaska. These were accompanied by above freezing temperatures, abundant rainfall, and high winds as the fronts passed through. A primary impact of this event was the flooding of the Anchor Point River. In addition, North Fork Road was impassable, and the Sterling Highway was flooded in several locations between mile 161 and 163, there was flooding across East End Road at Bear Creek Drive, and a mudslide on East End Road at Kachemak Bay Drive. • In January 2020, a low-pressure system developed south of the Aleutian Islands and then moved north along the Alaska Peninsula and up Cook Inlet. A strong high-pressure system that followed brought a large amount of cold air, which created high winds through the Cook Inlet area. Homer reported 8 hours of blizzard conditions and near-whiteout conditions.

Table 3-7: Severe Weather

Profile	Description
Extent / Severity	Winter storms in the Homer area can produce snow of up to 3 feet per storm, high wind speeds of up to 60 miles per hour and with cold temperatures.
Recurrence Probability	Based on historical occurrences, the City of Homer can expect to experience severe weather conditions approximately 5 to 6 days each year.

3.7 TSUNAMI

Table 3-8: Tsunami

Profile	Description
Nature	A tsunami is a series of traveling ocean waves of extremely long length, generated by disturbances associated primarily with earthquakes occurring below or near the ocean floor. Subduction zone earthquakes at plate boundaries often cause tsunamis. However, tsunamis can also be generated by submarine landslides, sub-marine volcanic eruptions, the collapse of volcanic edifices, and—in very rare instances—large meteorite impacts in the ocean. In the deep ocean, a tsunami may have a length from wave crest to wave crest of 100 miles or more, but a wave height of only a few feet or less. Therefore, the wave period can be up to several hours and wavelengths can exceed several hundred miles. Tsunamis are unlike typical wind-generated swells on the ocean, which might have a period of about 10 seconds and a wavelength of up to 300 feet. Tsunamis not only affect beaches that are open to the ocean, but also bay mouths, tidal flats, and the shores of large coastal rivers. Tsunami waves can also diffract around land masses. Because tsunamis are not symmetrical, the waves may be much stronger in one direction than another, depending on the nature of the source and the surrounding geography. However, tsunamis propagate outward from their source; therefore, coasts in the shadow of affected land masses are safer. Secondary hazards can occur from tsunamis, such as: • Erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features. • Impact damage to structures, roads, bridges, culverts, and other features from high-velocity flow and from debris carried by floodwaters; debris may also accumulate on bridge piers and in culverts, increasing loads on these features or causing overtopping or backwater effects. • Release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed. • Flood waters can pose health risks such as contaminated water and food supplies. • Loss of shelter leaves people vulnerable to insect exposure, heat, and other environmental hazards. The majority of deaths associated with tsunamis are related to drownings; however, traumatic injuries are also a primary concern. Injuries such as broken limbs and head injuries are often caused by the physical impact of people being washed into debris such as houses, trees, and other stationary items. As the water recedes, the strong suction of debris being pulled into largely populated areas can cause further injuries and undermine buildings and services.
Location	The tsunami inundation zone for Homer is shown in Figure 6 and Figure 7. Nearly the entire Homer Spit could be inundated, as well as the low-lying areas around Beluga Lake and to the coast, excluding the airport.
History	The 1964 Great Alaska Earthquake triggered several tsunamis, one major tectonic tsunami and approximately 20 local submarine and subaerial landslide tsunamis. The major tsunami hit between 20 and 45 minutes after the earthquake. The locally generated tsunamis struck between 2 and 5 minutes after their generation and caused most of the deaths and damage in Homer.

Table 3-8: Tsunami

Profile	Description
Extent / Severity	The Alaska Earthquake Center and University of Alaska Fairbanks model for tsunami waves and inundation shows a maximum composite tsunami inundation for Homer. Based on this model, there are 1,735 acres (19%) of Homer's land area at risk to tsunami inundation. This inundation level includes eight (24%) critical assets. A series of simulated tectonic scenarios were conducted in a report by the ADGGS. The first scenario (a repeat of the 1964 Great Alaska Earthquake) would not result in any inundation in Homer except for the section of Lake Street that separates the tidal flats from Beluga Lake. Some low-lying parts of Homer Spit would be flooded, but the Homer Spit Road would not be inundated. In the next scenario (a magnitude 9.2 earthquake on the Kenai Peninsula), Lake Street (which separates the tidal flats from Beluga Lake), the areas between the tidal flats, the Sterling Highway, and nearly the entire Homer Spit would be inundated. The third scenario (maximum slip distributed between 9.3 and 21.7 miles deep) would result in the most severe inundation. The entire low-lying area of Homer from the tidal flats to the Kachemak Bay shore as well as some residential areas south of Beluga Land and along the Sterling Highway would be inundated. The Homer Spit would be completely inundated under this scenario. The final scenario (rupture of the Cascadia subduction zone) would not result in any inundation except for the tidal flats area and some low-lying areas of the Homer Spit. The City of Homer created a task force to evaluate risks and provide recommendations for mitigation to the public works campus.
Recurrence Probability	The likelihood of a tsunami is hard to predict; however, previous events have shown that an earthquake-generated tsunami could impact the Homer community in the next 5 years (up to 1 in 5 chance of occurring).

3.8 VOLCANO

Table 3-9: Volcano

Profile	Description
Nature	A volcano is a vent or opening in the earth's crust from which molten lava (magma), pyroclastic materials, and volcanic gases are expelled onto the surface. The vent may be visible as a small bowl-shaped depression at the summit of a cone or shield-shaped mountain. Through a series of cracks in and beneath the volcano, the vent connects to one or more linked storage areas of molten or partially molten rock. There are four general volcano types: • Lava domes are formed when lava erupts and accumulates near the vent. • Cinder cones are shaped and formed by cinders, ash, and other fragmented material accumulations that originate from an eruption. • Shield volcanoes are broad gently sloping volcanic cones with a flat dome shape that usually encompass several tens or hundreds of square miles, built from overlapping and inter-fingering basaltic lava flows. • Composite or stratovolcanoes are typically steep-sided large dimensional symmetrical cones built from alternating lava, volcanic ash, cinder, and block layers; most composite volcanoes have a crater at the summit containing a central vent or a clustered group of vents. There are three types of volcanic eruptions, described below. Some volcanoes may exhibit only one type of eruption during an event, while others may display an entire sequence of all three types in one event. • Magmatic eruptions are the most well observed eruptions. Magmatic eruptions produce juvenile clasts (composed fragments) during explosive decompression from gas releases. Magnetic eruption subtypes include Hawaiian, Strombolian, Vulcanian, Peléan, and Plinian. • Phreatomagmatic eruptions are volcanic eruptions resulting from the interaction between magma and water. Grain deposits from phreatomagmatic explosion involving high water to magma ratios are extremely fine-grained and distinctly poorly sorted, while deposits resulting from low water to magma ratios are commonly coarse and relatively well sorted. Phreatomagmatic eruption subtypes include: Surtseyan, Submarine, and Subglacial. • Phreatic eruptions are steam-blast eruptions. These eruptions occur when cold groundwater or surface water comes into contact with hot rock or magma. Phreatic eruptions blast out steam, water, ash, volcanic bombs, and volcanic blocks, but no new magma. Other hazards potentially caused by a volcanic eruption include: • Volcanic ashfall • Lava flows • Lahars (debris flows) • Volcanic gas • Pyroclastic surges or flows • Volcanic landslides
Location	As shown in Figure 8, most of the community of Homer (95% of land area) is at risk for moderate tephra ashfall hazard with 0.25 to 1 inch accumulation, and the far western end of Homer (5% of land area) is at risk for high (heavy) tephra ashfall with 1 to 4 inches of accumulation.

Table 3-9: Volcano

Profile	Description
History	The Alaska Volcano Observatory is monitoring 3 volcanos within 100 miles of Homer: • Augustine (70 miles southwest) was last active in 2006 when it had explosive eruptions that produced ash plumes that deposited small amounts of ash in Homer. • Iliamna (60 miles northwest) was last active in 1953 when it emitted a large cloud of smoke. • Redoubt (80 miles northwest) was last active in 2009 when it erupted over several months with multiple ash-producing explosions, culminating in an eruption in which the ash cloud reached 50,000 feet and moved swiftly to the southeast, depositing up to 2 millimeters of ashfall in Homer. Eruptions also occurred in 1968 and 1990. None of these volcanos have been active since the 2010 LHMP.
Extent / Severity	As noted above, all of the Homer area is susceptible to moderate to heavy tephra ashfall. According to the Alaska Volcano Observatory, ash accumulation of 0.25 to 1 inch is likely from moderate tephra ashfall while ash accumulations of 1-4 inches is likely from heavy tephra ashfalls.
Recurrence Probability	Given the proximity of three active volcanos and history of past events, the City of Homer could have an ashfall event in the next 10 years (1 in 10 chance of occurring).

3.9 WILDFIRE

Table 3-10: Wildfire

Profile	Description
Nature	A wildfire—sometimes referred to as a wildland fire—is a fire in an area of combustible vegetation occurring in rural areas. Wildfires can be caused by human activities (e.g., unattended burns, campfires, or off-road vehicles without spark-arresting mufflers); or by natural events (e.g., lightning, drought, or infestation). Wildfires can be classified as forest, urban, tundra, interface or intermix fires, and prescribed burns. The following three factors contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas: • Topography describes slope increases, which influences wildfire spread rate increases. South-facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridge tops may mark the end of wildfire spread because fire spreads more slowly or may even be unable to spread downhill. • Fuel is the type and condition of vegetation that plays a significant role in wildfire spread occurrence. Certain plant types are more susceptible to burning or will burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available as fire fuel (referred to as the "fuel load"). The living-to-dead plant matter ratio is also important. Certain climate changes may increase wildfire risk significantly during prolonged drought periods as both living and dead plant matter moisture content decreases. Insect infestations can kill trees and create high fuel loads. Both the horizontal and vertical fuel load continuity is also an important factor. • Weather is the most variable factor affecting wildfire behavior. Temperature, humidity, wind, and lightning can affect ignition opportunities and fire spread rate. Extreme weather (e.g., high temperatures and low humidity) can lead to extreme wildfire activity. Climate change increases fire to vegetation ignition susceptibility due to longer dry seasons. By contrast, cooling and higher humidity often signal reduced wildfire occurrence and easier containment. Indirect wildfire effects can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and exacerbate river and stream siltation thereby increasing flood potential, harming aquatic life, and degrading water quality. Vegetation-stripped lands are more susceptible to increased debris flow hazards.
Location	As shown in Figure 9, most of the Homer area has moderate or high wildland fuel risk, with some areas of very high risk. The Homer Spit, tidal flats, and low-lying areas around Beluga Lake are at moderate risk; the areas of very high risk are primarily along the bluffs. The northern and eastern borders of Homer are in the wildland-urban interface. These areas, which are primarily residential, are at higher risk from fires on the Kenai Peninsula. The areas around the Bridge Creek Reservoir are at a higher risk because of substantial spruce bark beetle killed trees. The City has implemented aggressive management in this area to reduce risk.

Table 3-10: Wildfire

Profile	Description
History	Th Alaska Interagency Coordination Center tracks wildfires throughout the state. Every year there are wildfires across the Kenai Peninsula. Homer, like other areas of the Kenai Peninsula, has been dramatically affected by the spruce bark beetle infestation. The vast majority of wildland fires on the Kenai Peninsula are the result of human activities with open burning being the most prevalent. Although lightning-caused fires do occur, they are infrequent, especially on the south Kenai Peninsula. The 2005 Tracy Avenue Fire and the 2009 East End Road Fire were the most recent large fires near Homer and were especially threatening to property and had potential loss of life. In May of 2014, a human-caused fire started along the Funny River Road in the central Kenai Peninsula. Over its course, this fire grew to almost 200,000 acres of black spruce, mixed hardwoods, and spruce and bark beetle killed spruce, and grass. Although outside Homer city limits, these recent fires demonstrate the potential for rapid fire spread given the weather conditions, topography, and the availability of local and state wildfire fighting crews.
Extent / Severity	Much of Homer is vulnerable to wildfires. As shown on Figure 9, 65% of the land area in Homer is in a high/very high/extreme fuel risk area. Wildfires can destroy habitat, impact watersheds; burn down homes, buildings, and critical facilities; cause loss of life to humans and animals; and restrict access to recreational areas. Wildfires can cause fire-related injuries; and local and regional transport of smoke, ash, and fine particles, which increase respiratory and cardiovascular risks. People without means for evacuation are also vulnerable to wildfires.
Recurrence Probability	Recorded wildland fires within 10 years and 50 miles of Homer have an average recurrence rate of approximately 2.5 to 3 years. It is anticipated that this probability will continue into the future or increase in frequency as climate change and spruce bark beetles create more fuel for potential fires.

4.0 RISK ASSESSMENT

This section addresses Element B of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element B: Hazard Identification and Risk Assessment
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

4.1 HAZARD IMPACT

A hazard impact assessment predicts the current or expected impact of a hazard on a community or given area. The analysis provides quantitative data that may be used to identify and prioritize potential mitigation measures by allowing communities to focus attention on areas with the greatest risk of damage.

For this 2022 LHMP, a conservative exposure-level analysis was conducted to assess the risks associated with the identified hazards. Due to a combination of a lack of adequate information and methodology, a semi-quantitative hazard impact assessment has only been prepared for the following hazards: climate change, earthquake, flood, landslide, tsunami, volcano, and wildfire. A qualitative analysis was prepared for the following hazards: erosion and severe weather.

Hazard impact assessments were prepared for the City of Homer's land area, population center, and critical facilities (Table 4-1). A land area of 13.93 square miles was determined using available Geographic Information System (GIS) data. The population center (i.e., a region that describes a center point of Homer's population) was determined to comprise 9.23 square miles. The critical facilities (Figure 10) include a list of facilities that provide services and functions essential to Homer, especially during and after a disaster. Common types of critical facilities include fire stations; police stations; hospitals; schools; water and wastewater systems; and utilities. Critical facilities may also include places that can be used for sheltering or staging purposes, such as community centers, schools and libraries. Critical facilities may also include large public gathering spots and places of worship. For the 2022 LHMP, 33 critical facilities (public and privately owned) were collected in Homer. Critical facility names and coordinates were then geocoded to a location and the resulting geographic features were used for hazard impact assessment. Facility-specific information was given to the City of Homer and will be kept on file.

The overall results of the hazard assessments are provided below. This analysis is a simplified assessment of the potential effects of the hazards on land area (Table 4-2), population center (Table 4-3), and critical facilities (Table 4-4) at risk, without consideration of the probability or level of damage. In addition, elevation data were not available; therefore, additional analysis will need to be conducted to develop a more accurate understanding of hazard vulnerabilities.

Table 4-1: Total Land Area, Population Center and Critical Facilities

Category	Number
Land Area	8,912.52 acres
Population Center	5,899.74 acres
Critical Facilities	33

Table 4-2: Total Acres of Land in a Hazard Area

Hazard Area	Acres	Percent of Total Acres
Climate Change	8,912.52	100
Earthquake		
Weak/Light	0	0
Moderate/Strong	0	0
Very Strong/Severe/Violent	8,912.52	100
Erosion	No mapping data are available for erosion. Based on existing reports and the community planning team, approximately 10% of total land area is susceptible erosion.	
Flood		
1% Annual Chance	708.52	7.95
0.2% Annual Chance	113.46	1.27
Landslide	1,503.91	16.87
Severe Weather	8,912.52	100
Tsunami	1,735.33	19.47
Volcano		
Low	0	0
Low-Moderate/Moderate	8,490.64	95.27
High	421.89	4.73
Wildfire		
Moderate	2,939.61	32.98
High/Very High	5,820.79	65.31
Extreme	15.30	0.17

Table 4-3: Total Number of Acres of Population Center in a Hazard Area

Hazard Area	Acres	Percent of Total Acres
Climate Change	5,899.74	100
Earthquake		
Weak/Light	0	0
Moderate/Strong	0	0
Very Strong/Severe/Violent	5,899.74	100
Erosion	No mapping data are available for erosion. Based on existing reports and the community planning team, approximately 5% of the total population center is susceptible erosion.	

Table 4-3: Total Number of Acres of Population Center in a Hazard Area

Hazard Area	Acres	Percent of Total Acres
Flood		
1% Annual Chance	21.80	3.7
0.2% Annual Chance	0	0
Landslide	1,030.41	17.47
Severe Weather	5,899.74	100
Tsunami	5,657.83	95.90
Volcano		
Low	0	0
Low-Moderate/Moderate	5,878.24	99.64
High	21.50	0.36
Wildfire		
Moderate	1,384.28	23.46
High/Very High	4,503.32	76.33
Extreme	9.46	0.16

Table 4-4: Total Number of Critical Facilities in a Hazard Area

Hazard Area	Number	Percent of Total Facilities
Climate Change	33	100
Sea Level Rise	5	15
Earthquake		
Weak/Light	0	0
Moderate/Strong	0	0
Very Strong/Severe/Violent	33	100
Erosion	7	24
Flood		
1% Annual Chance	3	10
0.2% Annual Chance	1	3
Landslide	1 This facility is not in an area of greater than 20% slope, but is in the path of a potential landslide.	3
Severe Weather	33	100
Tsunami	8	24

Table 4-4: Total Number of Critical Facilities in a Hazard Area

Hazard Area	Number	Percent of Total Facilities
Volcano		
Low	0	0
Low-Moderate/Moderate	31	94
High	2	6
Wildfire		
Moderate	22	67
High/Very High	9	27
Extreme	0	0

4.2 OVERALL SUMMARY OF VULNERABILITY

A list of the key issues, or overall summary of vulnerability, for each hazard profiled in the 2022 LHMP is provided in Table 4-5.

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
Climate Change	All of Homer is vulnerable to climate change. Over the next century, weather patterns that are considered extreme today are expected to become normal. The City of Homer's overall vulnerabilities to climate change include sea level rise, coastal erosion, increased average annual maximum temperature, increased average annual precipitation, severe moisture deficit/drought, and wildfires. • Sea level rise: 15% of the critical facilities and infrastructure in the city are in the low-lying areas on the Homer Spit and will be at risk of inundation. Flooding due to sea level rise will cause destructive erosion; flooding; and soil contamination with salt; loss of habit for fish, birds, and plants; disruption and/or delay of transportation; and damages to homes and businesses on a more regular basis. • Temperature and precipitation: SNAP temperature models show that all of Homer will experience a temperature increase of 5.3ºF by the end of the century, while precipitation models show that for the same reporting period, Homer will see an average rainfall increase of 2.8 inches. In the summer, an increase in temperature will cause an increase in fire risk. • Mega storms that are linked to climate change can cause severe flooding. Along the coast, deadly and destructive storm surges may push farther inland than they once did, which means more frequent nuisance flooding.
Earthquake	All of the City of Homer is vulnerable to ground shaking from an earthquake and the entire city is in severe perceived ground shaking hazard areas. Nearly 100% of Homer's residents live and 100% of critical facilities and infrastructure are in the severe shaking potential areas. The estimated value of structure loss is provided in Table 4-6. Those that live in severe shaking potential areas can expect earthquake events to produce moderate to heavy damage. According to the USGS, this could mean slight damage in specially designed structures, considerable damage in ordinary substantial

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
	buildings with partial building collapse, and considerate damage in poorly built or badly designed structures. Those that live in violent shaking potential areas can expect earthquake events to produce the potential for heavy damage. According to the USGS, this could mean that well designed framed structures could be thrown out of plumb and substantial buildings could experience partial building collapse.
Erosion	Coastal erosion along the Homer Spit is a major concern for the City and for property owners. Only approximately 10% of the land area is susceptible to erosion, and those areas are primarily on the Homer Spit. The land base is narrow and significant mitigation will be required to stop or slow the coastal erosion occurring there. If no action is taken, all structures along the spit will be susceptible to damage, including 7 critical facilities, many local businesses, and state and federal land. Coastal erosion is also occurring on the Homer bluffs through storm wave action and solifluction. A 4,830-foot revetment was constructed on the coast near the base of the Homer Spit in 1998, and a seawall was constructed in 2002 in an attempt to protect residential structures from continuing coastal erosion. The seawall requires continuous maintenance because it is frequently impacted by storm surge. In addition, protective measures such as seawalls or revetments can lead to increased erosion when shoreline structures eliminate the natural wave run-up and sand deposition and increase reflected wave action. The increased wave action can scour in front of and behind structures and prevent the settlement of suspended sediment. The primary impact from erosion is the loss of developable land and anything on it. The impact to infrastructure is expensive, ongoing, and includes the Sterling Highway Kachemak Drive, Ocean Loop Drive, and Homer Spit Road.
Flood	The City of Homer is most vulnerable to flooding caused by snowmelt and heavy rainfall. Approximately 9.2% of Homer's land mass (1.28 square miles) and 4 critical facilities (the City of Homer Port and Harbor Office, the Homer Harbor, the Petro Marine Tank Farm, and Pioneer Dock) are in the SFHA, which is concentrated on the Homer Spit, along the shoreline, and low-lying areas around Beluga Lake. Floods can block roadways and cause erosion, mudflows, debris flows, and water damage to structures and result in land loss, injury, and even death. People that are most vulnerable to flooding are generally those that live in the SFHA. There are 26 structures insured by the National Flood Insurance Program (NFIP) and none of those properties are considered Repetitive Loss properties (i.e., any insurable building for which two or more claims of more than $1,000 were paid by the NFIP in any rolling 10-year period, since 1978).
Landslide	No official landslide dataset exists for the City of Homer. However, in North America, there is an association between landslides and hilly terrain (particularly with slopes ranging from about 20 to 40 degrees). As such, the mountainous terrain in Homer that includes slopes greater than 20 degrees is at greatest risk of slide. Approximately 17% (1,504 acres) of Homer is in this hazard area, including 1 critical facility, the Southern Peninsula Hospital. In particular, the ADGGS found that the area covered by the Bluff Point landslide deposit and the area immediately adjacent to the headscarp have an elevated risk of deep-seated landslide hazard. Similarly, the deep-seated landslide at the end of China Poot Road also represents a significant landslide hazard. Development in and on the landslide deposit, as well as development in the mouths of catchments on either side of the China Poot Road landslide should be considered high-risk areas. Debris flow from landslides along the bluffs, particularly below Woodard Canyon,

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
	has the potential to impact facilities and residential buildings, including the South Peninsula Hospital. Landslides can cause damage to and impact critical infrastructure, including water, sewer, and roadways. They may also cause injury or death to those trapped; break utility lines; block/damage roadways; damage foundations, chimneys, or surrounding land; and lead to flash flooding and further landslides.
Severe Weather	All of the City of Homer is vulnerable to severe weather. The Homer area is most vulnerable to high winds during the winter season. Winds may sweep up loose snow and produce blinding blizzards and dangerous wind chills. A major storm can last for several days and be accompanied by high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. A storm may knock down trees and powerlines, cause roofs to collapse, and lead to dangerous driving conditions causing drivers to be stranded. Homer has an extensive history of storm damage, especially in the coastal areas along the Homer Spit and adjacent properties. Along the Homer Spit, high winds and coastal storm surge can damage other installments that mitigate erosion, such as revetments and gabion baskets. The Seward Highway between Anchorage and Homer is periodically closed every year due to an avalanche event or for avalanche control, which can further isolate the community.
Tsunami	The Alaska Earthquake Center and University of Alaska Fairbanks model for tsunami waves and inundation shows a maximum composite tsunami inundation for Homer. Based on this model, there are 1,735 acres (19%) of Homer's land area at risk to tsunami inundation. This inundation level includes eight (24%) critical assets. The most at-risk locations in Homer are the Homer Spit, coastal areas, and low-lying areas around (and including) Beluga Lake. Tsunami run-up will likely cause flooding and infrastructure along the Homer Spit could be damaged.
Volcano	Ashfall becomes a public health hazard when humans inhale fine ash. Ash will also interfere with the operation of mechanical equipment including aircraft. In Alaska, this is a major problem because many of the primary flight paths are near historically active volcanoes. Because ash can conduct electricity, accumulation may also interfere with the distribution of electricity from the shorting transformers and other electrical components. Based on modeling, most of the City of Homer is in a moderate ashfall hazard area. Even a small ashfall event could cause significant damage to the built environment (e.g., clogged filters and damaged parts of vehicles and machinery, clogged filters of air-ventilation systems, roof collapse, cellular and radio communication interruption) and the natural environment (e.g., habitat damage, water pollution, weather pattern shifts). In addition, an ashfall event could cause respiratory problems, eye problems, and skin irritation for humans.
Wildfire	Much of Homer is vulnerable to wildfires. As shown on Figure 9, 65% of the land area of Homer is in a high/very high/extreme fuel risk area. During the summer, the entire community is vulnerable to wildland fire because most structures are constructed of wood and other flammable materials. Standing timber and other natural fuels interface with the community. History has demonstrated that fire bands can be carried by local winds up to 0.5 mile, jumping human-made fire lines and spreading fire across large areas. Most areas of Homer

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
	are immediately adjacent to wildland areas and could be threatened by uncontrolled fire. Without mitigation or preparation efforts, the impacts of a wildland interface fire in Homer could grow into an emergency or disaster. In addition to impacting people, wildland fires may severely impact livestock and pets. Such situations may require emergency life support, evacuation, and alternative shelter. Indirect impacts of wildland fires can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, which increases flood and landslide potential, harms aquatic life, and degrades water quality.

Table 4-6: Value of Facilities Most Affected by Earthquake

Category	Total Value (Building and Contents)	Estimated Loss from M9.2 Earthquake	M9.2 Earthquake loss Ratio
Boat Dock	$16,366,000	$1,525,582	20.10%
City Office	$239,000	$12,850	5.38%
Airport	$15,416,800	$905,695	5.87%
School	$55,914,600	$3,163,500	11.41%
Emergency Shelter	$4,140,400	$229,649	10.95%
State Office	$2,271,800	$2,038,298	5.74%
Police Station	$2,064,500[1]	$112,256	5.44%
Fire Station	$2,064,500	$112,256	5.44%

Notes:
[1]The information in this table is as reported *in Kenai Peninsula Borough Risk Report: Kenai Peninsula Borough and the Incorporated Cities of Homer, Kachemak, Kenai, Seldovia, Seward, and Soldotna, 2017*. This facility has since been bonded for $5,000,000

4.3 NATIONAL FLOOD INSURANCE PROGRAM INSURED STRUCTURES

The NFIP, managed by FEMA, provides flood insurance to property owners, and businesses. There are 26 NFIP-insured structures in the City of Homer. Of these, none are considered Repetitive Loss properties.

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5.0 MITIGATION STRATEGY

This section addresses Element C of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element C: Mitigation Strategy
C1. Does the Plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement § 201.6(c)(3))
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement § 201.6(c)(3)(i))
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))

5.1 AUTHORITIES, POLICIES, PROGRAMS, AND RESOURCES

The City of Homer's existing authorities, policies, programs, and resources available for hazard mitigation are provided in Table 5-1 (human and technical resources), Table 5-2 (financial resources), and Table 5-3 (planning and policy resources). The ways in which the City of Homer is looking to expand and improve on its hazard mitigation authorities, policies, programs, and resources are provided in Table 5-4.

Table 5-1: Human and Technical Resources for Hazard Mitigation

Staff/Personnel	Department/Agency	Principal Activities Related to Hazard Mitigation
Planner(s) and technical staff with knowledge of land development, land management practices, human-caused hazards, and natural hazards	City of Homer Planning Department	Anticipates and acts on the need for new plans, policies, and code changes. Applies the approved plans, policies, code provisions, and other regulations to proposed land uses.
Fire Chief	City of Homer Volunteer Fire Department	Provides fire protection services in the City of Homer.
Head of Public Works	City of Homer Public Works Department	Maintains the city's roads, drainage, water distribution, wastewater collection, buildings and facilities, and motor vehicles. Works with developers in conjunction with the planning department on proposed subdivisions, land use variances, right-of-way vacations, zoning changes, and building site plans.
Police Chief	City of Homer Police Department	Provides law enforcement services in the City of Homer.
Harbormaster	City of Homer City Department of Port and Harbor	Manages and maintains port and harbor facilities.
Emergency Manager	City of Homer City Manager's Office	Maintains and updates Homer's Emergency Operations Plan. In addition, coordinates local response and relief activities in the Emergency Operations Center; works closely with local, state, and federal partners to support planning and training and to provide information and coordinate assistance.
Engineers, construction project managers, and supporting technical staff	City of Homer Public Works Department	Provides direct or contract civil, structural, and mechanical engineering services, including contract, project, and construction management.
Engineer(s), project manager(s), technical staff, equipment operators, and maintenance and construction staff	City of Homer Public Works Department	Maintains and operates of a wide range of local equipment and facilities and assists members of the public. This includes providing sufficient clean fresh water, reliable sewer services, street maintenance, storm drainage systems, street cleaning, streetlights, and traffic signals.
Floodplain Administrator	City of Homer Planning Department	Enforces its floodplain requirements through the Flood Development Permit program.
Procurement Services Manager	City of Homer Finance Department	Provides a full range of municipal financial services and administers several licensing measures.

Table 5-1: Human and Technical Resources for Hazard Mitigation

Staff/Personnel	Department/Agency	Principal Activities Related to Hazard Mitigation
Public Information Officer	City of Homer City Manager's Office	Coordinates and facilitates a public information program regarding activities of Homer and its various departments; actively promotes the services and successes of operating departments and the benefits to residents; proactively establishes and maintains productive relationships between Homer and any media; and performs related duties as required.

Table 5-2: Financial Resources for Hazard Mitigation

Type	Source	Purpose	Amount
General Fund	City of Homer Finance Department	Program operations and specific projects.	Variable
Enterprise Funds	City of Homer City Department of Port and Harbor	An enterprise fund is a self-supporting government fund that sells goods and services to the public for a fee. An enterprise fund uses the same accounting framework followed by entities in the private sector. Homer uses an enterprise fund for the port and harbor facilities.	Variable
General Obligation Bonds	City of Homer Police Department	General obligation bonds are appropriately used for the construction and/or acquisition of improvements to real property broadly available to residents and visitors. Such facilities include—but are not limited to—libraries, hospitals, parks, public safety facilities, and cultural and educational facilities. The city uses a general obligation bond for the police station.	Variable
Renewable Energy Fund	Alaska Energy Authority	Provides funding for the development of qualifying and competitively selected renewable energy projects in Alaska. The program is designed to produce cost-effective renewable energy for both heat and power For Fiscal Year 2019, $11 million has been allocated by the governor to fund the Renewable Energy Fund. This program runs through 2023.	Project-specific
HMA: Hazard Mitigation Grant Program (HMGP)	FEMA	Supports pre- and post-disaster mitigation plans and projects. Available to communities in Alaska after a presidentially declared disaster has occurred in Alaska.	Project-specific
HMA: Building Resilient Infrastructure and Communities (BRIC)	FEMA	Focuses on reducing the nation's risk by funding public infrastructure projects that increase a community's resilience before a disaster affects an area.	Project-specific

Table 5-2: Financial Resources for Hazard Mitigation

Type	Source	Purpose	Amount
HMA: Flood Mitigation Assistance	FEMA	Funds projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the NFIP.	Project-specific
Homeland Security Preparedness Technical Assistance Program	FEMA/Department of Homeland Security	Build and sustain preparedness technical assistance activities in support of the four homeland security mission areas (i.e., prevention, protection, response, recovery) and homeland security program management.	Project-specific
Assistance to Firefighters Grant Program	FEMA/U.S. Fire Administration	Provides equipment, protective gear, emergency vehicles, training, and other resources needed to protect the public and emergency personnel from fire and related hazards. Available to fire departments and nonaffiliated emergency medical services providers.	Project-specific
Community Action for a Renewed Environment	U.S. Environmental Protection Agency	Through financial and technical assistance, this program offers an innovative way for a community to organize and take action to reduce toxic pollution (e.g., stormwater) in its local environment. Through this program, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize exposure to them.	Project-specific
Community Block Grant Program Entitlement Communities Grants	U.S. Department of Housing and Urban Development (HUD)	Acquisition of real property; relocation and demolition; rehabilitation of residential and nonresidential structures; construction of public facilities and improvements, such as water and sewer facilities, streets, neighborhood centers; and the conversion of school buildings for eligible purposes.	Project-specific
Community-Based Restoration Program	National Oceanic and Atmospheric Administration	Provides funding and technical assistance to communities for restoration projects that ensure fish have access to high-quality habitat. The goal of these projects is to recover and sustain fisheries.	Project-specific
National Coastal Resilience Fund	National Fish and Wildlife Foundation	Provides assistance to restore, increase and strengthen natural infrastructure to protect coastal communities while also enhancing habitats for fish and wildlife. It invests in projects that restore or expand natural features such as coastal marshes and wetlands, oyster and coral reefs, forests, coastal rivers and floodplains, and barrier islands that minimize the impacts of storms and other naturally occurring events on communities.	Project-specific

Table 5-3: Planning and Policy Resources for Hazard Mitigation

Name	Description	Hazards Addressed	Emergency Management
Homer City Ordinances Title 21.44 Slopes	The City of Homer has adopted local ordinances to define Steep Slope and to require engineering approval for any development of steep slopes in Homer (Homer City Code [HCC] 21.44.050).	Landslide	Mitigation
Homer City Ordinances, Title 12 Building and Construction, Title 13 Standard Construction Practices, and Title 22 Subdivisions	Hazard-resistant building codes are a cost-effective way to safeguard communities against natural disasters.	Climate Change, Earthquake, Erosion, Flood, Landslide, Severe Weather, Wildfire	Mitigation
City of Homer Emergency Operations Plan	The plan describes the City of Homer's organizational structures, roles, and responsibilities; protocols for providing emergency response and short-term recovery; the purpose, situation, and assumptions; concept of operations, organization, assignment of responsibilities, and plan development and maintenance; authorities; and references.	Coastal Storm Surge/Erosion, Earthquake, Wildland Fire, Flood, Landslide, Tsunami, Volcano, Severe Weather	Response, Recovery
City of Homer Capital Improvement Plan 2019-2024	Identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan. The plan/program is usually short-range, approximately 6 years.	Landslide, Coastal Storm Surge/Erosion, Flood	Mitigation, Preparedness
Homer Comprehensive Plan	Describes hazard areas and lists goals and policies to reduce the potential risk of death, injuries, and economic damage resulting from natural and human-caused hazards.	Erosion, Flood Landslide	Mitigation, Preparedness, Response
Public Outreach	The City of Homer uses a Facebook page and an email distribution list to provide outreach to the community on relevant events, activities, and planning processes happening in the city.	All	All Phases
NFIP	Makes affordable flood insurance available to homeowners, business owners, and renters in participating communities. In exchange, those communities must adopt and enforce minimum floodplain management regulations to reduce the risk of damage from future floods.	Flood	Mitigation

Table 5-4: Ability to Expand Resources

Capability	Type/Description	Expansion
Human and Technical	Mitigation Specialist	Appoint or assign someone with Homer's government to oversee hazard mitigation grant opportunities, including notifying Homer's departments/agencies of upcoming grant cycles, and spearheading Notice of Intent applications, grant applications, and grant management requirements.
Financial	HMA funding	Apply for BRIC and HMGP funding as it becomes available. The focus should be on projects that mitigate critical infrastructure, provide protection for disadvantaged areas, and address climate change.
Planning and Policy	Climate Action Plan	Integrate climate sustainability plans into Homer's Comprehensive Plan (including measures to reduce greenhouse emissions) through a series of local transportation, land use, building energy, water, waste, and green infrastructure programs and policies.
Planning and Policy	Zoning and Permitting Code Updates	Develop City Code that reflects current and future work on city-wide drainage and wetlands to mitigate erosion.

5.2 NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION

The NFIP aims to reduce the impact of flooding on residential and nonresidential buildings by providing insurance to property owners and encouraging communities to adopt and enforce floodplain management regulations. Participation in the NFIP is based on an agreement between local communities and the federal government.

The City of Homer joined the NFIP on May 19, 1981, the same day the city was mapped to a FIRM. The current FIRM date for Homer is October 20, 2016. As a participant of the NFIP, the Homer City Planning Department enforces a floodplain management ordinance and participates in FEMA's Community Assisted Visits, which occur on a 3- to 5-year cycle. FEMA's last Community Assisted Visit to Homer occurred in 2011.

5.3 MITIGATION GOALS

Mitigation goals are defined as general guidelines that explain what an agency wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range policy-oriented statements representing a community-wide vision. FEMA's 2022 Building Resilient Infrastructure and Communities priorities are the basis for the three goals (Table 5-5) for the 2022 LHMP.

Table 5-5: Mitigation Goals

Goal #	Description
1	Enhance climate protection and adaptation efforts
2	Create a healthy and safe community
3	Protect critical facilities and infrastructure against hazards

5.4 RECOMMENDED MITIGATION ACTIONS

Mitigation actions help achieve the goals of the LHMP. The recommended mitigation actions provided in Table 5-6 include: education and awareness; structure and infrastructure projects; preparedness and response; and local plans and regulations. This list addresses every hazard profiled in this plan and is based on the plan's risk assessment as well as lessons learned from recent disasters. It was developed using FEMA success stories and best management practices; FEMA job aids; local and regional plans and reports; and input from planning team members.

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
1	Critical Facility Auxiliary Power (Phase I)	All	Determine which critical facilities require auxiliary power in order to remain functional during de-energization or public safety power shutoff and/or general loss of power and install auxiliary power systems. Auxiliary power systems may include back-up generators, local Solar Photovoltaic plus storage, and microgrids.	Existing
2	Generators (Phase II)	All	Purchase and install generators with main power distribution disconnect switches for identified and prioritized critical facilities susceptible to short-term power disruption. (e.g., first responder, medical facilities, schools, correctional facilities, and water and sewage treatment plants).	New and existing
3	Emergency Radio Communication System Upgrade	All	Continue the city's systematic upgrade of its Emergency Radio Communication System.	Existing
4	Upslope Tidal Marshes	Climate Change	Create tidal marshes with resilience to climate change by providing space for the tidal marshes to spread vertically upslope when sea level rises.	New and existing
5	Downslope Tidal Marshes	Climate Change	Create tidal marshes with resilience to climate change by providing space for tidal marshes to spread vertically downslope to aid upland drainage to the sea	New and existing
6	Seismic Retrofits	Earthquake	Seismically retrofit existing critical facilities to make them more resistant to damage from earthquakes.	Existing
7	Earthquake-Resistant Pipes Replacement	Earthquake, Landslide	Replace aging critical pipes in areas of extreme or violent shaking hazard and landslide hazard areas to improve seismic reliability and safeguard critical water distribution lines against the potential destructive impacts of large-scale earthquakes and accompanying landslides.	Existing
8	Storm Drainage Improvements	Flood	Continue to make capacity/structural improvements to storm drains, channels, and pump stations, as well as green infrastructure systems (such as marshes) to enable them to perform to their capacity in handling water flows.	Existing

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
9	Bank and Shoreline Protection	Flood, Erosion	Develop mitigation initiatives such as: revetments, articulated matting, concrete, asphalt, vegetation, or other armoring or protective materials to provide small scale site-specific shoreline bank protection.	New and existing
10	Shoreline Protection on the Homer Spit	Flood, Erosion	Develop plan to implement mitigation recommendations cited in Coastal Erosion Assessment of Sterling Highway Termini on Homer Spit such as: large-scale gravel placement as beach re-nourishment and site-specific shoreline bank protection (revetments) along the Homer Spit.	New and existing
11	Groundwater Protection	Flood, Erosion	Develop mitigation initiatives to provide site-specific protection for near-surface groundwater.	New and existing
12	Property Buyout on the Homer Spit	Flood, Erosion	Buyout property in areas that are prone to flooding or at risk from erosion, particularly on the Homer Spit, as an alternative to "defend in place" mitigation actions.	Existing
13	Property Buyout of Wetlands	Flood, Erosion	Buyout property in areas that have high green infrastructure value, such as wetlands and riparian areas, to provide natural mitigation against flooding and erosion.	Existing
14	Flood Protection Ordinance/Overlay Zone	Flood	Adopt a comprehensive flood protection ordinance/overlay zone for areas that are in the SFHA or subject to flooding. Properties in this overlay are often subject to additional standards concerning development/land uses, building elevation, stream buffers, outdoor storage, building materials, and permitting procedures.	New and existing
15	Sterling Highway Drainage Improvements	Erosion, Flood, Landslide	Continue implementing elements of the Green Infrastructure Stormwater Management Plan for drainage improvements at Sterling Highway Milepost 172 and other erosion-prone areas such as Kachemak Drive, Main Street South and East End Road.	Existing
16	Hillside Protection	Landslide	Stabilize landslide-prone areas through stability improvement measures, including interceptor drains, in situ soil piles, drained earth buttresses, and subdrains.	New and existing
17	Landslide Zone	Landslide	Regulate development through zoning and permitting in landslide-prone areas.	New

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
18	Tree Clearing	Severe weather	Develop and implement tree clearing programs for the city and residents to keep trees from threatening lives, property, and public infrastructure from severe weather events.	New and existing
19	Powerline Disconnects	Severe weather	Increase power line wire size and incorporate quick disconnects (breakaway devices) to reduce ice load and windstorm powerline failure during severe wind or winter ice storm events.	New and existing
20	Underground Powerlines	Severe weather	Continue to require new development to implement underground powerlines and relocate aboveground power lines to below ground where possible.	New and existing
21	StormReady Program	Severe weather	Complete certification for the StormReady program. The program encourages communities to take a proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations.	New and existing
22	TsunamiReady Program	Tsunami	Maintain certification for the TsunamiReady program. The main goal of the program is to improve public safety before, during, and after tsunami emergencies. It aims to do this by establishing guidelines for a standard level of capability to mitigate, prepare for and respond to tsunamis, and work with communities to help them meet the guidelines and ultimately become recognized as "TsunamiReady" by the National Weather Service.	New and existing
23	Public Works Campus Task Force Recommendations	Tsunami	Implement the recommendations provided by the Public Works Campus Task Force to mitigate impacts of tsunami damage, including developing a long-term plan to move the Public Works Campus.	Existing
24	Tsunami Vertical Evacuation Structure	Tsunami	Construct a tsunami vertical evacuation tower on the Homer Spit to provide temporary refuge above tsunami waves.	New
25	Tsunami Preparedness, Warning, and Evacuation System	Tsunami	Develop a tools and materials to educate the public about tsunami preparedness and methods to make evacuation procedures clear and efficient in the event of a tsunami.	New and existing

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
26	Tsunami Warning System	Tsunami	Conduct assessment of tsunami warning system and implement recommendations to add technological performance and redundancy to the siren system.	New and existing
27	Air Filtration Identification	Volcano	Identify vulnerabilities in critical facilities—particularly air filtration and water systems—to deal with ashfall events.	Existing
28	Air Quality Clean Building	Volcano, Wildfire	Identify a building or room to be a designated "clean building" or "clean room" for use during periods of poor air quality created from wildfires, volcanic ash, or other poor air quality event. Acquire air filters and masks for distribution.	Existing
29	Property Buyout near Bridge Creek Reservoir	Wildfire	Buyout property in areas that are prone wildfire, particularly on the near the Bridge Creek Reservoir to protect the drinking watershed.	Existing
30	Wildland-Urban Interface Ordinance/Overlay Zone	Wildfire	Adopt a Wildland-Urban Interface ordinance/overlay zone. Properties in this overlay area are often subject to additional standards concerning structure density and location, building materials and construction, vegetation management, emergency vehicle access, water supply, and fire protection.	New and existing
31	Critical Facility Fireproofing	Wildfire	Consider ways to protect radio sites from wildfire, including rebuilding using fire-resistant materials.	Existing
32	Wildfire Risk Coordination	Wildfire	Continue coordinating with and providing support to the Kenai Peninsula Borough and the Alaska Department of Natural Resources during their wildfire assessments and plan implementations.	New and existing
33	Homer Volunteer Fire Department Fleet Replacement	Wildfire	Improve the Homer Volunteer Fire Department Wildland-Urban-Interface response capabilities by replacing out-of-compliance and substandard Brush-1 initial fire attack vehicle.	New
34	Water Supply	Wildfire	Water sources for both residential protections and firefighting capacity should be developed. This includes increased pumping capability at treatment plant, and two additional 10,000-gallon tanks buried along Skyline Drive.	New and existing
34	Water Lines and Hydrants	Wildfire	Provide additional water lines and fire hydrants to the residential neighborhoods along Skyline Drive.	New and existing

5.5 PRIORITIZED ACTION PLAN

A prioritized action plan is an itemized list of recommended mitigation actions that a community/agency hopes to put into practice to reduce its risks and vulnerabilities.

For the 2022 LHMP, the planning team created a two-tier prioritization process based on the following:

- High priority mitigation actions are those that address hazards of immediate concern and are also cost-effective (positive cost-benefit ratio) and may have an identified funding source.
- Medium priority mitigation actions are those that address hazards that are not of immediate concern and/or those that are of immediate concern but are not cost effective or do not have an identified funding source.

The City of Homer determined the hazards and threats of immediate concern based on the 2022 LHMP's hazard profiles, risk assessment, and capability assessment as follows: climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, and wildfire.

The results of the prioritization process are provided in Table 5-7. For each mitigation action listed, potential funding sources, responsible departments or agencies, and implementation timelines have been identified.

Table 5-7: Prioritized Action Plan

No.	Project Name	Priority	Potential Funding Source	Responsibility	Timing
1	Critical Facility Auxiliary Power (Phase I)	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
2	Generators (Phase II)	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
3	Emergency Radio Communication System Upgrade	High	City of Homer	City of Homer Public Works Department	0 to 5 years
7	Earthquake-resistant pipes replacement	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
8	Storm Drainage Improvements	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
10	Shoreline Protection on the Homer Spit	High	FEMA BRIC/HMGP	City of Homer Planning Department	0 to 5 years
11	Groundwater Protection	High	City of Homer	City of Homer Planning Department	0 to 5 years
12	Property Buyout on the Homer Spit	Medium	HUD Community Block Grant Program	City of Homer City Manager's Office	0 to 5 years
15	Sterling Highway Drainage Improvements	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
16	Hillside Protection	High	FEMA BRIC/HMGP	City of Homer Planning Department	0 to 5 years
17	Landslide Zone	High	City of Homer	City of Homer Planning Department	0 to 5 years
18	Tree Clearing	Medium	City of Homer, FEMA BRIC/HMGP	City of Homer City Management's Office	0 to 5 years
20	Underground Power Lines	High	City of Homer	City of Homer Public Works Department	0 to 5 years
21	StormReady Program	Medium	City of Homer	City of Homer Planning Department	0 to 5 years
22	TsunamiReady Program	High	City of Homer	City of Homer Planning Department	0 to 5 years

Table 5-7: Prioritized Action Plan

No.	Project Name	Priority	Potential Funding Source	Responsibility	Timing
23	Public Works Campus Task Force Recommendations	High	City of Homer, FEMA BRIC/HMGP	City of Homer City Manager's Office	0 to 5 years
24	Tsunami Vertical Evacuation Structure	Medium	City of Homer, FEMA BRIC	City of Homer City Manager's Office	2 to 5 years
25	Tsunami Preparedness, Warning, and Evacuation System	High	City of Homer	City of Homer City Manager's Office	0 to 5 years
26	Tsunami Warning System	High	Kenai Peninsula Borough/Division of Homeland Security	Kenai Peninsula Borough in coordination with City of Homer	0 to 5 years
28	Property Buyout near Bridge Creek Reservoir	High	City of Homer, HUD Community Block Grant Program	City of Homer City Manager's Office	0 to 5 years
30	Wildland-Urban Interface Ordinance/Overlay Zone	High	City of Homer	City of Homer Planning Department	0 to 5 years
31	Critical Facility Fireproofing	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
33	Homer Volunteer Fire Department Fleet Replacement	High	City of Homer, Assistance to Firefighters Grants Program	City of Homer Volunteer Fire Department	0 to 5 years

5.6 PLAN INTEGRATION

Information about how the 2022 LHMP will be integrated into Homer's relevant plans and programs moving forward is provided in Table 5-8.

Table 5-8: Integration of the 2022 LHMP

LHMP Section	Existing Plan/Policy/Program	Process/Timeframe
Section 3—Hazard Identification	Homer Comprehensive Plan	Update of the Homer Comprehensive Plan to address hazards in the LHMP that are not currently included in it. Consider creating a hazard profiles section in the Comprehensive Plan. The land use planning process can help identify investments in nature-based solutions to natural hazards, including preserving parks and greenways.
Section 3—Hazard Identification	2005 Homer Area Transportation Plan	Update the Homer Area Transportation Plan to address hazards in the LHMP that are not currently included in it. Include planning for the management of floodplains and erosion.
Section 4—Risk Assessment	City of Homer Emergency Operations Plan	Incorporate risk assessment findings into the City of Homer Emergency Operations Plan to help identify and ensure critical resources to maintain operations internally and externally.
Section 5—Mitigation Strategy	City of Homer Capital Improvement Plan 2019-2024	Incorporate the mitigation actions provided in Table 5-7 into the City of Homer Capital Improvement Plan by further studying and evaluating the underlying problems or if studies exist that outline potential solutions. Begin the design stage to develop a plan for each identified project, the actions to be taken, engineering and construction required, schedule, and estimated costs.

6.0 PLAN REVIEW, EVALUATION, AND IMPLEMENTATION

This section addresses Element D of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element D: Plan Review, Evaluation and Implementation
D1. Was the plan revised to reflect changes in development? (Requirement § 201.6(d)(3))
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement § 201.6(d)(3))
D3. Was the plan revised to reflect changes in priorities? (Requirement § 201.6(d)(3))

6.1 CHANGES IN DEVELOPMENT

The 2022 LHMP was updated to reflect the following changes that affect development:

- Five additional critical facilities were added from the previous 2010 LHMP. Two are large docks on the Homer Spit. The ADOT&PF facility and two electrical substations were added. Linear features, such as roads, sewer lines, and telephone lines were excluded from this plan. In addition, the Port and Harbor office has been relocated since the 2010 LHMP.
- New residential development has occurred at a steady rate since the 2010 LHMP. New residential neighborhoods along West Hill Road and East Hill Road could be in areas of higher risk for landslides or wildfires, and as a result increase the plan areas vulnerability to those hazards. The City of Homer has actively curtailed development around the reservoir where there is substantial risk of wildfire.

6.2 PROGRESS IN LOCAL MITIGATION EFFORTS

The City of Homer reviewed its 2010 LHMP's mitigation strategy and documented progress made toward each local mitigation effort, provided in Table 6-1. Mitigation actions that had not been implemented were considered for the 2022 LHMP (Table 5-6).

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
A.1.1.1	Distribute, display, and educate about hazards, flood insurance, and the benefits of various protective measures in public outreach programs. Outreach maybe information in a newsletter, on utility bills, in newspapers, public workshops, kiosk at the fire/police hall, and the library.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
A.1.1.2	Provide the public library with documents about hazards, flood insurance, and the benefits of various protective measures.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
A.1.1.3	Provide information about hazards on the City's website and include links to relevant pages that have local conditions, protective measures, permit requirements and maps.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
B.1.1.1	Continue to participate in the National Weather Service/West Coast and Alaska Tsunami Warning Center TsunamiReady Program.	Ongoing, mitigation action included in the 2022 LHMP.
B.1.1.2	Maintain regular tsunami warning siren drills so that citizens can learn to recognize and expect.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.2.1.1	Continue to monitor the tsunami evacuation signs on the Homer Spit to Kachemak Drive, East to the junction with East End Road. This route directs people away from the Beluga Slough crossing, which is in the projected tsunami inundation zone.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.3.1.1	Reduce susceptibility to damage and disruption by incorporating the Tsunami Hazard and FIRMs into the City's planning and zoning process.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.3.1.2	New development in tsunami hazard areas to meet the same standards required in the coastal high hazard areas.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.3.1.2	Require the anchoring of fuel tanks, manufactured home, accessory structures, and recreational vehicles to be anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas..
C.1.1.1	Encourage homeowners and property owners to remove dead or diseased trees to create "defensible space."	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.1.1.2	Encourage home and business owners to complete a Fire Wise assessment of their home and/or business.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.1.1.3	Educate homeowners on wildfire resistive construction techniques and strategies to limit their exposure to wildfire.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.1.1.4	Provide interested residents with Fire Wise informational packets and brochures.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.2.1.1	Issue burn permits to Homer residents who wish to dispose of organic materials. Direct nonresidents to the Division of Forestry Website to obtain an open burning permit during the statutory fire season.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
C.3.1.1	Encourage use of composting, chipping, or grinding as an alternative to burning of woody debris.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
C.4.1.1	Maintain open lines of communication between the Division of Forestry, National Weather Service, and the Homer Volunteer Fire Department to determine when fire conditions warrant suspension of burn permits or open burning in general.	Ongoing, mitigation action modified and included in the 2022 LHMP.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
C.4.1.2	When conditions warrant suspension of burn permits or open burning in Homer, disseminate that information in the form of press-releases to the local radio and print media.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.4.1.3	When open burning is prohibited or burn permits are suspended, ensure that the Homer Police Department Dispatch center is notified so that they can advise people who call in to activate their individual permit that a temporary suspension has been placed on open burning.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.4.1.4	Complete a daily assessment of fire danger during closures or suspensions by 10:00 a.m. each day to determine the need to continue the closure or resend the closure.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.1.1	Develop list of known shelters (from Emergency Plan), safe zones, and critical infrastructure.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.1.2	Review wildfire fuel load and develop mapping of area in need of fuels management activities.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.1.3	Develop and implement fuel reduction plan.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.2.1	Attend local planning meetings when conducted.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
C.5.2.2	Review drafts of the Community Wildfire Protection Plan when available and provide feedback to the Alaska Division of Forestry as appropriate.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
D.1.1.1	Identify buildings and facilities that must be able to remain operable during and following a hazard event.	Ongoing, mitigation action included in the 2022 LHMP.
D.1.1.2	Contract a structural engineering firm to assess the identified buildings and facilities to determine their structural integrity and strategy to improve their earthquake resistance.	Ongoing, mitigation action modified and included in the 2022 LHMP.
D.1.2.1	Identify priorities and budget to retrofit existing infrastructure to existing earthquake resistive construction standards.	Ongoing, mitigation action included in the 2022 LHMP.
D.1.2.2	Develop a Request for Proposals to submit for design and construction of the retrofitting requirements.	Ongoing, mitigation action included in the 2022 LHMP.
D.2.1.1	Reference the International Residential Code (current edition) for seismic and wind load requirements.	Ongoing, mitigation action modified and included in the 2022 LHMP.
D.3.1.1	Compile list of available nonstructural mitigation resources available to the public.	Ongoing, mitigation action included in the 2022 LHMP.
E.1.1.1	Annually review the requirements of the NFIP to conform to enrollment objectives and criteria.	Ongoing, mitigation action included in the 2022 LHMP.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
E.2.1.1	Encourage FEMA to restudy and remap the city with an emphasis on the Homer Spit, Beluga Slough, and Beluga Lake.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
E.2.2.1	Acquire funds to develop a watershed and drainage management plan that identifies important natural water storage, low features critical to flood function, and predicts future flood hazards.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.1	Develop overlay map of existing infrastructure (drainages, culvert size, storm drains).	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.2	Identify high risk city structures.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.3	Establish an annual inspection of all stormwater management (public and private) and order maintenance as needed.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.4	Require maintenance logs on private and public stormwater plans.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
E.4.1.1	Require developers/landowners to provide documentation of compliance with existing Flood Damage Prevention requirements if the project is in a flood hazard area as defined by City Code.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
E.4.2.1	Acquire land in high hazard area to restore or retain flood functions.	Ongoing, mitigation action included in the 2022 LHMP.
E.4.2.2	Identify less hazard prone areas for development. Suitability study and map 2008.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.3	Create and maintain buffers and building setbacks from wetlands, creeks, shorelines and drainages.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.4	In the flood hazard areas and along the bluff, consider “relocatable structures” on skids or pilings versus permanent foundation structures.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.5.	Require the anchoring of fuel tanks, manufactured homes, and accessory structures to resist flotation, collapse, and lateral movement due to the effects of wind and water loads.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.6	Preserve open space and/or relocate structures out of high-risk areas.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.7	Provide a means to regulate clearing, filling, grading, dredging, and other development that may impact flood, drainage, and erosion damage.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.8	Minimize adverse impacts of alterations of ground and surface waters and natural flow patterns.	Ongoing, mitigation action modified and included in the 2022 LHMP.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
E.4.2.9	Maintain requirements for stormwater control and mitigation through the enforcement of HCC 21.74 Development Activity Plan and HCC 21.75 Stormwater Plan.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.10	Integrate hazard identification, ecosystem protection, protection of community infrastructure and shoreline management into zoning and subdivision ordinances.	Ongoing, mitigation action modified and included in the 2022 LHMP.
F.1.1.1	Do not operate nonessential equipment.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.2	Protect office equipment such as copiers, fax machines, and personal computers.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.3	Allow employees to get home before ashfall occurs.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.4	Limit outdoor activity.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.15	Close doors, windows, and vents.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.6	Do not run exhaust-circulating fans.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.7	Check and change (when needed) oil, oil filter, and air filters.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.8	Wear respirator and eye protection during ash cleanup.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.9	Establish a communication system to alert employees.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
F.1.1.10	Establish an email alert or a call-in voice recording.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.1.1	Install security systems where hazard materials are stored and/or transferred.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.2.1	Install security measure at the city water treatment plant.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.2.2	Secure all remote pump facilities.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.3.1	Create redundant/backup capability for landline telephone system.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.3.2	Develop off-site backup information technology system.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.3.3	Prepare for utility disruption.	Ongoing, mitigation action modified and included in the 2022 LHMP.
G.1.3.4	Secure vital records and other important document.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.4.1	Encourage local businesses to have adequate cash on hand for emergencies.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.4.2	Encourage local businesses to establish a regular off-site computer back-up system.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.4.3	Encourage local businesses to participate in the State's Continuity of Business program through the Department of Homeland Security and Emergency Management.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
H.1.1.1:	Safely store biological, chemical, and hazardous materials.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
H.1.1.2:	Continue to require Fire Marshal certification for all commercial buildings.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
H.1.1.3:	Monitor, in cooperation with the Department of Health, Public Health Center, spikes in illnesses that may indicate the spread of a natural or human-made pathogen among the population.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
H.1.1.3:	Continue participation and leadership in the Community Based Emergency Planning Committee established by Public Health.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Notes:
Regarding Action Numbers, A=public education actions; B=tsunami actions; C=wildfire actions; D=earthquake actions; E=flood actions; F=ash actions; G=technological hazard actions; H= biological, chemical and hazardous materials actions.

In addition, supporting local plans, studies, and programs were reviewed to determine progress in local mitigation efforts. Relevant ongoing actions are provided in Table 5-6.

6.3 CHANGES IN PRIORITIES

The 2010 LHMP's mitigation strategy was prioritized using the STAPLEE (social, technical, administrative, political, legal, environmental, and economic), which FEMA recommended (FEMA 386-9) as a prioritization method in the early to mid-2000s. While the STAPLEE has been replaced in the 2022 LHMP by a more streamlined prioritization process, the priorities (listed below) have not changed:

- To build a culture and practice of disaster resilience by addressing hazards of immediate concern, a mitigation project must have social support.
- To be implemented in a timely manner, a mitigation project must be economically feasible and have an identified funding source.

7.0 PLAN ADOPTION

This section addresses Element E of the Local Mitigation Plan Regulation Checklist.

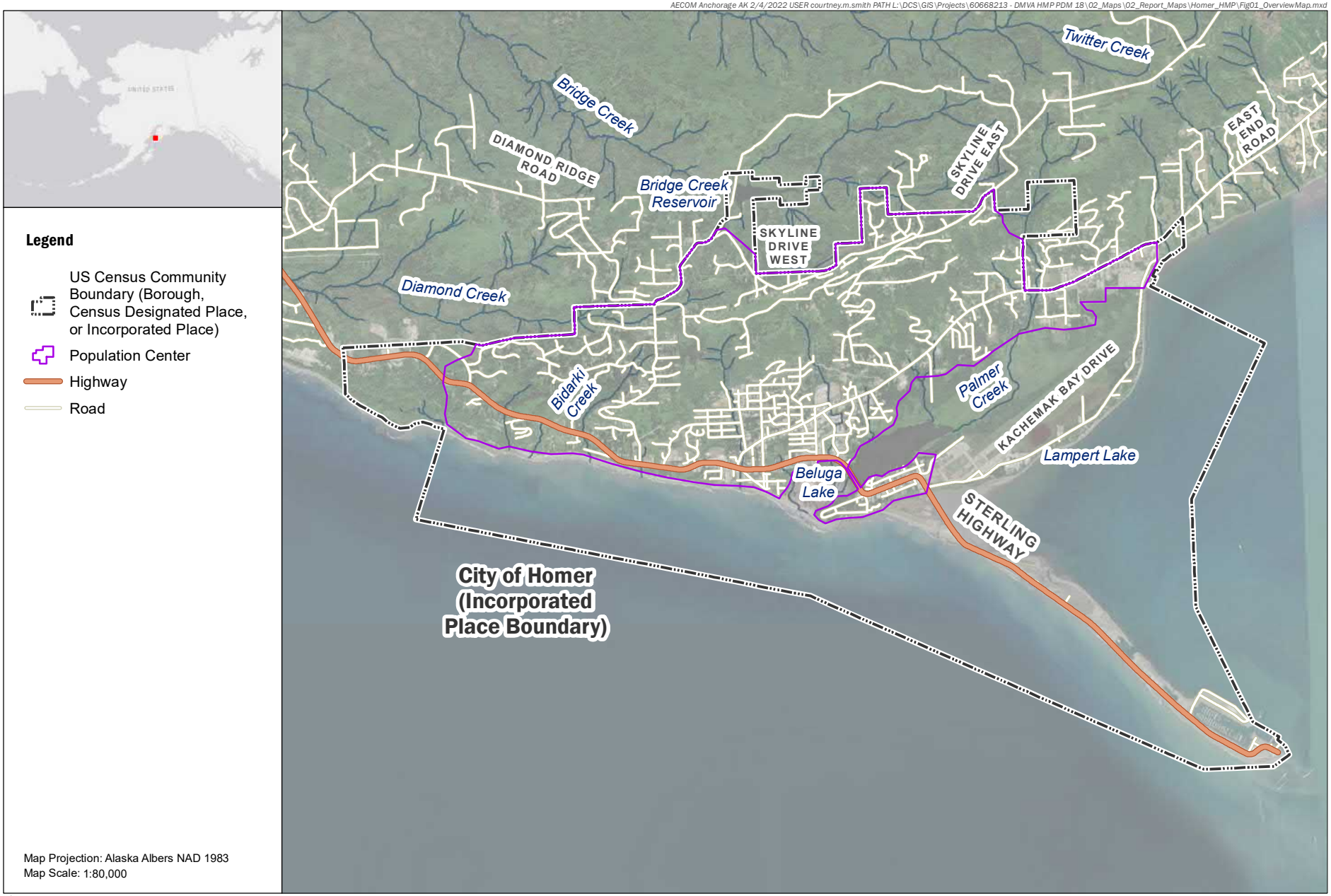
Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element E: Plan Adoption
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5)) E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))

7.1 FORMAL ADOPTION

The 2022 LHMP was formally adopted on [date] by the Homer City Council. A copy of the adoption resolution in on file with the community and the Alaska Division of Homeland Security and Emergency Management.

8.0 APPENDICES

APPENDIX A—FIGURES



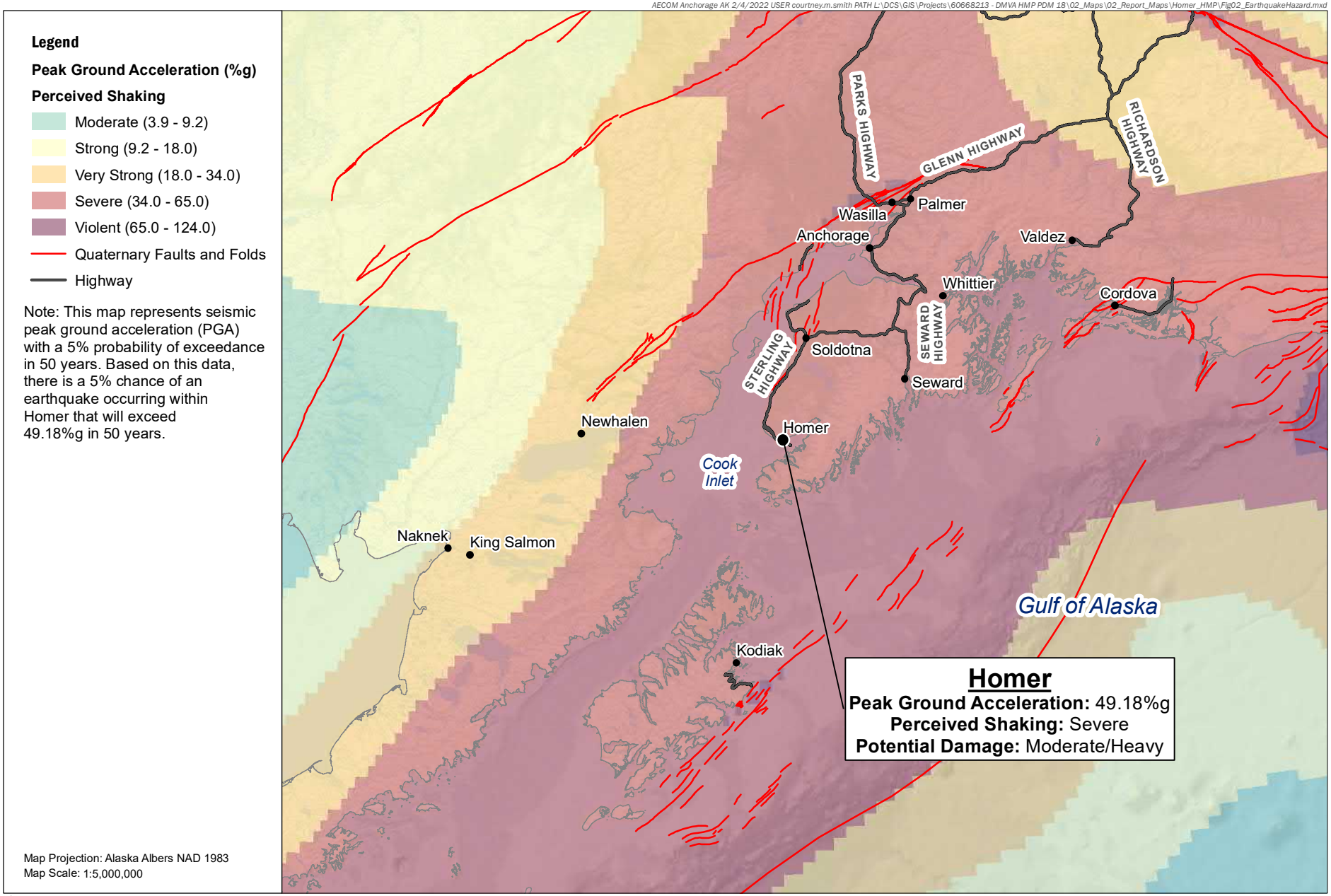
US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

AECOM
City of Homer 2022
Local Hazard Mitigation Plan

OVERVIEW MAP

Figure 1

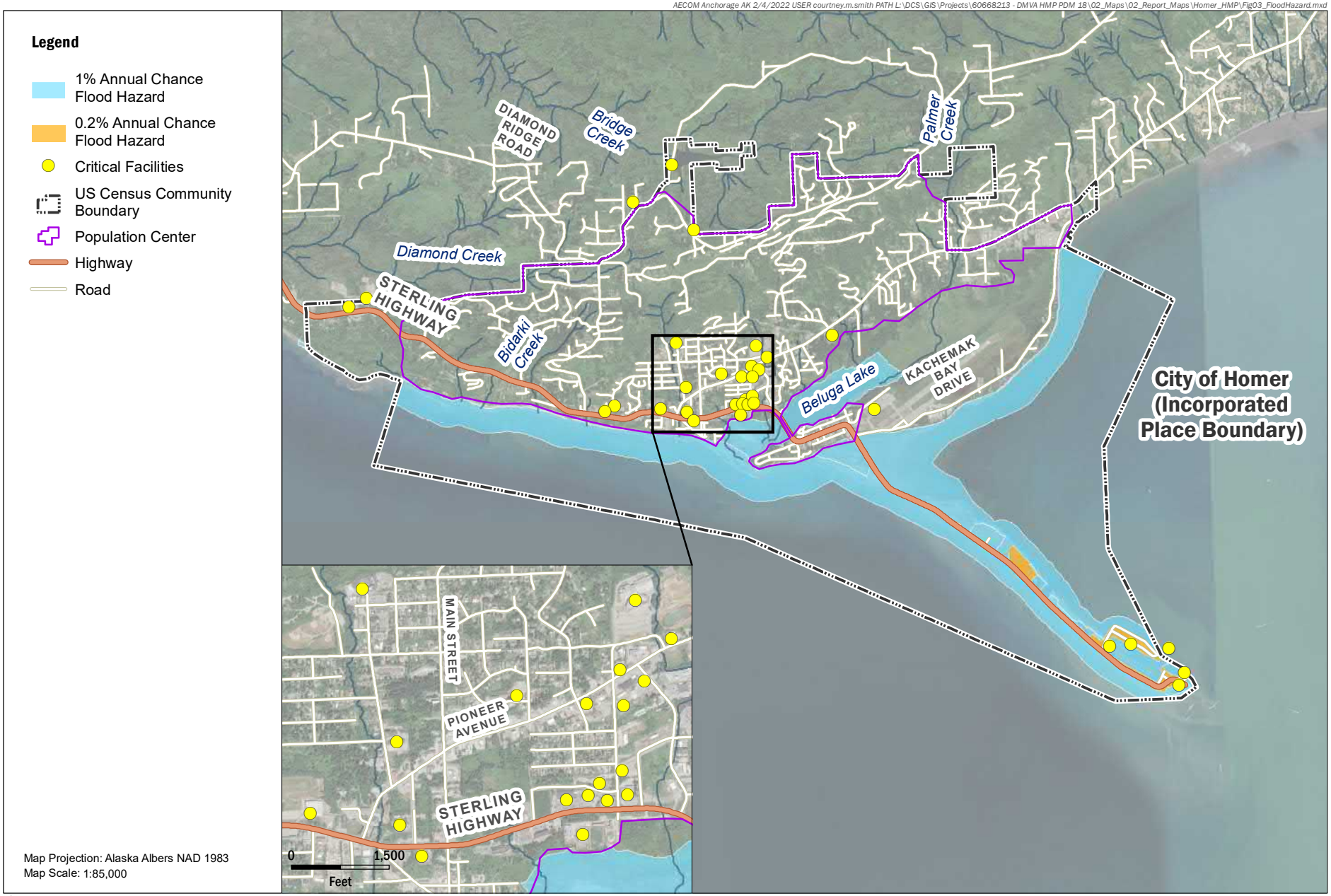
AECOM Anchorage AK 2/4/2022 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60668213 - DMVA HMP PDM 18\02_Maps\02_Report_Maps\Homer_HMP\Fig02_EarthquakeHazard.mxd



AECOM
City of Homer 2022
Local Hazard Mitigation Plan

EARTHQUAKE HAZARD AREAS

Figure 2

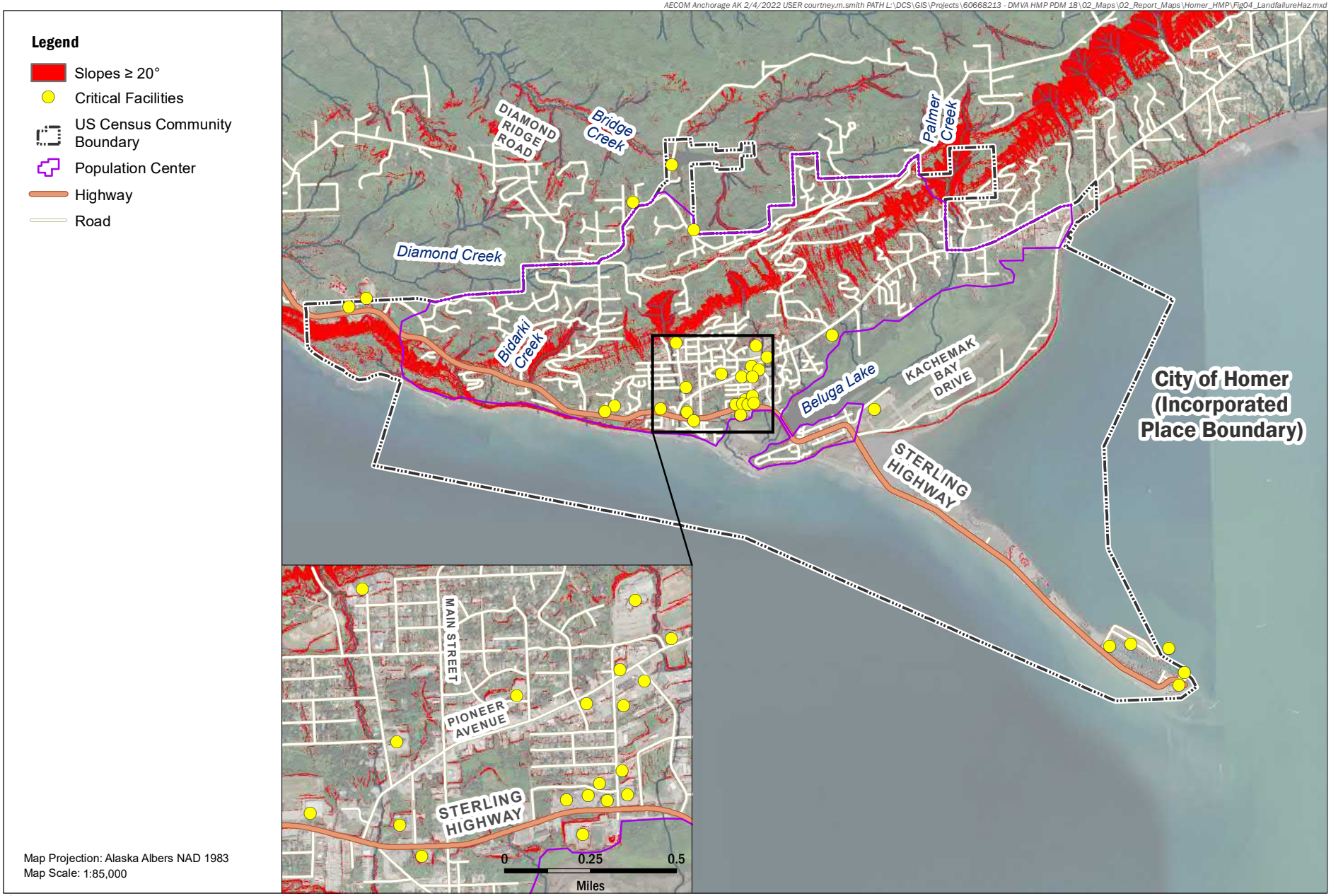


AECOM

City of Homer 2022
Local Hazard Mitigation Plan

FLOOD HAZARD AREAS

Figure 3



US Census TigerLine (2021)
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AECOM
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Local Hazard Mitigation Plan

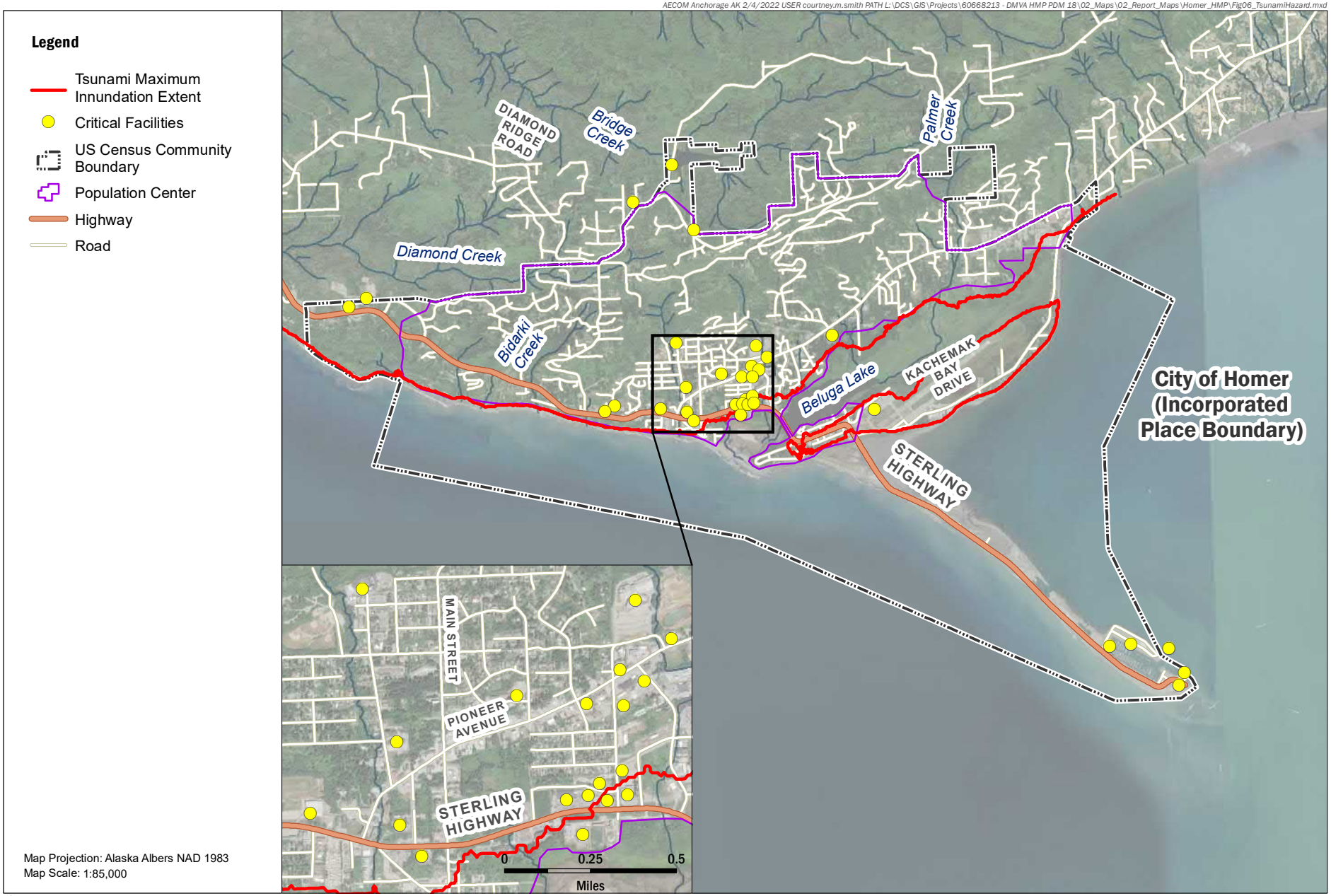
LAND FAILURE HAZARD AREAS

Figure 4

Deep-seated landslide susceptibility near the Bluff Point Landslide. Note that the landslide body (southwest of the yellow headscarp line) is also a landslide deposit and is highly susceptible to repeated failure.

BLUFF POINT LANDSLIDE AREA

Figure 5

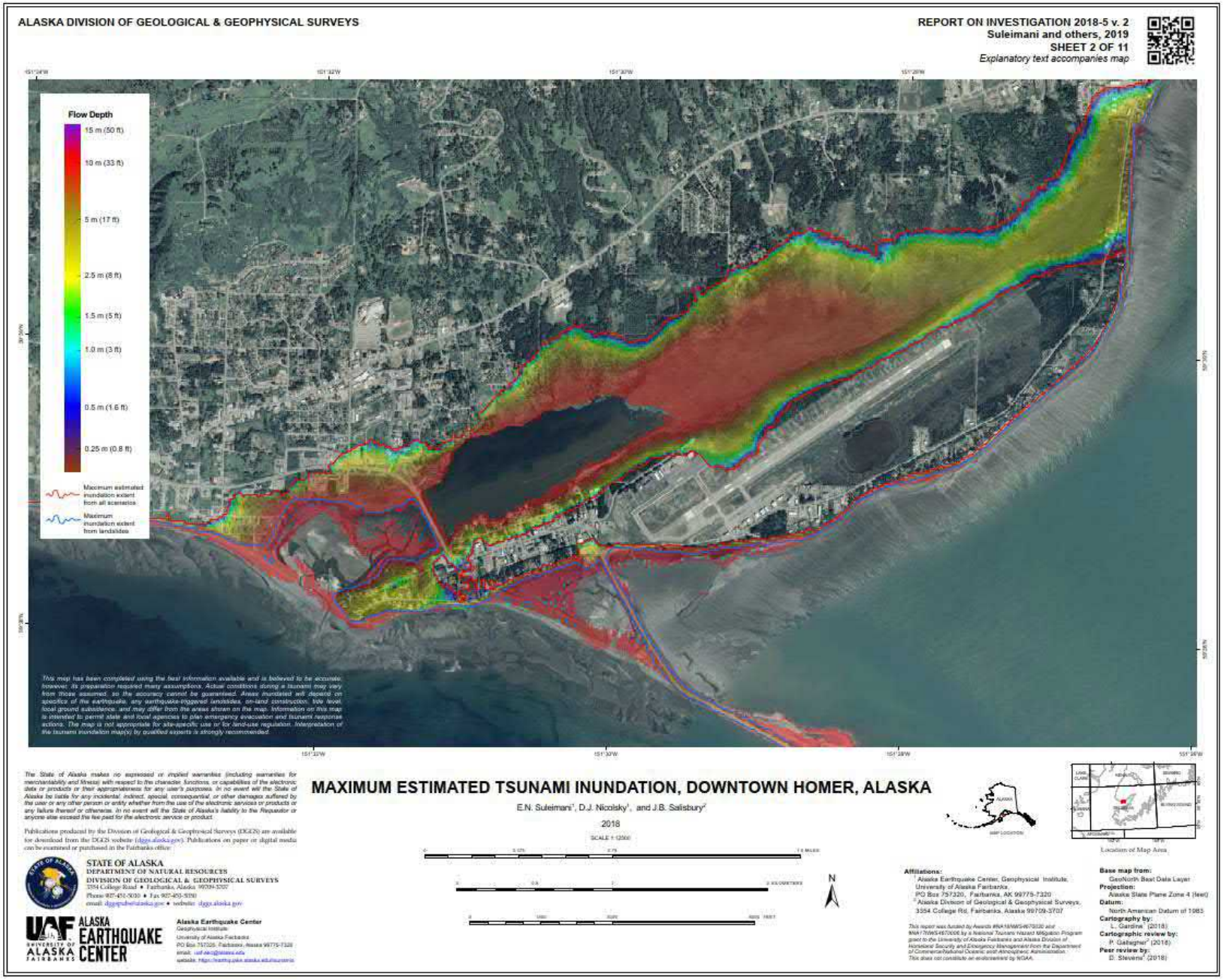


DGGS (2019); US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

AECOM
City of Homer 2022
Local Hazard Mitigation Plan

TSUNAMI HAZARD AREAS

Figure 6


ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
REPORT ON INVESTIGATION 2018-5 v. 2
Suleimani and others, 2019
SHEET 2 OF 11
Explanatory text accompanies map
Flow Depth
15 m (50 ft)
10 m (33 ft)
5 m (17 ft)
2.5 m (8 ft)
1.5 m (5 ft)
1.0 m (3 ft)
0.5 m (1.6 ft)
0.25 m (0.8 ft)
Maximum estimated inundation extent from all scenarios
Maximum inundation extent from landslides
This map has been completed using the best information available and is believed to be accurate; however, its preparation required many assumptions. Actual conditions during a tsunami may vary from those assumed, so the accuracy cannot be guaranteed. Areas inundated will depend on specifics of the earthquake, any earthquake-triggered landslides, on-land construction, tide level, local ground subsidence, and may differ from the areas shown on the map. Information on this map is intended to permit state and local agencies to plan emergency evacuation and tsunami response actions. The map is not appropriate for site-specific use or for land-use regulation. Interpretation of the tsunami inundation map(s) by qualified experts is strongly recommended.
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Publications produced by the Division of Geological & Geophysical Surveys (DGGS) are available for download from the DGGS website (dggs.alaska.gov). Publications on paper or digital media can be examined or purchased in the Fairbanks office:
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
3354 College Road • Fairbanks, Alaska 99709-3707
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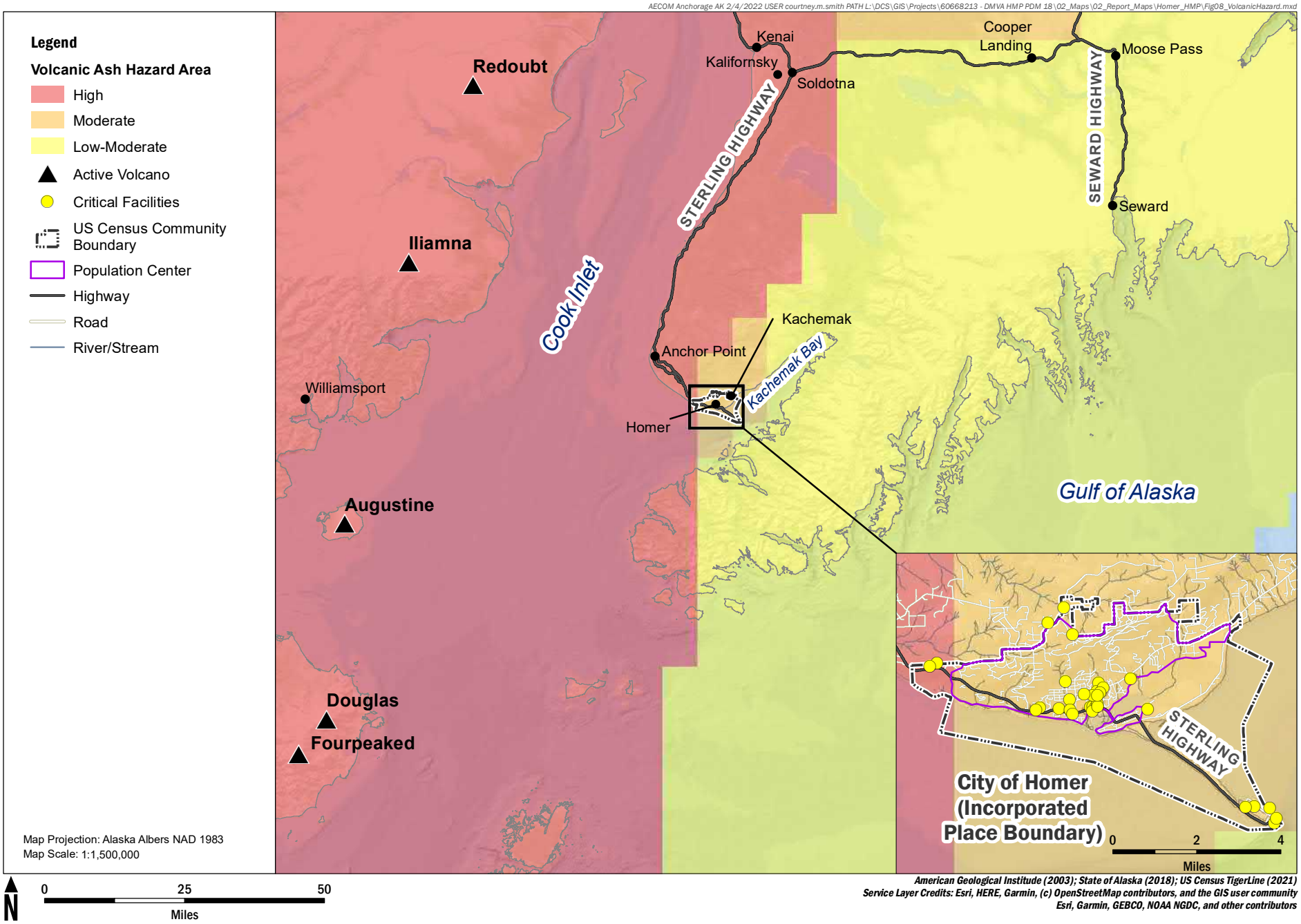
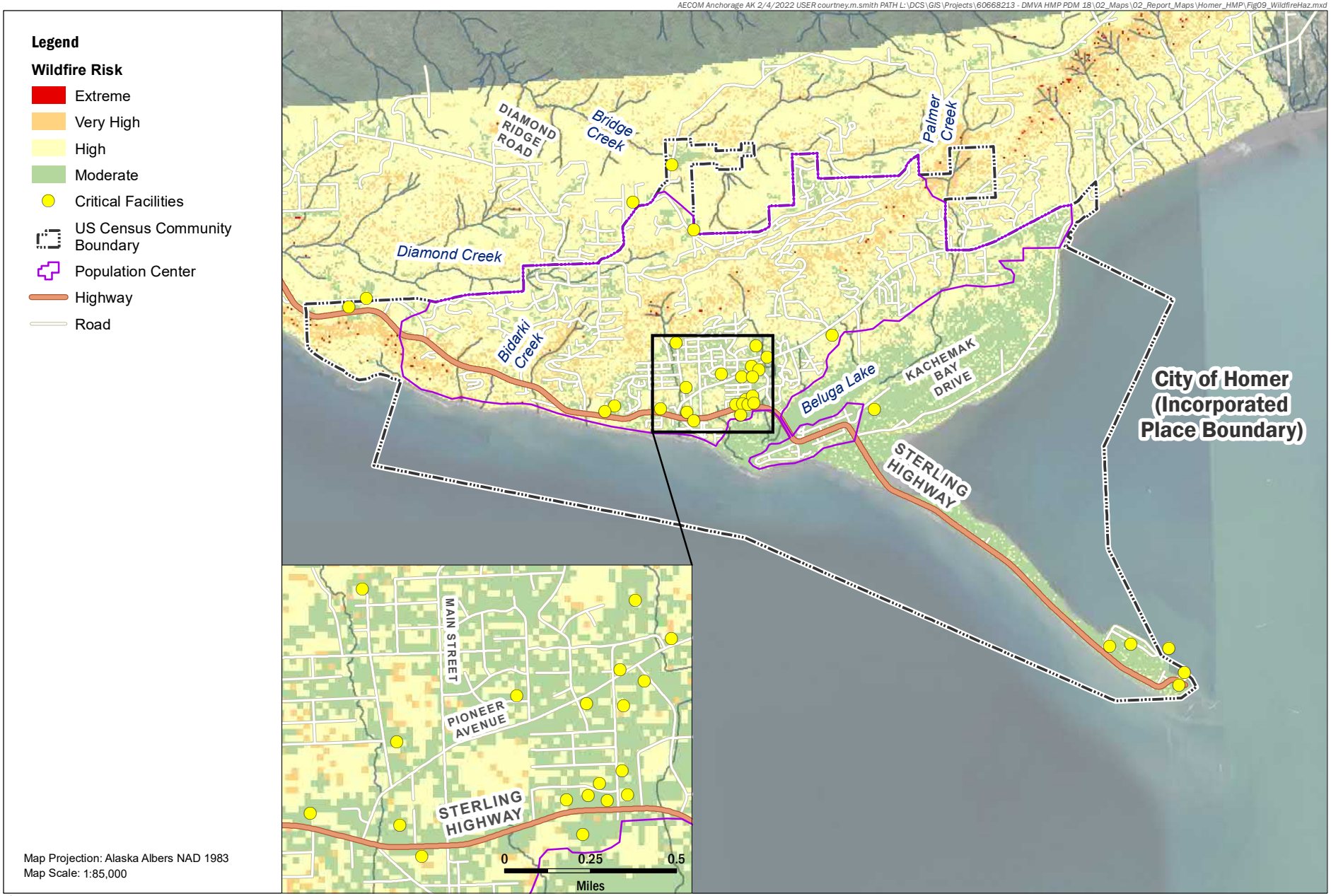
email: dggspubs@alaska.gov • website: dggs.alaska.gov
UAF ALASKA EARTHQUAKE CENTER
Alaska Earthquake Center
Geophysical Institute
University of Alaska Fairbanks
PO Box 757320, Fairbanks, Alaska 99775-7320
email: uaf-aec@alaska.edu
website: https://earthquake.alaska.edu/tsunamis
MAXIMUM ESTIMATED TSUNAMI INUNDATION, DOWNTOWN HOMER, ALASKA
E.N. Suleimani[1], D.J. Nicolsky[1], and J.B. Salisbury[2]
2018
SCALE 1:12500
N
Location of Map Area
Affiliations:
[1] Alaska Earthquake Center, Geophysical Institute, University of Alaska Fairbanks, PO Box 757320, Fairbanks, AK 99775-7320
[2] Alaska Division of Geological & Geophysical Surveys, 3354 College Rd, Fairbanks, Alaska 99709-3707
This report was funded by Awards #NA16NWS4670030 and #NA17NWS4670006 by a National Tsunami Hazard Mitigation Program grant to the University of Alaska Fairbanks and Alaska Division of Homeland Security and Emergency Management from the Department of Commerce/National Oceanic and Atmospheric Administration. This does not constitute an endorsement by NOAA.
Base map from:
GeoNorth Best Data Layer
Projection:
Alaska State Plane Zone 4 (feet)
Datum:
North American Datum of 1983
Cartography by:
L. Gardine (2018)
Cartographic review by:
P. Gallagher[1] (2018)
Peer review by:
D. Stevens[1] (2018)



VOLCANIC ASH HAZARD AREAS

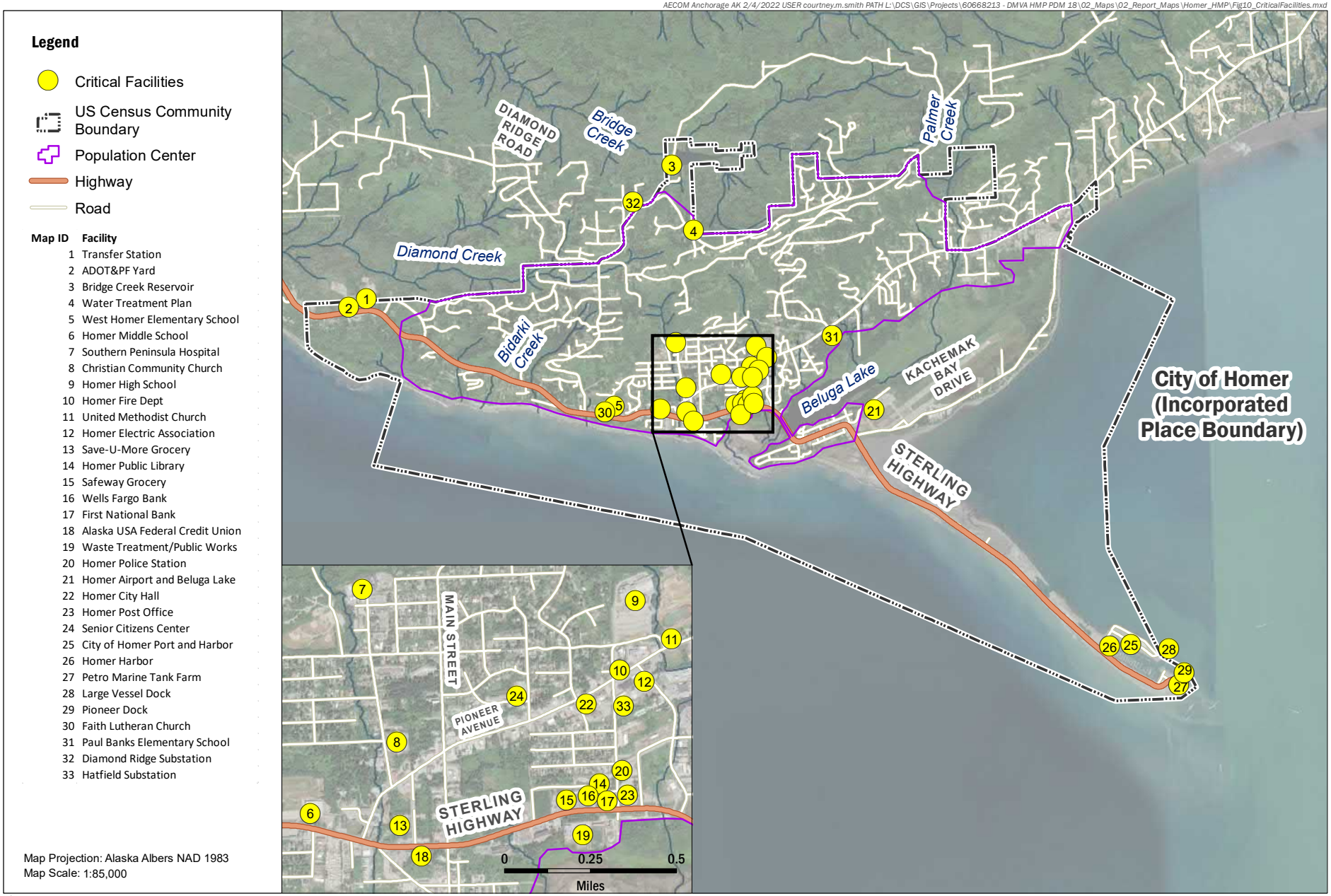
Figure 8



US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

WILDFIRE HAZARD AREAS

Figure 9



US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CRITICAL FACILITIES

Figure 10

APPENDIX B—FEMA DOCUMENTATION

LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: City of Homer	**Title of Plan:** 2022 City of Homer Local Hazard Mitigation Plan	**Date of Plan:** April, 2022
Local Point of Contact: Rick Abboud	**Address:**	
Title: City Planner		
Agency:		
Phone Number: 907-235-3106	**E-Mail:** RAbboud@ci.homer.ak.us	

State Reviewer: Erin M. Leaders	**Title:** EMS II/Planner	**Date:** 3/23/2022

FEMA Reviewer	Josh Vidmar, John McCandless
Title	CERC Planner, Hazard Mitigation Planner
Date:	5/6/2023
Date Received in FEMA Region 10	4/20/2022
Plan Not Approved	5/10/2022
Plan Approvable Pending Adoption	5/18/2022
Plan Approved	

SECTION 1:
REGULATION CHECKLIST

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST	Location in Plan (section and/or page number)	Met	Not Met
ELEMENT A. PLANNING PROCESS			
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Sec 2.1/pp. 2-1 – 2-3 (PDF 9-19)	Met	
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Sec 2.2/pp. 2-4 (PDF 12), PDF p. 77 (Appendix C)	Met	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Sec 2.1/pp. 2-1 (PDF p. 8), Sec 2.3/pp. 2-4 (PDF 12)	Met	
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Sec 2.4/pp. 2-4 – 2-5 (PDF 12-13)	Met	
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Sec 2.5/pp. 2-5 – 2-6 (PDF 13-14)	Met	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a five-year cycle)? (Requirement §201.6(c)(4)(i))	Sec 2.6/pp. 2-6 – 2-7 (PDF 14-15)	Met	
ELEMENT A: REQUIRED REVISION			

ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	**Climate Change Sec 3.1** Type (Nature): pp. 3-2 (PDF 17) Location: pp. 3-2 (PDF 17) Extent: pp. 3-3 (PDF 18) **Earthquake Sec 3.2kk** Type (Nature): pp. 3-4 (PDF 19) Location: pp. 3-4 (PDF 19) Extent: pp. 3-5 (PDF 20) **Erosion Sec 3.3** Type (Nature): pp. 3-6 (PDF 21) Location: pp. 3-6 (PDF 21) Extent: pp. 3-7 (PDF 22) **Flood Sec 3.4** Type (Nature): pp. 3-8 (PDF 23) Location: pp. 3-8 (PDF 23) Extent: pp. 3-8 (PDF 23) **Landslide Sec 3.5** Type (Nature): pp. 3-9 (PDF 24) Location: pp. 3-9 (PDF 24) Extent: pp. 3-10 (PDF 25) **Severe Weather Sec 3.6** Type (Nature): pp. 3-11 (PDF 26) Location: pp. 3-11 (PDF 26) Extent: pp. 3-12 (PDF 27) **Tsunami Sec 3.7** Type (Nature): pp. 3-13 (PDF 28) Location: pp. 3-13 (PDF 28) Extent: pp. 3-14 (PDF 29) **Volcano Sec 3.8** Type (Nature): pp. 3-15 (PDF 30) Location: pp. 3-15 (PDF 30) Extent: pp. 3-16 (PDF 31) **Wildfire Sec 3.9** Type (Nature): pp. 3-17 (PDF 32) Location: pp. 3-17 (PDF 32) Extent: pp. 3-18 (PDF 33)	Met	
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	**Climate Change Sec 3.1** History: pp. 3-2 (PDF 17) **Earthquake Sec 3.2** History: pp. 3-5 (PDF 20) **Erosion Sec 3.3** History: pp. 3-6 (PDF 21) **Flood Sec 3.4** History: pp. 3-8 (PDF 23) **Landslide Sec 3.5** History: pp. 3-9 (PDF 24) **Severe Weather Sec 3.6** History: pp. 3-11 (PDF 26) **Tsunami Sec 3.7** History: pp. 3-13 (PDF 28) **Volcano Sec 3.8** History: pp. 3-16 (PDF 31) **Wildfire Sec 3.9**	Met	

	History: pp. 3-18 (PDF 33)		
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Impact: Sec 4.1/pp. 4-1 – 4-4 (PDF p. 34-37) Summary: Sec 4.2/pp. 4-4 – 4-7 (PDF p. 37-40)	Met	
B4. Does the Plan address (National Flood Insurance Program (NFIP) insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Sec 4.3/pp. 4-7 (PDF p. 40)	Met	
ELEMENT B: REQUIRED REVISIONS ~~**B2-c.** The history of earthquakes states that there have been 27 events since 2000. However, it does not specify when they took place, or if any took place since the previous plan was adopted. Similarly, the history of flooding ends at 2013; landslides end at 2015. Either add recent events to the risk assessment tables, or state that there have been no other recent events since the previous plan was developed.~~ FEMA Revisions Review: They have clarified history in the Earthquake, Flood, Landslide, Volcano, and Wildfire profiles.			
ELEMENT C. MITIGATION STRATEGY			
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Sec 5.1/pp. 5-1 – 5-6 (PDF 41-46)	Met	
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Sec 5.2/pp. 5.7 (PDF 47)	Met	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Sec 5.3/pp. 5-7 (PDF 47)	Met	
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Sec 5.4/pp. 5-7 – 5-11 (PDF 47-51)	Met	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Sec 5.5/pp. 5-12 – 5-14 (PDF 52-54), Sec. 6.3/pp. 6-7 (PDF p. 62)	Met	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Sec 5.6/pp. 5-15 (PDF 55)	Met	
ELEMENT C: REQUIRED REVISIONS			
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)			
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Sec 6.1/pp. 6-1 (PDF 56)	Met	

D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Sec 6.2/pp. 6-1 – 6-7 (PDF 56-62)	Met	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Sec 5.5/pp. 5-12 (PDF p. 52-54), Sec 6.3/pp. 6-7 (PDF 62)	Met	
ELEMENT D: REQUIRED REVISIONS			
ELEMENT E. PLAN ADOPTION			
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	Sec 7.1/pp. 7-1 (PDF 63)		Pending
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	N/A		
ELEMENT E: REQUIRED REVISIONS			
OPTIONAL: HIGH HAZARD POTENTIAL DAM (HHPD) RISKS			
HHPD1. Did Element A4 (planning process) describe the incorporation of existing plans, studies, reports, and technical information for high hazard potential dams?	N/A		
HHPD2. Did Element B3 (risk assessment) address HHPDs?	N/A		
HHPD3. Did Element C3 (mitigation goals) include mitigation goals to reduce long-term vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?	N/A		
HHPD4. Did Element C4-C5 (mitigation actions) address HHPDs prioritize mitigation actions to reduce vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?	N/A		
REQUIRED REVISIONS			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			
F2.			
ELEMENT F: REQUIRED REVISIONS			

SECTION 2:
PLAN ASSESSMENT

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

1. Plan Strengths and Opportunities for Improvement
2. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

Strengths

- Table 2-2 includes how each member of the planning team participated. It also includes what contribution they each made to the process.
- Section 2.2 notes each organization that was invited to contribute to the plan. This includes their titles where applicable.
- Table 2-3 includes all resources that were used to develop the plan. It also includes how they were incorporated.
- Table 2-4 provides a place for planners to track changes to the document each year.
- The appendix includes emails and screenshots that were used to invite stakeholders and the public to the process.

Opportunities for Improvement

- Use other meetings, such as town halls or public events where residents already participate, to talk about the plan. This can help spread awareness about the planning process.

Element B: Hazard Identification and Risk Assessment

Strengths

- The Vulnerability Assessment does an excellent job of specifying the exact areas in the community that are most susceptible to these hazards.
- Each hazard table clearly labels each section. This makes information easy to find throughout the Risk Assessment.

Opportunities for Improvement

- Consolidate some of the information in the Risk Assessment. Right now, the hazard history, extent, location and description are separate from the Vulnerability Assessment. Having this information in one section can help readers know what the issues are and how to address them.

Element C: Mitigation Strategy

Strengths

- The capability assessment does a good job of explaining how each resource can help implement mitigation projects.
- Table 5-4 specifically calls out how to expand each type of resource to further address mitigation needs.
- The project description in Table 5-6 gives a good background on each of the identified mitigation actions.

Opportunities for Improvement

- All prioritized actions have a timing of 0-5 years. Some should be identified as happening sooner. That would create an order for eachone to take place.
- There are two actions labeled as "34" in Table 5-6.

Element D: Plan Update, Evaluation, and Implementation (*Plan Updates Only*)

Strengths

- Table 6-1 gives a good overview of each of the actions from the previous plan. For those that are not included in the prioritized list of actions for this update, there is a clear explanation why.
- Page 6-7 concisely explains that there have been no major changes in priorities. They are the same from the previous plan.

Opportunities for Improvement

- Include any success stories that result from the plan. This can include mitigation projects that were implemented or meetings that were held. These stories can show that mitigation is a worthwhile process.

B. Resources for Implementing Your Approved Plan

Ideas may be offered on moving the mitigation plan forward and continuing the relationship with key mitigation stakeholders such as the following:

- *What FEMA assistance (funding) programs are available (for example, Hazard Mitigation Assistance) to the jurisdiction(s) to assist with implementing the mitigation actions?*
- *What other Federal programs NFIP, Community Rating System, Risk MAP, etc.) may provide assistance for mitigation activities?*
- *What publications, technical guidance or other resources are available to the jurisdiction(s) relevant to the identified mitigation actions?*
- *Are there upcoming trainings/workshops (Benefit-Cost Analysis), Hazard Mitigation Assistanc, etc.) to assist the jurisdictions(s)?*
- *What mitigation actions can be funded by other Federal agencies (for example, United.State Forest Service, National Oceanic and Atmospheric Administration, Environmental Protection Agency Smart Growth, Housing and Urban Development Sustainable Communities, etc.) and/or state and local agencies?*

SECTION 3:
MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were 'Met' or 'Not Met,' and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

	Mulit- Juridiction	Summary	Sheet			Requirements:		(Met /Not Met)			
Line Number	**Jurisdiction Name**	**Jurisdiction Type (city/borough/township/village, etc.)**	**Plan Point of Contact**	**Mailing Address**	**Email**	**Phone**	**A. Planning Process**	**B. Hazard Identification and Risk Assessment**	**C. Mitigation Strategy**	**D. Plan Review, Evaluation and Implementation**	**E. Plan Adoption**	**F. State Require-ments**
1	Homer	City	Rick Abboud, AICP		RAbboud@ci.homer.ak.us	907-235-3106	Met	Met	Met	Met		
2												
3												
4												
5												
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18												
19												
20												

APPENDIX C—PLANNING PROCESS

Evans, Jessica

From: Rick Abboud <RAbboud@ci.homer.ak.us>
Sent: Wednesday, January 5, 2022 11:20 AM
To: Evans, Jessica
Cc: erin.leaders@alaska.gov; kachemak@xyz.net; cassidi@kpedd.org; ashley.list@alaska.gov; dnr.pkskenai@alaska.gov; cpierce@kpb.us; info@friendsofkachemakbay.org; cmwalker@alaska.edu; info@KachemakLandTrust.org; info@ciri.com; kevin.jones@alaska.gov; kevin.combell@enstarnaturalgas.com; ryan.pierce@enstarnaturalgas.com; KLyon@kpbsd.k12.ak.us; bahlberg@kpb.us; joselyn.biloon@alaska.gov
Subject: [EXTERNAL] City of Homer Local Mitigation Plan Update

Greetings,

The City of Homer is kicking off the 2022 Local Hazard Mitigation Plan (LHMP) update process. LHMPs are pre-disaster plans that are focused on reducing the impacts of disasters before they occur. In addition, governments that prepare LHMPs are eligible for certain types of FEMA funding.

The 2022 LHMP update process will take place over the next several months. Hazards addressed in the plan will include: climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, volcano, and wildfire.

To learn more about hazard mitigation planning, please visit: https://www.fema.gov/hazard-mitigation-planning.
If you would like to participate in our plan update process, please contact me.

We will send out a follow-up email when our Public Draft is available for review and comment. Thank you.

Sincerely,

RICK ABBOUD, AICP
City Planner
491 E Pioneer Ave
Homer, AK 99603
(o) 907-235-3106
(f) 907-235-3118

VOL. I - ISSUE IV | DECEMBER 2021

CITY OF HOMER

Monthly Newsletter from the office of the City Manager

Greetings from City Hall

Festive Lights Add Glow to the Holidays

The beautiful white lights that line the edges of many of the buildings around town add a festive glow to our dark winter days and nights. City Hall is adorned too. We invite you to come see our nautical themed Christmas tree in the lobby.

Be sure to take advantage of the many holiday and year end festivities happening in the Homer area. We encourage you to shop and dine locally.

The Giving Season - Share the Spirit

Giving back to the community and helping those in need is a mission the City has all year long. During the holidays, several City departments - City Hall, the Fire Hall, Police Department, Public Works and the Port and Harbor - will fill Christmas wish lists and food boxes, which Share the Spirit will distribute to families in need.

The Food Pantry ordered 780 turkeys to give away for Thanksgiving and Christmas through the Salvation Army and Lions Club at Homer High School.

If you're looking for ways to give back to the community, Homer is loaded with opportunities. Whether you give the gift of food, clothing or your precious time, there is always someone will appreciate it more than you know.

Happy Holidays

FROM THE CITY OF HOMER

285

WHAT'S NEW?

- Library News
- Community Corner
- Public Safety Notes
- Parks & Community Recreation
- Police Department
- Public Works Department
- Fire Department
- Port & Harbor
- Meet the Staff
- City of Homer Roster
- Stay Connected with City Council
- Municipal Art Collection

We hope you'll discover something new today as we share information and ways you can tap into what's going on at City Hall and in the Homer community.

Check us out on Facebook

City Hall - **@cityofhomerak**
Parks & Recreation - @homerparksandrec
Homer Public Library - @homerpubliclibrary
Homer Police - @homerpolice
Fire Department - @HomerVolFireDept.

Share this link with your friends, so they can get the newsletter too - **https://www.cityofhomer-ak.gov/citymanager/monthly-email-newsletter**

"where the land ends and the sea begins"

Bring Back the Light

A moment of celebration, community, solidarity and reflection

On the darkest night of the year, at 5:00 p.m. on Sunday, December 19, 2021, you are invited to step outside with others and light a candle or turn on lights, flashlights, headlamps or a lantern. You can participate from your porch or join family, friends and neighbors for a lighted walk through your community. Don't know of anything happening locally? Organize your own event with friends and neighbors!

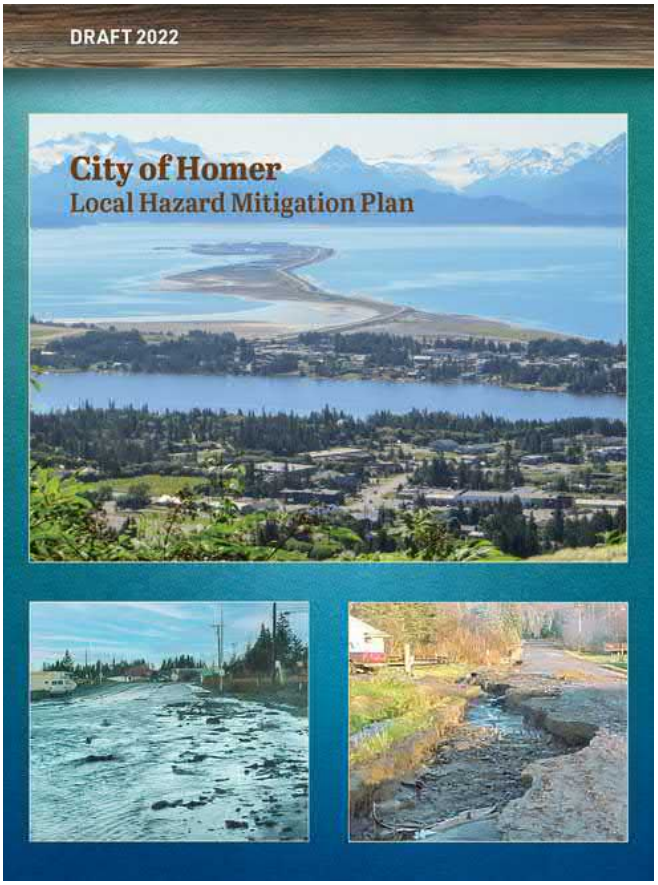
The pandemic has been long and difficult, but we have much to be grateful for - especially each other! Alaskans have shown considerable strength and resiliency, and continue to adapt and care for each other. Let's join together to shine a positive light as the return of longer days arrive and:

- Celebrate the return of the light in the sky.
- Express gratitude for family, friends, neighbors, frontline workers, teachers, business owners and more.
- Remember those who have lost their lives and loved ones, or have experienced hardship.

There's no one way to do this, so step outside and shine a light!
Take photos or videos and share them if you like on social media using the hashtag

#WithYouAlaska

Hazard Mitigation Plan



Our community is launching an effort known as the 2022 City of Homer Hazard Mitigation Plan. Over the next few months, we will work with a consultant to assess risks posed by natural disasters and develop strategies to protect life and property in Homer from future hazard events.

Hazards addressed in our plan include the following: earthquake, climate change, flood, erosion, landslide, tsunami, wildland fire, and volcano. Once our plan is completed and approved by FEMA, our community will be eligible to apply for and receive certain types of non-emergency disaster assistance, including funding for mitigation projects identified in our plan.

To learn more about hazard mitigation planning, please visit: https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning.

As our draft plan comes together, updates will be posted on the Planning page of the City of Homer Website or you may contact Homer City Planning at 907-235-3106 or email *planning@ci.homer.ak.us*.

Evans, Jessica

From: Rick Abboud <RAbboud@ci.homer.ak.us>
Sent: Tuesday, March 29, 2022 1:05 PM
To: Evans, Jessica
Subject: [EXTERNAL] FW: 2022 Homer Draft Local Hazard Mitigation Plan
Attachments: Homer_LHMP_DRAFT_20220323.pdf

Jessica,

Here you go.

Rick

From: Rick Abboud
Sent: Thursday, March 24, 2022 4:46 PM
To: 'erin.leaders@alaska.gov' <erin.leaders@alaska.gov>; 'kachemak@xyz.net' <kachemak@xyz.net>; 'cassidi@kpedd.org' <cassidi@kpedd.org>; 'ashley.list@alaska.gov' <ashley.list@alaska.gov>; 'dnr.pkskenai@alaska.gov' <dnr.pkskenai@alaska.gov>; 'cpierce@kpb.us' <cpierce@kpb.us>; 'info@friendsofkachemakbay.org' <info@friendsofkachemakbay.org>; 'cmwalker9@alaska.edu' <cmwalker9@alaska.edu>; 'info@KachemakLandTrust.org' <info@KachemakLandTrust.org>; 'info@ciri.com' <info@ciri.com>; 'kevin.jones@alaska.gov' <kevin.jones@alaska.gov>; 'KLyon@kpbsd.k12.ak.us' <KLyon@kpbsd.k12.ak.us>; 'bahlberg@kpb.us' <bahlberg@kpb.us>; 'joselyn.biloon@alaska.gov' <joselyn.biloon@alaska.gov>; 'Alicia.Martinez@enstarnaturalgas.com' <Alicia.Martinez@enstarnaturalgas.com>
Subject: 2022 Homer Draft Local Hazard Mitigation Plan

Greetings,

As you may remember from our last email on January 5, the City of Homer is updating our Local Hazard Mitigation Plan (LHMP). LHMPs are pre-disaster plans that are focused on reducing the impacts of disasters before they occur. In addition, governments that prepare LHMPs are eligible for certain types of FEMA funding.

We have completed a public draft of the 2022 City of Homer LHMP update. Over past few months, we have worked with a consultant to assess risks posed by natural disasters and develop strategies to protect life and property in Homer from future hazard events. Hazards addressed in the plan include climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, volcano, and wildfire.

To learn more about hazard mitigation planning, please visit: https://www.fema.gov/hazard-mitigation-planning.

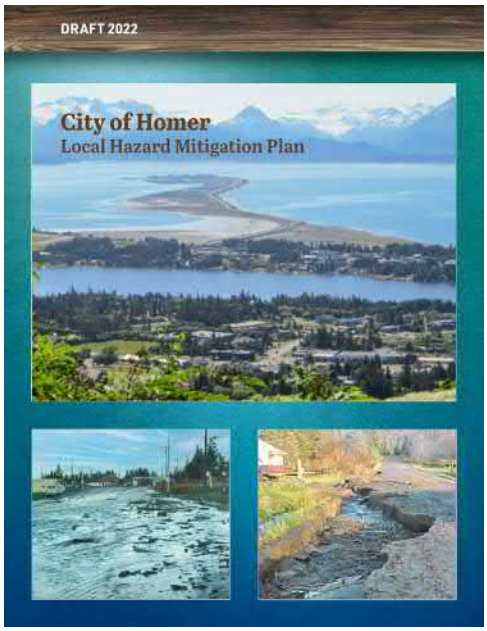
A copy of our draft plan is attached and available to review until April 15. If you have comments please get in touch with me or Jessica Evans at jessica.evans@aecom.com.

Thank you for your continued interest and participation.

RICK ABBOUD, AICP
City Planner
491 E Pioneer Ave
Homer, AK 99603
(o) 907-235-3106
(f) 907-235-3118

HOMER ALASKA

2022 City of Homer Local Hazard Mitigation Plan



Our community has completed a public draft of the 2022 City of Homer Local Hazard Mitigation Plan. Over the past few months, we have worked with a consultant to assess risks posed by natural disasters and develop strategies to protect life and property in Homer from future hazard events.

Hazards addressed in our plan include the following: climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, volcano, and wildfire.

Once our plan is finalized and approved by FEMA, our community will be eligible to apply for and receive certain types of nonemergency disaster assistance, including funding for mitigation projects identified in our plan.

To learn more about hazard mitigation planning, please visit: https://www.fema.gov/emergency-managers/risk-management/hazard-mitigatio...

Click here to see our plan

We are taking public comments until April 15, at which point the plan will be submitted to the State for review, followed by FEMA review.

To submit comments, you can type them into the comments box below, email the Planning Office at planning@ci.homer.ak.us, or drop them off at City Hall. Have questions? contact Rick Abboud at RAbboud@ci.homer.ak.us or Jessica Evans at jessica.evans@aecom.com.

Supporting Documents

2022 City of Homer Local Hazard Mitigation Plan (9 MB)

Comments?

Submit

Planning

+ Floodplains

City Code 288

+ Planning Commission

+ Documents

+ Signs

+ Permits

+ Maps

+ How Do I

+ Helpful Links

Compilation of historical HERC floor plans, remodel plans and cost estimates

Contact Information

Mailing address:
Homer City Hall
491 East Pioneer Ave
Homer AK 99603

Phone:
907-235-3106
Email:
Planning@ci.homer.ak.us
Fax:
907-235-3118

Office Hours: Monday through Friday 8am to 5pm

View Full Contact Details

Planning Public Hearings

There are no upcoming public notices posted at this time.

VOL. I - ISSUE VIII | APRIL 2022

CITY OF HOMER

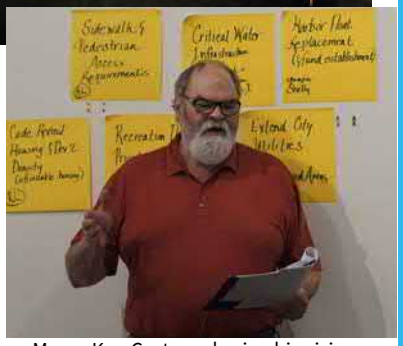
Monthly Newsletter from the office of the City Manager

Hastings Frank, Talons Hooked

GREETINGS FROM CITY HALL

City Council is Visioning for the Future

City Manager Rob Dumouchel in breakout session.



Mayor Ken Castner sharing his visions.

The Pratt Museum was the stage for the 2022 Council Visioning Session on March 16 and 17. *Susie Amundson* of Wise at Work facilitated Homer City Councilmembers and the City of Homer leadership team to create a strategic plan and set goals for a vision of the future of Homer.

During the two day retreat, the group presented their individual priorities, both City-initiated and Council-initiated, followed by a question and answer period. Afterward, Amundson facilitated an in-depth conversation to help the group weave their priorities into a set of common goals by identifying potential patterns and partnerships. Break-out sessions helped the group hone common interests and dive deeper into strategies for 2022 and beyond.

These goals will guide both City Council and City Staff as they plan for the future by tracking and monitoring progress on priorities, and they help steer budgetary goals and funding priorities.

Our special thanks to the Pratt Museum & Park for their first class hospitality and support.

WHAT'S NEW?

We hope you'll discover something new today as we share the latest information and ways you can tap into what's going on at City Hall and in the Homer community.

Check us out on Facebook

- City Hall - @cityofhomerak
- Parks & Recreation - @homerparksandrec
- Homer Public Library - @homerpubliclibrary
- Homer Police - @homerpolice
- Fire Department - @HomerVolFireDept

Share this link with your friends, so they can get the newsletter too - **https://www.cityofhomer-ak.gov/citymanager/monthly-email-newsletter**

"where the land ends and the sea begins"

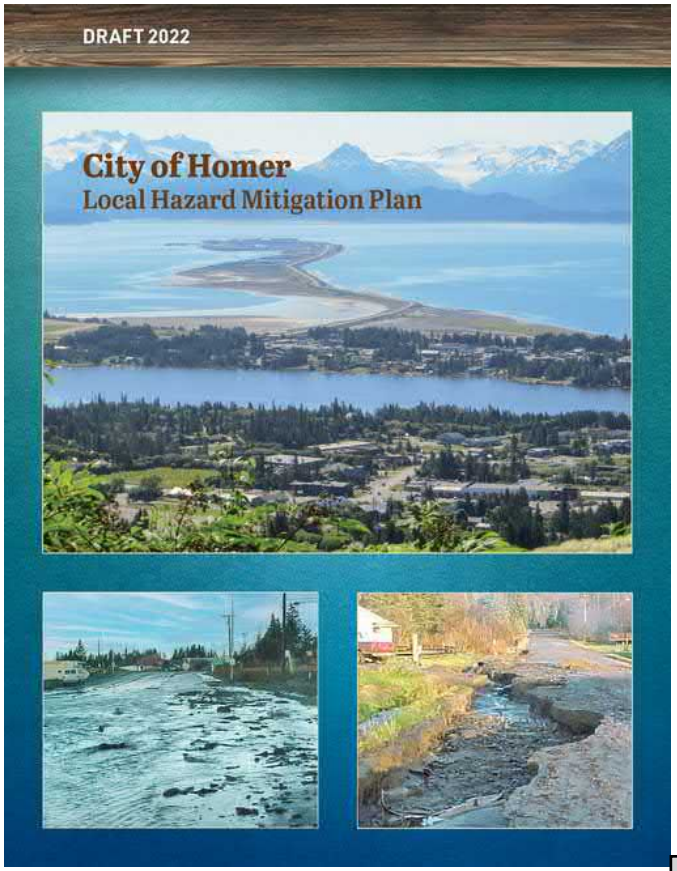
Port & Harbor

Harbor's Ice Plant is Open for the Season

The Ice Plant staff have been hustling to get the winter shutdown maintenance list knocked out in time for the March 6th opening of the Black Cod/Halibut commercial fisheries. On February 28th the ice compressors started for the season and fishing boats have "iced up" and headed out for the opening. The Ice Plant will remain open through November, selling ice to fishermen and providing cold storage for bait. There's a lot of speculation about the price of fuel, price of fish and run time, but in the end fishermen fish and the rest will play out as we go. We're happy to have the temperature warm up a bit, which will help keep our fishermen safer out on the ocean.

Maintenance is key to keeping the Ice Plant & Fish Dock Cranes operating around the clock. Crane 4 is back from a total rebuild. The crane was sandblasted, painted inside and out, its AC Motor was cleaned and balanced, and new valving put in place. Stainless steel hardware will prevent any hydraulic fluid leaks to protect the Harbor from contamination. It was installed at the end of March and is part of a continuous maintenance plan to rebuild and maintain the Fish Dock's eight public-use cranes. We also took delivery a new-to-us scissor lift that help harbor maintenance staff access Ice Plant equipment like augers, cranes, and help them maintain security cameras.

Jededia Gautier aboard the Man Lift



2022 City of Homer Local Hazard Mitigation Plan

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Hazards addressed in the plan include climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, volcano, and wildfire.

Once the plan is finalized and approved by FEMA, the community will be eligible to apply for and receive certain types of nonemergency disaster assistance, including funding for mitigation projects identified in our plan.

To learn more about hazard mitigation planning, please visit: https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning

The 2022 Draft Local Hazard Mitigation Plan is available for review until April 15th. You may view the plan and submit comment at: https://www.cityofhomer-ak.gov/planning/2022-ity-homer-local-hazard-mitigation-plan

City of Homer Roster

Rob Dumouchel, City Manager
Melissa Jacobsen, MMC, City Clerk
Andrea Browning, Personnel Director
Rick Abboud, City Planner
Mark Robl, Chief of Police
Mark Kirko, Fire Chief
Bryan Hawkins, Port Director/Harbormaster
Elizabeth Walton, Finance Director
Jan Keiser, Public Works Director
Dave Berry, Library and IT Director
Nick Poolos, Info. Technology Manager
Mike Illg, Community Recreation Manager

Mayor - Ken Castner (2022)

City Council
Donna Aderhold (2024)
Jason Davis (2022)
Shelley Erickson (2024)
Storm P. Hansen-Cavasos (2022)
Rachel Lord (2023)
Caroline Venuti (2023)

Commissions & Boards
Planning Commission
Economic Development Advisory Commission
Library Advisory Board
Parks , Art, Recreation and Culture Advisory Commission
Port and Harbor Advisory Commission

Standing Committees
ADA Compliance Committee

MUNICIPAL ART COLLECTION

Learn more about the municipal art collection at:
https://www.cityofhomer-ak.gov/prac/city-homer-municipal-art-collection

Next time you're strolling down Pioneer Avenue, be sure to stop and take a look at the artwork on the public restroom near the corner of Pioneer and Bartlett Street. Melissa Reichman's art adorns the exterior of the building with two pieces, *"Roaming the Land,"* above and *"Beings of the Bay,"* below, which depict mammals and sea creatures found in our area. Both pieces are constructed of fortified cement over carved foam and are approximately 48 x 26 inches in size. They were purchased by the City in 2014 as part of the 1% for the Arts program.

STAY CONNECTED WITH CITY COUNCIL

Go to: *cityofhomer-ak.gov/cityclerk/stay-connected-city-council*. Here you will find instructions on how to listen, provide testimony and participate in the meetings via Zoom.

Upcoming Meetings

APRIL

6th	5:30pm	Planning Commission Worksession
	6:30pm	Planning Commission Regular Meeting
11th	5:00pm	City Council Committee of the Whole
	6:00pm	City Council Regular Meeting
12th	5:00pm	Economic Development Advisory Commission Worksession
	6:00pm	Economic Development Advisory Commission Regular Meeting
14th	4:00pm	ADA Compliance Committee
19th	4:30pm	Library Advisory Board Worksession
	5:30pm	Library Advisory Board Regular Meeting
20th	5:30pm	Planning Commission Worksession
	6:30pm	Planning Commission Regular Meeting
21st	4:30pm	Parks, Art, Recreation & Culture Advisory Commission Worksession
	5:30pm	Parks, Art, Recreation & Culture Advisory Commission Regular Meeting
25th	5:00pm	City Council Committee of the Whole
	6:00pm	City Council Regular Meeting
27th	5:00pm	Port & Harbor Advisory Commission Regular Meeting

JOIN OUR TEAM

The City of Homer has current Job Openings.
Sign up for Job Alerts or Apply Online at
cityofhomerak.applicantpro.com/jobs

CURRENT JOB LISTINGS

- Heavy Equipment Operator I or II
- Police Officer
- Temporary/Seasonal Parks Technician
- Temporary/Seasonal Library Aide
- Temporary/Seasonal Harbor Assistant I
- Temporary/Seasonal Parking Enforcement Aide

City of Homer
491 E. Pioneer Avenue, Homer, Alaska 99603
907-235-8121
www.cityofhomer-ak.gov

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

Staff Report PL 22-22

TO: HOMER PLANNING COMMISSION
FROM: RICK ABBOUD, AICP, CITY PLANNER
DATE: MARCH 16, 2022
SUBJECT: 2022 LOCAL HAZARD MITIGATION PLAN

Introduction

After waiting till the worst of COVID has passed, we are working to update our Local Hazard Mitigation Plan.

Analysis

The Local Hazard Mitigation Plan is a plan required by FEMA to gain edibility for funding of projects eligible for FEMA mitigation funding. The plans are to be updated every five years.

Perhaps the FEMA website explains it best:

> *Hazard mitigation planning reduces loss of life and property by minimizing the impact of disasters. It begins with state, tribal and local governments identifying natural disaster risks and vulnerabilities that are common in their area. After identifying these risks, they develop long-term strategies for protecting people and property from similar events. Mitigation plans are key to breaking the cycle of disaster damage and reconstruction. https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning accessed 3.9.20*

We have gathered stakeholders and identified critical facilities and gauged the risk they are at from our local natural hazards. Additionally, we have prioritized mitigation projects, many of which we are actively working on or have previously identified. The plan also reviews previous mitigation actions listed in the last version and gives status reports. Current thoughts on the plan are to focus on items were we have a need and path to outside funding and not so much on routine operational items that can be addressed internally.

Staff Recommendation

Review the plan and make comments and I will address and/or pass along to the contactor.

Attachments

Draft Mitigation Plan
Appendix A

CITY OF HOMER
2022 LOCAL HAZARD MITIGATION PLAN

TABLE OF CONTENTS

APPENDICES

Appendix A—Figures
Appendix B—FEMA Documentation
Appendix C—Planning Process

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS

ADGGS	Alaska Division of Geological and Geophysical Surveys
ADNR	Alaska Department of Natural Resources
ADOT&PF	Alaska Department of Transportation and Public Facilities
BRIC	Building Resilient Infrastructure and Communities
CFR	Code of Federal Regulations
DMA 2000	Disaster Mitigation Act of 2000
ENSTAR	ENSTAR Natural Gas Company
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
g	gravity
GIS	Geographic Information System
HCC	Homer City Code
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HUD	U.S. Department of Housing and Urban Development
LHMP	Local Hazard Mitigation Plan
LIDAR	light detection and ranging
NFIP	National Flood Insurance Program
PGA	peak ground acceleration
SFHA	Special Flood Hazard Area
SNAP	Scenarios Network for Alaska + Arctic Planning
STAPLEE	social, technical, administrative, political, legal, environmental, and economic
U.S.	United States
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

1.0 INTRODUCTION

1.1 CITY OF HOMER OVERVIEW

The City of Homer is a first-class city in the Kenai Peninsula Borough (Figure 1). The city is on the northern shore of Kachemak Bay, on the southwestern edge of the Kenai Peninsula. The Homer Spit is a distinguishing feature of the city, which extends 4.5 miles from the shoreline into the bay. Homer is 227 road miles south of Anchorage, at the southern terminus of the Sterling Highway. Homer comprises 24.2 square miles, with 13.9 square miles of land and 10.3 square miles of water.

Homer was incorporated in 1964. The city is governed by a city council composed of a mayor and council members. According to the 2020 United States (U.S). Census, the population of Homer is 5,522, up from 5,003 in 2010.

1.2 HAZARD MITIGATION PLANNING

As defined in Title 44 of the Code of Federal Regulations (CFR), Subpart M, Section 206.401, hazard mitigation is "any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards." As such, hazard mitigation is any work to minimize the impacts of any type of hazard event before it occurs. Hazard mitigation aims to reduce losses from future disasters. It is a process that identifies and profiles hazards, analyzes the people and facilities at risk, and develops mitigation actions to reduce or eliminate hazard risk. The implementation of the mitigation actions—which include short- and long-term strategies that may involve planning, policy changes, programs, projects, and other activities—is the end result of this process.

Over the past two decades, local hazard mitigation planning has been driven by a federal law, known as the Disaster Mitigation Act of 2000 (DMA 2000). On October 30, 2000, Congress passed the DMA 2000 (Public Law 106-390), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Title 42 of the United States Code Section 5121 et seq.) by repealing the act's previous mitigation planning section (409) and replacing it with a new mitigation planning section (322). This new section emphasized the need for state, tribal, and local entities to closely coordinate mitigation planning and implementation efforts. This new section also provided the legal basis for the Federal Emergency Management Agency's (FEMA's) mitigation plan requirements for the Hazard Mitigation Assistance (HMA) grant programs.

1.3 2022 LOCAL HAZARD MITIGATION PLAN SYNOPSIS

To meet the requirements of the DMA 2000, the City of Homer is updating its 2010 plan, which was included as an annex to the 2014 Kenai Peninsula Borough All-Hazard Mitigation Plan. In 2018, the City unofficially prepared an updated plan. Although the 2018 City of Homer All-Hazard Mitigation Plan was not fully enacted by FEMA, the 2018 plan serves as a reference document for this plan.

The goal of this planning process is to assess risks posed by hazards and to develop prioritized action plans to reduce risks in Homer. The 2022 Local Hazard Mitigation Plan (LHMP) is organized to follow FEMA's Local Mitigation Plan Review Tool (Appendix B), which demonstrates how hazard mitigation plans meet the DMA 2000 regulations. As such, specific planning elements of this review tool are in their appropriate plan sections.

The LHMP structure has been updated to include the following sections:

- **Section 1 Introduction**, which introduces the City of Homer and provides information on hazard mitigation planning.

- **Section 2 Planning Process**, which provides an overview of the planning process, starting with a timeline. It identifies planning team members and describes their involvement with the planning process. This section also details stakeholder outreach, public involvement, and continued public involvement. It provides an overview of the existing plans and reports, details how those documents were incorporated into the 2022 LHMP, and provides a plan update method and schedule. Supporting planning process documentation is provided in Appendix C.
- **Section 3 Hazard Identification**, which provides a description of each of the nine hazards addressed in this plan. Hazard figures are provided in Appendix A.
- **Section 4 Risk Assessment**, which provides hazard impact tables or descriptions for land area, population centers, and critical facilities. An overall summary of vulnerability for each hazard is also provided.
- **Section 5 Mitigation Strategy**, which provides a description of the City of Homer's mitigation goals, potential mitigation actions and projects, and prioritization process. A capability assessment, prioritized action plan, and the process to integrate the 2022 LHMP into other planning mechanisms is also addressed.
- **Section 6 Plan Review**, which provides an overview of development changes that have occurred since the 2010 plan, the progress in local mitigation efforts, and changes in priorities for mitigation actions.
- **Section 7 Plan Adoption**, which provides information about the formal adoption.
- **Section 8 Appendices**, which provides Appendix A (Figures), Appendix B (FEMA Documentation), and Appendix C (Planning Process).

2.0 PLANNING PROCESS

This section addresses Element A of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element A: Planning Process
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

2.1 OVERVIEW OF THE 2022 LHMP PLANNING PROCESS

The development of the 2022 LHMP was collaborative effort between the City of Homer, AECOM Technical Services, Inc., and a planning team. The planning process officially started in November 2021 and ended in [month, year]. A timeline of the major planning tasks and milestones by month, including the times the planning team met, is provided in Table 2-1. A list of the planning team members and how they contributed to the development of the plan is provided in Table 2-2.

Table 2-1: LHMP Timeline

Date	Tasks	People Involved
November 2, 2021	LHMP planning team meeting 1 (project overview) Initial information collected: hazards to be profiled, critical facility information	LHMP project manager, consultant, planning team
December 4, 2021	Initial public outreach, via Facebook and newsletter	LHMP project manager
December 2021 and January 2022	Hazard profiles drafted	LHMP project manager, consultant
January, 2022	Initial stakeholder outreach, via email	LHMP project manager
January, 2022	Critical facilities map reviewed and approved	LHMP project manager, consultant
January, 2022	Hazard figures created, hazard impact assessments drafted Draft mitigation actions developed	Consultant

Table 2-1: LHMP Timeline

Date	Tasks	People Involved
February, 2022	Planning team meeting 2 (draft mitigation actions reviewed)	LHMP project manager, consultant, planning team
February, 2022	Prioritization action plan developed Integration of LHMP into other planning documents determined	LHMP project manager, consultant, planning team
February and March, 2022	Internal Draft LHMP	LHMP project manager, consultant, planning team
[March, 2022]	Public Draft LHMP Follow-up public outreach and stakeholder involvement	LHMP project manager, consultant, public
[March/April, 2022]	Final Draft LHMP	LHMP project manager, consultant, Alaska Division of Homeland Security and Emergency Management, FEMA Region X
[month, year]	Adoption of Final LHMP	LHMP project manager, City of Homer

Table 2-2: Planning Team

Name	Department/Agency and Title	Contribution
Rick Abboud, AICP	City Planner, City of Homer, LHMP project manager	Served as the LHMP project manager. Led planning team meetings; reviewed and commented on hazard figures, risk assessment tables, mitigation strategies, and the Internal Draft LHMP.
Robert Dumouchel	City Manager, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Janna Davis	Safety Coordinator, Homer Electric Association, Inc.	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Shelly Erickson	City Council Member, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Janette Keiser	Public Works Director, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Mark Kirko	Fire Chief, City of Homer	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.
Scott Mullen	Support Services Director, South Peninsula Hospital	Participated in planning team meetings and/or reviewed planning team documents; reviewed and commented on hazard figures, mitigation strategies, and the Internal Draft LHMP.

2.2 OPPORTUNITIES FOR STAKEHOLDERS

On January 5, 2022, the LHMP project manager reached out to stakeholders via email (Appendix C) about the 2022 LHMP and invited them to participate in the planning process. Stakeholders included the Alaska Department of Homeland Security and Emergency Management, Kachemak City, Alaska Department of Natural Resources (ADNR) Divisions of Forestry and Parks and Recreation, Kenai Peninsula Borough, Friends of Kachemak Bay State Park, University of Alaska Anchorage Kachemak Bay National Estuarine Research Reserve, Kachemak Heritage Land Trust, Cook Inlet Regional, Inc., Homer Airport, Kenai Peninsula School District, Alaska Department of Transportation and Public Facilities (ADOT&PF), and ENSTAR Natural Gas Company (ENSTAR). The Kachemak Bay National Estuarine Research Reserve offered assistance and resources about LHMP planning. The ADNR responded that they had concerns about potential tsunami threat from a glacier-caused landslide across Kachemak Bay. The ADNR is also a landowner along the Homer Spit, which is experiencing damage from erosion. The planning team spoke to them about their concerns and agreed to keep the ADNR informed of the LHMP process. The ADOT&PF also expressed concern about erosion along the Homer Spit and noted that they would like to participate in the planning process. In addition, ENSTAR expressed interest in participating in planning meetings.

The LHMP project manager reached out to the stakeholders again via email on [date], inviting them to review and provide comments about the Public Draft LHMP (Appendix C). [Summary of stakeholder comments].

2.3 PUBLIC INVOLVEMENT

On December 4, 2021, the City of Homer used their monthly newsletter to announce to their public that they were beginning the LHMP update process and provided contact information for interested persons. No comments were received from the public. Also, on [date], the City of Homer used their monthly newsletter to announce the Public Draft LHMP and comment period. Copies of Homer's newsletters are provided in Appendix C.

2.4 REVIEW AND INCORPORATION OF EXISTING PLANS AND REPORTS

A list of the major relevant plans and reports reviewed and incorporated into the 2022 LHMP is provided in Table 2-3.

Table 2-3: Existing Plans and Reports

Plans and Reports	Information to be Incorporated into the 2022 LHMP
Alaska State Hazard Mitigation Plan (2018)	Information on statewide trends and the nature for all hazards are incorporated into the hazard profile and risk assessment sections.
Kenai Peninsula Borough All-Hazard Mitigation Plan (2014)	Information on borough-wide trends and the nature for all hazards are incorporated into the hazard profile and risk assessment sections.
City of Homer All-Hazard Mitigation Plan Update (unofficial) (2018)	Information on community trends and the nature for all hazards are incorporated into the hazard profile and risk assessment sections.
City of Homer and Kachemak City Community Wildfire Protection Plan (Kenai Peninsula Borough 2006)	This plan is in the process of being updated by the borough, but information is incorporated on wildfire history and recommendations brought into the mitigation strategy.

Table 2-3: Existing Plans and Reports

Plans and Reports	Information to be Incorporated into the 2022 LHMP
Homer Comprehensive Plan (City of Homer 2018)	Reviewed to ensure consistency.
Kenai Peninsula Borough Comprehensive Plan (2005)	Reviewed to ensure consistency.
City of Homer Emergency Operations Plan (2013)	Reviewed to ensure consistency.
Alaska Baseline Erosion Assessment: Study Findings and Technical Report (U.S. Army Corps of Engineers [USACE] 2009)	Background erosion information is incorporated into the hazard identification.
Kenai Peninsula Borough Risk Report: Kenai Peninsula Borough and the Incorporated Cities of Homer, Kachemak, Kenai, Seldovia, Seward, and Soldotna (FEMA 2017)	Background flood and earthquake information is incorporated into the hazard identification.
Coastal Change Analysis (Kachemak Bay Research Reserve 2016)	Historical information on coastal erosion is incorporated into the hazard profiles.
Landslide Hazard Evaluations for Multi-Hazard Risk Mapping in Homer, Alaska (Alaska Division of Geological and Geophysical Surveys [ADGGS] 2020 unpublished)	Information on current and historical landslide hazards in Homer are incorporated into the risk analysis and hazard profiles.
Updated tsunami inundation maps for Homer and Seldovia (ADGGS, 2018)	Tsunami hazard information into the hazard profile section and figure provided in Appendix A.
City of Homer Public Works Campus Tsunami Hazard Report: Risks, Mitigation Strategies, and Recommendations (Public Works Campus Task Force 2021)	Incorporated mitigation recommendations into the mitigation strategy.
Flood Risk Report: Lower Kenai Peninsula (City of Homer 2013)	Incorporated mitigation recommendations into the mitigation strategy.

2.5 CONTINUED PUBLIC PARTICIPATION

A copy of the 2022 LHMP will remain available at the City of Homer Planning and Land Management website and State of Alaska Division of Community and Regional Affairs online community planning library. The LHMP project manager will use Homer's monthly newsletter to notify the public of, and seek input on, any changes or updates to the 2022 LHMP, including prioritized action plan and the 2027 LHMP kickoff. The public can reach out to the Homer Planning Department with comments or questions at Planning@ci.homer.ak.us.

2.6 PLAN UPDATE METHOD AND SCHEDULE

The 2022 LHMP will be monitored and evaluated by a subset of the planning team, specifically the LHMP project manager. Should the LHMP project manager no longer be involved with the LHMP, the project manager and/or the Homer Planning Department will select a new LHMP project manager to oversee the annual reviews and plan update.

The LHMP project manager will get input from specific planning team members as needed. They will complete the Annual Review Tracker every January and after any major disaster to ensure that the 2022 LHMP is relevant and effective in achieving the plan's goals. Annual review will be tracked in a table in this document (Table 2-4). FEMA-funded mitigation projects will continue to be tracked and reviewed using FEMA Mitigation Progress Report forms; progress summaries will be included in the Annual Review Tracker (Table 2-4) at the beginning of each year.

Four years after the 2022 LHMP's adoption:

- The LHMP project manager will complete the Annual Review Tracker.
- The LHMP project manager will reconvene the planning team and update membership, if necessary.
- The planning team will review Table 2-4, which provides annual summaries of the disasters that have occurred; new permanent information that becomes available; implementation measures; and public outreach and response to determine the hazards to be included in the next LHMP.
- The LHMP project manager will develop a new work plan.
- The LHMP project manager—with support from the planning team—will begin the plan update process, which is expected to take up to 6 months.

Table 2-4: Annual Review Tracker

Year	Disasters that Occurred	Mitigation Actions Implemented	New Relevant Studies/Reports to Include in 2027 LHMP	Public Outreach Conducted	Changes Made to 2022 LHMP
2023					
2024					
2025					
2026					

3.0 HAZARD IDENTIFICATION AND RISK ASSESSMENT

This section addresses Element B of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element B: Hazard Identification and Risk Assessment
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement § 201.6(c)(2)(ii))
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement § 201.6(c)(2)(i))

Hazard identification consists of describing the nature of the hazard, location, disaster history, extent/severity, and probability of future events. Hazard identification profiles have been developed for each of the nine hazards addressed in Section 3.1 through Section 3.9: climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, volcano, wildfire. The hazards profiled for this LHMP are provided in alphabetical order; this order does not signify level of risk or hazard classification.

3.1 CLIMATE CHANGE

Table 3-1: Climate Change

Profile	Description
Nature	Climate is defined as the average statistics of weather, which includes temperature, precipitation, and seasonal patterns in a particular region. Climate change refers to the long-term and irrevocable shift in these weather-related patterns. The Fourth National Climate Assessment Report (2018) states that Earth's climate is now changing at a faster rate than at any time in the history of modern civilization, primarily due to human activities. The disruption in the climate is already impacting the way people live, the food they grow, their health, the wildlife, the availability of water, and much more. The impacts of global climate change are being felt today in the form of sea level rise and storm surge in coastal areas; increased riverine flooding and stormwater inundation; more frequent and prolonged higher temperatures (leading to heat events, wildfires, and permafrost thaw); and more severe and frequent extreme weather events. Changing climate conditions are more pronounced in the polar regions. Alaska is often identified as being on the frontline of climate change because it is warming faster than any other state and faces multiple issues associated with a changing climate. These climate change impacts include: • Retreat of sea ice, which will disrupt marine ecosystems and other animals (such as polar bears and walruses), impact local communities where sea ice is important for subsistence or tourism, and contribute to increased storm surge, coastal flooding, and erosion. • Increase of ocean temperature impacting marine ecosystems and Alaska's fisheries. • Flooding and erosion of coastal and river areas related to changes in sea ice and increase in storm intensity. • Increase in ocean acidification, which will impact marine organisms and thereby disrupting the marine food web. • Increase in the size and frequency of wildfires and droughts. • Thawing permafrost, melting glaciers, and associated effects on the state's infrastructure and hydrology. • Increase of health threats, such as injuries, smoke inhalation, damage to vital infrastructure, decrease of food and water security, and new infectious diseases. The City of Homer is vulnerable to an increase in ocean temperature; flooding and erosion of coastal areas; increase in ocean acidification; increase in the size and frequency of wildfires; and increase of health threats.
Location	The entire area of the City of Homer is susceptible to climate change. Potential seal level rise, along with increased intensity of storm surge and coastal erosion, is threatening the Homer Spit.
History	According to the 2018 National Climate Assessment, the rate at which Alaska's temperature has been warming is twice as fast as the global average since the middle of the twentieth century. Statewide annual average temperatures from 1925 to the late 1970s were variable with no clear pattern of change. However, over the past 45 years (late 1970s to present), statewide annual average temperatures began to increase with an average rate of 0.7 degrees Fahrenheit (ºF) per decade. The temperature increase was especially strong in the Arctic due to the polar amplification of global warming. In Homer, the Alaska Climate Research Center has observed a change of annual average temperature from 34.9ºF in 1950 to 38.9ºF in 2020 (11% increase). During that period, the Alaska Climate Research Center also observed an increase of annual precipitation from 18.31 inches to 23.68 inches (29% increase). While historical precipitation and temperature changes in Alaska have been well documented over the past several decades, historical information on sea level rise is less known due to lack of tide gauges with extended records. Researchers believe that prior to 1990, sea level rise on a global

Table 3-1: Climate Change

Profile	Description
	scale was only 0.04 inches per year; however, for the 1993 to 2012 reporting period, sea level rise has been 0.12 inches per year.
Extent / Severity	The University of Alaska Fairbanks Scenarios Network for Alaska + Arctic Planning (SNAP) models climate data for mid-range global emissions. SNAP temperature models show that Homer will experience a temperature increase of 5.3ºF by the end of the century. Likewise, precipitation models show that for the same reporting period Homer will see an average rainfall increase of 2.8 inches (Table 3-2). Sea level rise is not modeled for the City of Homer, but any rise in sea level or storm surge intensity would threaten all land and water on the Homer Spit.
Recurrence Probability	Climate change is a significant and lasting change in the statistical distribution of weather patterns over periods of time ranging from decades to millions of years. It may be a change in average weather conditions or in the distribution of weather around the average conditions (i.e., more or fewer extreme weather events). According to the National Aeronautics and Space Administration, "the current warming trend is of particular significance because most of it is extremely likely (i.e., greater than 95% probability) to be the result of human activity since the mid-twentieth century and proceeding at a rate that is unprecedented over decades to millennia." The National Aeronautics and Space Administration also states that "scientists have high confidence that global temperatures will continue to rise for decades to come, largely due to greenhouse gases produced by human activities.

Table 3-2: Mean Annual Temperature and Precipitation Predictions

	2010-2019	2050-2059	2090-2099
Mean Annual Temperature	39.7°F	42.8°F	45.0°F
Mean Annual Precipitation	28.7 inches	29.6 inches	31.5 inches

3.2 EARTHQUAKE

Table 3-3: Earthquake

Profile	Description
Nature	An earthquake is a sudden motion or trembling caused by a release of strain accumulated in or along the edge of Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. Earthquakes usually occur without warning and can cause massive damage and extensive casualties in a few seconds. Common effects of earthquakes are ground motion and shaking; surface fault ruptures; and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can amplify ground motions. In addition to ground motion, several secondary hazards can occur from earthquakes, such as the following: • Surface Faulting: Surface faulting is the differential movement of two sides of a fault at Earth's surface. Displacement along faults—in terms of both length and width—varies but can be significant (e.g., up to 20 feet), as can the length of the surface rupture (e.g., up to 200 miles). Surface faulting can cause severe damage to linear structures including railways, highways, pipelines, tunnels, and dams. • Liquefaction: Liquefaction occurs when seismic waves pass through saturated granular soil, distorting its granular structure and causing some of the empty spaces between granules to collapse. Pore water pressure may also increase sufficiently to cause the soil to behave like a fluid for a brief period and cause deformations. Liquefaction causes lateral spreads (i.e., horizontal movements that are typically 10 to 15 feet, but can be up to 100 feet), flow failures (i.e., massive flows of soil that are typically hundreds of feet, but can be up to 12 miles), and loss of bearing strength (i.e., soil deformations causing structures to settle or tip). Liquefaction can cause severe damage to property. • Landslides/Debris Flows: Landslides/debris flows occur as a result of horizontal seismic inertia forces induced in the slopes by the ground shaking. The most common earthquake-induced landslides include shallow disrupted landslides such as rock falls, rockslides, and soil slides. Debris flows are created when surface soil on steep slopes becomes completely saturated with water. Once the soil liquefies, it loses the ability to hold together and can flow downhill at very high speeds, taking vegetation and/or structures with it. Slide risks increase after an earthquake during a wet winter. The two most common measures of earthquake intensity used in the United States are the Modified Mercalli Intensity scale, which measures felt intensity; and peak ground acceleration (PGA), which measures instrumental intensity by quantifying how hard the earth shakes in a given location. Magnitude is measured by the amplitude of the earthquake waves recorded on a seismograph using a logarithmic scale.
Location	Homer is in a region of high seismicity. It is above a boundary between segments of the earthquake-generating Alaska-Aleutian subduction zone—the Kodiak Island segment to the southwest and the Prince William Sound segment to the northeast. While the 1964 Great Alaska Earthquake ruptured both segments, findings from around the region suggest that the two segments may rupture independently. The nearest studied fault line to Homer is the Falls Creek-Ninilchik anticline, which is a quaternary fault (i.e., one event per 1,600,000 years) approximately 30 miles away. Several other fault lines lie around Homer and on the Kenai Peninsula but are not studied and no details are known.

Table 3-3: Earthquake

Profile	Description
History	As stated in the 2018 State of Alaska HMP, Alaska is one of the most seismically active regions in the world and is at risk of societal and economic losses due to damaging earthquakes. On average, Alaska has one "great" (magnitude of 8 or higher) earthquake every 13 years, one magnitude 7 to 8 earthquake every year, and six magnitude 6 to 7 earthquakes every year. In addition, earthquakes that occur on tectonic plate boundary faults near the coast can generate tsunamis that impact coastal communities, including Homer. The effects of the March 27, 1964 Great Alaska Earthquake (which had a magnitude of 9.2) in the Homer area were thoroughly documented after the event. Observations included general damage caused by tectonic subsidence; and earth flows, landslides, fissures, seiches, submarine landslides, and beach changes caused by strong ground shaking during the event. Most of the damage to the community occurred on Homer Spit as a result of 2 to 3 feet of tectonic subsidence. Since 2000, there have been 27 earthquakes with a magnitude of 5.0 or greater that occurred within 150 miles of the City of Homer. Two of those earthquakes had a magnitude of 7.0 or greater.
Extent / Severity	The strength of an earthquake's ground movement can be measured by PGA. PGA measures the rate in change of motion relative to the established rate of acceleration due to gravity (g = 980 centimeters per second). PGA is used to predict the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (e.g., 10%, 5%, or 2%) of being exceeded in 50 years. The ground motion values are used for reference in construction design for earthquake resistance and can also be used to assess the relative hazard between sites when making economic and safety decisions. The current U.S. Geological Survey (USGS) seismicity model for Alaska was developed in 2007. The PGA values in Homer for a 5% probability of exceedance in 50 years are shown in Figure 2. Based on this model, there are 8,912.52 acres (100%) in the perceived "Severe" shaking zone, with moderate to heavy potential damage. An earthquake risk assessment was conducted by FEMA in 2017. Two scenarios were analyzed: the first used the January 2016 M7.1 Old Iliamna earthquake event and estimated a loss of improved parcels of $3,303,266 (0.27%); the second simulated the M9.2 Great Alaska Earthquake and estimated a property loss of $56,997,792 (4.60%). The estimated value of structure loss is provided in Table 4-6.
Recurrence Probability	As shown in Figure 2, the seismic PGA for Homer has a 5% probability of severe shaking in Homer in the next 50 years. Based on these data, there is a 5% chance of an earthquake occurring in Homer that will exceed 49.18 PGA in 50 years.

3.3 EROSION

Table 3-4: Erosion

Profile	Description
Nature	Erosion is the wearing and transportation of land. Erosion is typically gradual land loss through wind or water scour. In developed regions, erosion undermines buildings and infrastructure. Erosion can be experienced from coastal, riverine, or wind sources. Erosion forces are embodied in waves, currents, and winds; surface and ground water flow; and freeze-thaw cycles may also play a role. Not all of these forces may be present at any particular location. In the U.S., Alaska is unique because of how permafrost thaw interacts with flooding and erosion to exacerbate the impacts of these hazards. Frozen ground can disintegrate under the compounding influences of permafrost thaw, flooding, and erosion in an escalating feedback loop that can result in damage that is much greater than would be expected from the individual processes alone. Coastal erosion is a common term used to describe the retreat of the shoreline along the ocean. It describes the attrition of land resulting in loss of beach, shoreline, or dune material from natural activity or human influences. Erosion rarely causes death or injury; however, it causes property destruction, prohibits development, and impacts community infrastructure. Erosion can occur rapidly as the result of floods, storms, or other events; or slowly as the result of long-term environmental changes such as melting permafrost. Erosion is a natural process, but its effects can be easily exacerbated by human activity. Coastal erosion can occur from rapid short-term daily, seasonal, or annual natural events such as waves, storm surge, wind, coastal storms, and flooding; or from human activities including boat wakes and dredging. The most dramatic erosion often occurs during storms, particularly because the highest energy waves are generated under storm conditions. Coastal erosion occurs over the area from roughly the top of the shore into the nearshore region to about 30-foot water depth. It is measured as the rate of change in the position or horizontal displacement of a shoreline over a period of time. Bluff recession is the most visible aspect of coastal erosion because of the dramatic change it causes to the landscape. As a result, this aspect of coastal erosion usually receives the most attention. Coastal erosion may also be due to multi-year impacts and long-term climatic change such as sea-level rise, lack of sediment supply, subsidence, or long-term human factors (e.g., aquifer depletion or the construction of shore protection structures and dams). Attempts to control erosion using shoreline protective measures such as groins, jetties, seawalls, or revetments can lead to increased erosion.
Location	The City of Homer experiences coastal erosion annually from winter storms and high storm surge, occurring along the entire coastline. Particular areas of concern are the Homer Spit, the bluffs along sections of the Sterling Highway, and along the residential areas on Ocean Drive Loop.
History	In 2005, the Kachemak Bay Research Reserve completed a study of erosion rates in Homer. The study provided an estimate of coastal bluff erosion rates based on a series of aerial surveys from 1951 to 2003. The study concluded that the average erosion rate along Homer's shoreline is approximately 0.3 to 1.2 meters per year. The researchers found that before, during, and right after the 1964 earthquake, erosion rates were faster than they had been since 1975 but slowed after that time. There is evidence that the rates have increased again in recent years
Extent / Severity	As noted above, studies have shown that Homer's coastal bluffs have retreated on average 0.3 to 1.2 meters per year over the last 70 years.
Recurrence Probability	Erosion will continue each year in Homer from winter storms and storm surge.

3.4 FLOOD

Table 3-5: Flood

Profile	Description
Nature	A flood occurs when the existing channel of a stream, river, canyon, or other watercourse cannot contain excess runoff from rainfall or snowmelt, resulting in overflow onto adjacent lands. In coastal areas, flooding may occur when high winds or tides result in a surge of seawater into areas that are above the normal high tide line. Secondary hazards from floods can include: • Erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features • Impact damage to structures, roads, bridges, culverts, and other features from high-velocity flow and debris carried by floodwaters (debris may also accumulate on bridge piers and in culverts, increasing loads on these features or causing overtopping or backwater effects) • Destruction of crops, erosion of topsoil, and deposition of debris and sediment on croplands • Release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed
Location	As shown in Figure 3, the areas most prone to flooding in the City of Homer are along nearly the entire shoreline, the low-lying areas surrounding and including Beluga Lake, and the entire Homer Spit. The flood map does not include risk from tsunami or sea level rise.
History	The City of Homer experiences flooding from rainfall runoff (late summer and early fall), snowmelt (spring and early summer), groundwater floods, and flash floods. Homer has experienced floods on several occasions in the last 20 years. Major events occurred in 2002, 2007, and 2013, resulting in numerous bridges being washed out on the Kenai Peninsula and isolating Homer for several weeks while temporary repairs were made. Two of these events were declared disasters and resulted in disruptions to the economy by preventing the flow of goods and materials except by barge or airplane.
Extent / Severity	The magnitude of flooding that is used as the standard for floodplain management in the United States is a flood with a probability of occurrence of 1% in any given year. This flood is also known as the 100-year flood (i.e., base flood). The 100-year flood (1%) and the 500-year flood (0.2%) are considered Special Flood Hazard Areas (SFHAs) and identified on FEMA's Flood Insurance Rate Maps (FIRMs). The City of Homer FIRM (Figure 2) identifies 708.52 acres (7.95%) with a 1% annual chance of flooding. These areas are along the shoreline, around Beluga Lake, and encompass the Homer Spit. There are 113.46 acres (1.27) with a 0.2% annual chance of flooding, which are on the Homer Spit.
Recurrence Probability	Floods can occur at any time in Homer but are most common in the spring and summer with heavy snowmelt and rainfall runoff. Based on previous occurrences of flood events in Homer, severe flooding is most likely to occur every 2 to 7 years.

3.5 LANDSLIDE

Table 3-6: Landslide

Profile	Description
Nature	Landslide is a general term for the dislodging and fall of a mass of soil or rocks along a sloped surface, or for the dislodged mass itself. The term is used for varying phenomena including mudflows, mudslides, debris flows, rock falls, rockslides, debris avalanches, debris slides, and slump-earth flows. Landslides may result from a wide range of combinations of natural rock, soil, or artificial fill. The susceptibility of hillside and mountainous areas to landslides depends on variations in geology, topography, vegetation, and weather. Landslides may also occur because of indiscriminate development of sloping ground or the creation of cut-and-fill slopes in areas of unstable or inadequately stable geologic conditions. Landslides often occur together with other hazards, which can exacerbate conditions as described below: • Shaking due to earthquakes can trigger events ranging from rock falls and topples to massive slides • Intense or prolonged precipitation that causes flooding can also saturate slopes and cause failures leading to landslides • Wildfires can remove vegetation from hillsides, significantly increasing runoff and debris flow potential • Landslides into a reservoir can indirectly compromise dam safety; a landslide can even affect the dam itself • Saturation by water is also a primary cause of landslides. Saturation can occur in the form of intense or prolonged rainfall, snowmelt, changes in groundwater levels, and surface water level changes along coastlines, earth dams, and banks of lakes. Another type of landslide occurs in areas cut by perennial streams; as floodwaters erode channel banks, rivers have undercut clay-rich sedimentary rocks along their southern bank, thereby destabilizing the ground and causing the ground above it to slide.
Location	In North America, there is an association between landslides and hilly terrain (particularly with slopes ranging from about 20 to 40 degrees). Areas on the mountainous terrain in the city which includes slopes greater than 20 degrees, are shown in Figure 4. The highest concentration of these slopes is along the bluffs running between Skyline Drive East End Road and on the west end of the city, just south of the Sterling Highway (Bluff Point). The Bluff Point landslide is well documented and shown in Figure 5.
History	The ADGGS has identified over 1,000 slope failure scars using aerial photographs and light detection and ranging (LIDAR) data from the Homer and Kachemak areas. Notable landslide failures in Homer include: • At least one severe landslide occurred above Kachemak following the Great Alaskan Earthquake. • In 2013, heavy rains caused a 16-foot mudslide down Bear Creek Drive (3 miles east on East End Road). Uphill, when heavy rains saturated the narrow Bear Creek Canyon, it "let go," which sent trees and debris down Bear Creek, jamming a culvert on the uphill side of East End Road. A disaster declaration was made for several rain-soaked areas in the Kenai Peninsula Borough. • In 2015, a landslide occurred along a stretch of Kachemak Drive near the Homer Airport. The slide resulted in the closure of Kachemak Drive approximately 0.5-mile from Homer Spit Road to the top of the hill by the old airport. The slide took out a 100-foot section of the east bound lane of Kachemak Drive, pushing clumps of spruce and alder trees into Mud Bay.
Extent / Severity	No official landslide dataset exists for the City of Homer. However, in North America, there is an association between landslides and hilly terrain (particularly with slopes ranging from about 20 to

Table 3-6: Landslide

Profile	Description
	40 degrees). As such, the mountainous terrain in Homer that includes slopes greater than 20 degrees is at greatest risk of slide. Approximately 17% (1,504 acres) of Homer is in this hazard area.
Recurrence Probability	Shallow landslides can occur at any time but are more likely to happen when the ground is nearly saturated. However, deep-seated landslides are generally triggered by deep infiltration of rainfall (which can take weeks or months to occur) and therefore typically follow major storm events. It is assumed that the probability of a future landslide event will be highly tied to winter storm/rain events. Based on historical occurrences, severe winter storm conditions are likely in the City of Homer every 2 to 7 years.

3.6 SEVERE WEATHER

Table 3-7: Severe Weather

Profile	Description
Nature	Severe weather occurs throughout Alaska with extremes includes thunderstorms; lightning; hail; heavy and drifting snow; freezing rain/ice storm; extreme cold; and high winds. Severe weather events can include the following: • A winter storm is an event in which the main types of precipitation are snow, sleet, or freezing rain and be accompanied by high winds, cold temperatures, and storm surge. A winter storm can range from a moderate snow over a few hours, to blizzard conditions with blinding wind-driven snow that lasts several days. Some winter storms may be large enough to affect several states, while others may affect only a single community. In more temperate continental climates such as Homer, these storms are not necessarily restricted to the winter season and may also occur in the late autumn and early spring. • Heavy snow and rain occur frequently in coastal areas and snowfall can accumulate 4 inches or more in 12 hours or less. • Freezing rain and ice storms occur when rain or drizzle freezes on surfaces and can cause damage to powerlines, pipelines, and other infrastructure. • Extreme cold varies according to normal regional climate. Alaska's extreme cold usually involves temperatures between -20 and -50ºF. Excessive cold may accompany winter storms, occur after storms, or can occur without storm activity. • High winds in Alaska can equal hurricane force but are under a different classification because they are not cyclonic nor possess other hurricane characteristics. Strong winds occasionally occur over the interior due to strong pressure differences, especially where influenced by mountainous terrain; however, the windiest places in Alaska are generally along the coastlines.
Location	The entire Homer area is vulnerable to the effects of severe weather.
History	Notable severe weather events from 2000 through 2021 include: • In the spring of 2003, strong winds across the Kenai Peninsula resulted in widespread power outages, downed trees, and structural damage and fanned the flames of a 150-acre wildfire in Anchor Point. • In November 2011, a series of major windstorms caused widespread power outages threatening life and property. Power was disrupted to 17,300 homes and businesses. Public infrastructure, commercial property, and personal property damages were reported throughout the borough. • In February 2014, a strong low in the southwest Gulf of Alaska produced strong wind in in the Kachemak Bay Area. The strong wind caused widespread damage from Kenai to the Homer area. Heavy snow fell in the Kachemak Bay area, combined with high wind and blizzard conditions. • In December 2019, a southerly jet stream brought several low-pressure systems to Southcentral Alaska. These were accompanied by above freezing temperatures, abundant rainfall, and high winds as the fronts passed through. A primary impact of this event was the flooding of the Anchor Point River. In addition, North Fork Road was impassable, and the Sterling Highway was flooded in several locations between mile 161 and 163, there was flooding across East End Road at Bear Creek Drive, and a mudslide on East End Road at Kachemak Bay Drive. • In January 2020, a low-pressure system developed south of the Aleutian Islands and then moved north along the Alaska Peninsula and up Cook Inlet. A strong high-pressure system that followed brought a large amount of cold air, which created high winds through the Cook Inlet area. Homer reported 8 hours of blizzard conditions and near-whiteout conditions.

Table 3-7: Severe Weather

Profile	Description
Extent / Severity	Winter storms in the Home area can produce snow of up to 3 feet per storm, high wind speeds of up to 60 miles per hour and cold with temperatures.
Recurrence Probability	Based on historical occurrences, the City of Homer can expect to experience severe weather conditions approximately 5 to 6 days each year.

3.7 TSUNAMI

Table 3-8: Tsunami

Profile	Description
Nature	A tsunami is a series of traveling ocean waves of extremely long length, generated by disturbances associated primarily with earthquakes occurring below or near the ocean floor. Subduction zone earthquakes at plate boundaries often cause tsunamis. However, tsunamis can also be generated by submarine landslides, sub-marine volcanic eruptions, the collapse of volcanic edifices, and—in very rare instances—large meteorite impacts in the ocean. In the deep ocean, a tsunami may have a length from wave crest to wave crest of 100 miles or more, but a wave height of only a few feet or less. Therefore, the wave period can be up to several hours and wavelengths can exceed several hundred miles. Tsunamis are unlike typical wind-generated swells on the ocean, which might have a period of about 10 seconds and a wavelength of up to 300 feet. Tsunamis not only affect beaches that are open to the ocean, but also bay mouths, tidal flats, and the shores of large coastal rivers. Tsunami waves can also diffract around land masses. Because tsunamis are not symmetrical, the waves may be much stronger in one direction than another, depending on the nature of the source and the surrounding geography. However, tsunamis propagate outward from their source; therefore, coasts in the shadow of affected land masses are safer. Secondary hazards can occur from tsunamis, such as: • Erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features. • Impact damage to structures, roads, bridges, culverts, and other features from high-velocity flow and from debris carried by floodwaters; debris may also accumulate on bridge piers and in culverts, increasing loads on these features or causing overtopping or backwater effects. • Release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed. • Flood waters can pose health risks such as contaminated water and food supplies. • Loss of shelter leaves people vulnerable to insect exposure, heat, and other environmental hazards. The majority of deaths associated with tsunamis are related to drownings; however, traumatic injuries are also a primary concern. Injuries such as broken limbs and head injuries are often caused by the physical impact of people being washed into debris such as houses, trees, and other stationary items. As the water recedes, the strong suction of debris being pulled into largely populated areas can cause further injuries and undermine buildings and services.
Location	The tsunami inundation zone for Homer is shown in Figure 6 and Figure 7. Nearly the entire Homer Spit could be inundated, as well as the low-lying areas around Beluga Lake and to the coast, excluding the airport.
History	The 1964 Great Alaska Earthquake triggered several tsunamis, one major tectonic tsunami and approximately 20 local submarine and subaerial landslide tsunamis. The major tsunami hit between 20 and 45 minutes after the earthquake. The locally generated tsunamis struck between 2 and 5 minutes after their generation and caused most of the deaths and damage in Homer.

Table 3-8: Tsunami

Profile	Description
Extent / Severity	The Alaska Earthquake Center and University of Alaska Fairbanks model for tsunami waves and inundation shows a maximum composite tsunami inundation for Homer. Based on this model, there are 1,735 acres (19%) of Homer's land area at risk to tsunami inundation. This inundation level includes eight (24%) critical assets. A series of simulated tectonic scenarios were conducted in a report by the ADGGS. The first scenario (a repeat of the 1964 Great Alaska Earthquake) would not result in any inundation in Homer except for the section of Lake Street that separates the tidal flats from Beluga Lake. Some low-lying parts of Homer Spit would be flooded, but the Homer Spit Road would not be inundated. In the next scenario (a magnitude 9.2 earthquake on the Kenai Peninsula), Lake Street (which separates the tidal flats from Beluga Lake), the areas between the tidal flats, the Sterling Highway, and nearly the entire Homer Spit would be inundated. The third scenario (maximum slip distributed between 9.3 and 21.7 miles deep) would result in the most severe inundation. The entire low-lying area of Homer from the tidal flats to the Kachemak Bay shore as well as some residential areas south of Beluga Land and along the Sterling Highway would be inundated. The Homer Spit would be completely inundated under this scenario. The final scenario (rupture of the Cascadia subduction zone) would not result in any inundation except for the tidal flats area and some low-lying areas of the Homer Spit. The City of Homer created a task force to evaluate risks and provide recommendations for mitigation to the public works campus.
Recurrence Probability	The likelihood of a tsunami is hard to predict; however, previous events have shown that it is plausible that an earthquake-generated tsunami could impact the Homer community in the next 10 years.

3.8 VOLCANO

Table 3-9: Volcano

Profile	Description
Nature	A volcano is a vent or opening in the earth's crust from which molten lava (magma), pyroclastic materials, and volcanic gases are expelled onto the surface. The vent may be visible as a small bowl-shaped depression at the summit of a cone or shield-shaped mountain. Through a series of cracks in and beneath the volcano, the vent connects to one or more linked storage areas of molten or partially molten rock. There are four general volcano types: • Lava domes are formed when lava erupts and accumulates near the vent. • Cinder cones are shaped and formed by cinders, ash, and other fragmented material accumulations that originate from an eruption. • Shield volcanoes are broad gently sloping volcanic cones with a flat dome shape that usually encompass several tens or hundreds of square miles, built from overlapping and inter-fingering basaltic lava flows. • Composite or stratovolcanoes are typically steep-sided large dimensional symmetrical cones built from alternating lava, volcanic ash, cinder, and block layers; most composite volcanoes have a crater at the summit containing a central vent or a clustered group of vents. There are three types of volcanic eruptions, described below. Some volcanoes may exhibit only one type of eruption during an event, while others may display an entire sequence of all three types in one event. • Magmatic eruptions are the most well observed eruptions. Magmatic eruptions produce juvenile clasts (composed fragments) during explosive decompression from gas releases. Magnetic eruption subtypes include Hawaiian, Strombolian, Vulcanian, Peléan, and Plinian. • Phreatomagmatic eruptions are volcanic eruptions resulting from the interaction between magma and water. Grain deposits from phreatomagmatic explosion involving high water to magma ratios are extremely fine-grained and distinctly poorly sorted, while deposits resulting from low water to magma ratios are commonly coarse and relatively well sorted. Phreatomagmatic eruption subtypes include: Surtseyan, Submarine, and Subglacial. • Phreatic eruptions are steam-blast eruptions. These eruptions occur when cold groundwater or surface water comes into contact with hot rock or magma. Phreatic eruptions blast out steam, water, ash, volcanic bombs, and volcanic blocks, but no new magma. Other hazards potentially caused by a volcanic eruption include: • Volcanic ashfall • Lava flows • Lahars (debris flows) • Volcanic gas • Pyroclastic surges or flows • Volcanic landslides
Location	As shown in Figure 8, most of the community of Homer (95% of land area) is at risk for moderate tephra ashfall hazard with 0.25 to 1 inch accumulation, and the far western end of Homer (5% of land area) is at risk for high (heavy) tephra ashfall with 1 to 4 inches of accumulation.

Table 3-9: Volcano

Profile	Description
History	The Alaska Volcano Observatory is monitoring 3 volcanos within 100 miles of Homer: • Augustine (70 miles southwest) was last active in 2006 when it had explosive eruptions that produced ash plumes that deposited small amounts of ash in Homer. • Iliamna (60 miles northwest) was last active in 1953 when it emitted a large cloud of smoke. • Redoubt (80 miles northwest) was last active in 2009 when it erupted over several months with multiple ash-producing explosions, culminating in an eruption in which the ash cloud reached 50,000 feet and moved swiftly to the southeast, depositing up to 2 millimeters of ashfall in Homer. Eruptions also occurred in 1968 and 1990.
Extent / Severity	As noted above, all of the Homer area is susceptible to moderate to heavy tephra ashfall. According to the Alaska Volcano Observatory, ash accumulation of 0.25 to 1 inch is likely from moderate tephra ashfall while ash accumulations of 1-4 inches is likely from heavy tephra ashfalls.
Recurrence Probability	Given the proximity of three active volcanos and history of past events, it is probable that the City of Homer will have an ashfall event in the next 50 years.

3.9 WILDFIRE

Table 3-10: Wildfire

Profile	Description
Nature	A wildfire—sometimes referred to as a wildland fire—is a fire in an area of combustible vegetation occurring in rural areas. Wildfires can be caused by human activities (e.g., unattended burns, campfires, or off-road vehicles without spark-arresting mufflers); or by natural events (e.g., lightning, drought, or infestation). Wildfires can be classified as forest, urban, tundra, interface or intermix fires, and prescribed burns. The following three factors contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas: • Topography describes slope increases, which influences wildfire spread rate increases. South-facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridge tops may mark the end of wildfire spread because fire spreads more slowly or may even be unable to spread downhill. • Fuel is the type and condition of vegetation that plays a significant role in wildfire spread occurrence. Certain plant types are more susceptible to burning or will burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available as fire fuel (referred to as the "fuel load"). The living-to-dead plant matter ratio is also important. Certain climate changes may increase wildfire risk significantly during prolonged drought periods as both living and dead plant matter moisture content decreases. Insect infestations can kill trees and create high fuel loads. Both the horizontal and vertical fuel load continuity is also an important factor. • Weather is the most variable factor affecting wildfire behavior. Temperature, humidity, wind, and lightning can affect ignition opportunities and fire spread rate. Extreme weather (e.g., high temperatures and low humidity) can lead to extreme wildfire activity. Climate change increases fire to vegetation ignition susceptibility due to longer dry seasons. By contrast, cooling and higher humidity often signal reduced wildfire occurrence and easier containment. Indirect wildfire effects can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and exacerbate river and stream siltation thereby increasing flood potential, harming aquatic life, and degrading water quality. Vegetation-stripped lands are more susceptible to increased debris flow hazards.
Location	As shown in Figure 9, most of the Homer area has moderate or high wildland fuel risk, with some areas of very high risk. The Homer Spit, tidal flats, and low-lying areas around Beluga Lake are at moderate risk; the areas of very high risk are primarily along the bluffs. The northern and eastern borders of Homer are in the wildland-urban interface. These areas, which are primarily residential, are at higher risk from fires on the Kenai Peninsula. The areas around the Bridge Creek Reservoir are at a higher risk because of substantial spruce bark beetle killed trees. The City has implemented aggressive management in this area to reduce risk.

Table 3-10: Wildfire

Profile	Description
History	Th Alaska Interagency Coordination Center tracks wildfires throughout the state. Every year there are wildfires across the Kenai Peninsula. Homer, like other areas of the Kenai Peninsula, has been dramatically affected by the spruce bark beetle infestation. The vast majority of wildland fires on the Kenai Peninsula are the result of human activities with open burning being the most prevalent. Although lightning-caused fires do occur, they are infrequent, especially on the south Kenai Peninsula. The 2005 Tracy Avenue Fire and the 2009 East End Road Fire were especially threatening to property and had potential loss of life. In May of 2014, a human-caused fire started along the Funny River Road in the central Kenai Peninsula. Over its course, this fire grew to almost 200,000 acres of black spruce, mixed hardwoods, and spruce and bark beetle killed spruce, and grass. Although outside Homer city limits, these recent fires demonstrate the potential for rapid fire spread given the weather conditions, topography, and the availability of local and state wildfire fighting crews.
Extent / Severity	Much of Homer is vulnerable to wildfires. As shown on Figure 9, 65% of the land area in Homer is in a high/very high/extreme fuel risk area. Wildfires can destroy habitat, impact watersheds; burn down homes, buildings, and critical facilities; cause loss of life to humans and animals; and restrict access to recreational areas. Wildfires can cause fire-related injuries; and local and regional transport of smoke, ash, and fine particles, which increase respiratory and cardiovascular risks. People without means for evacuation are also vulnerable to wildfires.
Recurrence Probability	Recorded wildland fires within 10 years and 50 miles of Homer have an average recurrence rate of approximately 2.5 to 3 years. It is anticipated that this probability will continue into the future or increase in frequency as climate change and spruce bark beetles create more fuel for potential fires.

4.0 RISK ASSESSMENT

This section addresses Element B of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element B: Hazard Identification and Risk Assessment
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

4.1 HAZARD IMPACT

A hazard impact assessment predicts the current or expected impact of a hazard on a community or given area. The analysis provides quantitative data that may be used to identify and prioritize potential mitigation measures by allowing communities to focus attention on areas with the greatest risk of damage.

For this 2022 LHMP, a conservative exposure-level analysis was conducted to assess the risks associated with the identified hazards. Due to a combination of a lack of adequate information and methodology, a semi-quantitative hazard impact assessment has only been prepared for the following hazards: climate change, earthquake, flood, landslide, tsunami, volcano, and wildfire. A qualitative analysis was prepared for the following hazards: erosion and severe weather.

Hazard impact assessments were prepared for the City of Homer's land area, population center, and critical facilities (Table 4-1). A land area of 13.93 square miles was determined using available Geographic Information System (GIS) data. The population center (i.e., a region that describes a center point of Homer's population) was determined to comprise 9.23 square miles. The critical facilities (Figure 10) include a list of facilities that provide services and functions essential to Homer, especially during and after a disaster. Common types of critical facilities include fire stations; police stations; hospitals; schools; water and wastewater systems; and utilities. Critical facilities may also include places that can be used for sheltering or staging purposes, such as community centers, schools and libraries. Critical facilities may also include large public gathering spots and places of worship. For the 2022 LHMP, 33 critical facilities (public and privately owned) were collected in Homer. Critical facility names and coordinates were then geocoded to a location and the resulting geographic features were used for hazard impact assessment. Facility-specific information was given to the City of Homer and will be kept on file.

The overall results of the hazard assessments are provided below. This analysis is a simplified assessment of the potential effects of the hazards on land area (Table 4-2), population center (Table 4-3), and critical facilities (Table 4-4) at risk, without consideration of the probability or level of damage. In addition, elevation data were not available; therefore, additional analysis will need to be conducted to develop a more accurate understanding of hazard vulnerabilities.

Table 4-1: Total Land Area, Population Center and Critical Facilities

Category	Number
Land Area	8,912.52 acres
Population Center	5,899.74 acres
Critical Facilities	33

Table 4-2: Total Acres of Land in a Hazard Area

Hazard Area	Acres	Percent of Total Acres
Climate Change	8,912.52	100
Earthquake		
Weak/Light	0	0
Moderate/Strong	0	0
Very Strong/Severe/Violent	8,912.52	100
Erosion	No mapping data are available for erosion. Based on existing reports and the community planning team, approximately 5% of total land area is susceptible erosion.	
Flood		
1% Annual Chance	708.52	7.95
0.2% Annual Chance	113.46	1.27
Landslide	1,503.91	16.87
Severe Weather	8,912.52	100
Tsunami	1,735.33	19.47
Volcano		
Low	0	0
Low-Moderate/Moderate	8,490.64	95.27
High	421.89	4.73
Wildfire		
Moderate	2,939.61	32.98
High/Very High	5,820.79	65.31
Extreme	15.30	0.17

Table 4-3: Total Number of Acres of Population Center in a Hazard Area

Hazard Area	Acres	Percent of Total Acres
Climate Change	5,899.74	100
Earthquake		
Weak/Light	0	0
Moderate/Strong	0	0
Very Strong/Severe/Violent	5,899.74	100
Erosion	No mapping data are available for erosion. Based on existing reports and the community planning team, approximately 1% of the total population center is susceptible erosion.	

Table 4-3: Total Number of Acres of Population Center in a Hazard Area

Hazard Area	Acres	Percent of Total Acres
Flood		
1% Annual Chance	21.80	3.7
0.2% Annual Chance	0	0
Landslide	1,030.41	17.47
Severe Weather	5,899.74	100
Tsunami	5,657.83	95.90
Volcano		
Low	0	0
Low-Moderate/Moderate	5,878.24	99.64
High	21.50	0.36
Wildfire		
Moderate	1,384.28	23.46
High/Very High	4,503.32	76.33
Extreme	9.46	0.16

Table 4-4: Total Number of Critical Facilities in a Hazard Area

Hazard Area	Number	Percent of Total Facilities
Climate Change	33	100
Sea Level Rise	5	15
Earthquake		
Weak/Light	0	0
Moderate/Strong	0	0
Very Strong/Severe/Violent	33	100
Erosion	7	24
Flood		
1% Annual Chance	3	10
0.2% Annual Chance	1	3
Landslide	1 This facility is not in an area of greater than 20% slope, but is in the path of a potential landslide.	3
Severe Weather	33	100
Tsunami	8	24

Table 4-4: Total Number of Critical Facilities in a Hazard Area

Hazard Area	Number	Percent of Total Facilities
Volcano		
Low	0	0
Low-Moderate/Moderate	31	94
High	2	6
Wildfire		
Moderate	22	67
High/Very High	9	27
Extreme	0	0

4.2 OVERALL SUMMARY OF VULNERABILITY

A list of the key issues, or overall summary of vulnerability, for each hazard profiled in the 2022 LHMP is provided in Table 4-5.

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
Climate Change	All of Homer is vulnerable to climate change. Over the next century, weather patterns that are considered extreme today are expected to become normal. The City of Homer's overall vulnerabilities to climate change include sea level rise, coastal erosion, increased average annual maximum temperature, increased average annual precipitation, severe moisture deficit/drought, and wildfires. • Sea level rise: 15% of the critical facilities and infrastructure in the city are in the low-lying areas on the Homer Spit and will be at risk of inundation. Flooding due to sea level rise will cause destructive erosion; flooding; and soil contamination with salt; loss of habit for fish, birds, and plants; disruption and/or delay of transportation; and damages to homes and businesses on a more regular basis. • Temperature and precipitation: SNAP temperature models show that all of Homer will experience a temperature increase of 5.3ºF by the end of the century, while precipitation models show that for the same reporting period, Homer will see an average rainfall increase of 2.8 inches. In the summer, an increase in temperature will cause an increase in fire risk. • Mega storms that are linked to climate change can cause severe flooding. Along the coast, deadly and destructive storm surges may push farther inland than they once did, which means more frequent nuisance flooding.
Earthquake	All of the City of Homer is vulnerable to ground shaking from an earthquake and the entire city is in severe perceived ground shaking hazard areas. Nearly 100% of Homer's residents live and 100% of critical facilities and infrastructure are in the severe shaking potential areas. The estimated value of structure loss is provided in Table 4-6. Those that live in severe shaking potential areas can expect earthquake events to produce moderate to heavy damage. According to the USGS, this could mean slight

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
	damage in specially designed structures, considerable damage in ordinary substantial buildings with partial building collapse, and considerate damage in poorly built or badly designed structures. Those that live in violent shaking potential areas can expect earthquake events to produce the potential for heavy damage. According to the USGS, this could mean that well designed framed structures could be thrown out of plumb and substantial buildings could experience partial building collapse.
Erosion	Coastal erosion along the Homer Spit is a major concern for the City and for property owners. Only approximately 5% of the land area is susceptible to erosion, and those areas are primarily on the Homer Spit. The land base is narrow and significant mitigation will be required to stop or slow the coastal erosion occurring there. If no action is taken, all structures along the spit will be susceptible to damage, including 7 critical facilities, several local businesses, and state and federal land. A 4,830-foot revetment was constructed on the Homer spit in 1998, and a seawall was constructed in 2002 in an attempt to protect residential structures from continuing coastal erosion. The seawall requires continuous maintenance because it is frequently impacted by storm surge. In addition, protective measures such as seawalls or revetments can lead to increased erosion when shoreline structures eliminate the natural wave run-up and sand deposition and increase reflected wave action. The increased wave action can scour in front of and behind structures and prevent the settlement of suspended sediment. The primary impact from erosion is the loss of developable land and anything on it. The impact to infrastructure is expensive, ongoing, and includes the Sterling Highway and Homer Spit Road.
Flood	The City of Homer is most vulnerable flooding from snowmelt and heavy rainfall. Approximately 9.2% of Homer's land mass (1.28 square miles) and 4 critical facilities (the City of Homer Port and Harbor Office, the Homer Harbor, the Petro Marine Tank Farm, and Pioneer Dock) are in the SFHA, which is concentrated on the Homer Spit, along the shoreline, and low-lying areas around Beluga Lake. Floods can block roadways and cause erosion, mudflows, debris flows, and water damage to structures and result in land loss, injury, and even death. People that are most vulnerable to flooding are generally those that live in the SFHA. There are 26 structures insured by the National Flood Insurance Program (NFIP) and none of those properties are considered Repetitive Loss properties (i.e., any insurable building for which two or more claims of more than $1,000 were paid by the NFIP in any rolling 10-year period, since 1978).
Landslide	No official landslide dataset exists for the City of Homer. However, in North America, there is an association between landslides and hilly terrain (particularly with slopes ranging from about 20 to 40 degrees). As such, the mountainous terrain in Homer that includes slopes greater than 20 degrees is at greatest risk of slide. Approximately 17% (1,504 acres) of Homer is in this hazard area, including 1 critical facility, the Southern Peninsula Hospital. In particular, the ADGGS found that the area covered by the Bluff Point landslide deposit and the area immediately adjacent to the headscarp have an elevated risk of deep-seated landslide hazard. Similarly, the deep-seated landslide at the end of China Poot Road also represents a significant landslide hazard. Development in and on the landslide deposit, as well as development in the mouths of catchments on either side of the China Poot Road landslide should be considered high-risk areas. Debris flow from landslides along the bluffs, particularly below Woodard Canyon,

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
	has the potential to impact facilities and residential buildings, including the South Peninsula Hospital. Landslides can cause damage to and impact critical infrastructure, including water, sewer, and roadways. They may also cause injury or death to those trapped; break utility lines; block/damage roadways; damage foundations, chimneys, or surrounding land; and lead to flash flooding and further landslides.
Severe Weather	All of the City of Homer is vulnerable to severe weather. The Homer area is most vulnerable to high winds during the winter season. Winds may sweep up loose snow and produce blinding blizzards and dangerous wind chills. A major storm can last for several days and be accompanied by high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. A storm may knock down trees and powerlines, cause roofs to collapse, and lead to dangerous driving conditions causing drivers to be stranded. Homer has an extensive history of storm damage, especially in the coastal areas along the Homer Spit and adjacent properties. Along the Homer Spit, high winds and coastal storm surge can damage other installments that mitigate erosion, such as revetments and gabion baskets. The Seward Highway between Anchorage and Homer is periodically closed every year due to an avalanche event or for avalanche control, which can further isolate the community.
Tsunami	The Alaska Earthquake Center and University of Alaska Fairbanks model for tsunami waves and inundation shows a maximum composite tsunami inundation for Homer. Based on this model, there are 1,735 acres (19%) of Homer's land area at risk to tsunami inundation. This inundation level includes eight (24%) critical assets. The most at-risk locations in Homer are the Homer Spit, coastal areas, and low-lying areas around (and including) Beluga Lake. Tsunami run-up will likely cause flooding and infrastructure along the Homer Spit could be damaged.
Volcano	Ashfall becomes a public health hazard when humans inhale fine ash. Ash will also interfere with the operation of mechanical equipment including aircraft. In Alaska, this is a major problem because many of the primary flight paths are near historically active volcanoes. Because ash can conduct electricity, accumulation may also interfere with the distribution of electricity from the shorting transformers and other electrical components. Based on modeling, most of the City of Homer is in a moderate ashfall hazard area. Even a small ashfall event could cause significant damage to the built environment (e.g., clogged filters and damaged parts of vehicles and machinery, clogged filters of air-ventilation systems, roof collapse, cellular and radio communication interruption) and the natural environment (e.g., habitat damage, water pollution, weather pattern shifts). In addition, an ashfall event could cause respiratory problems, eye problems, and skin irritation for humans.
Wildfire	Much of Homer is vulnerable to wildfires. As shown on Figure 9, 65% of the land area of Homer is in a high/very high/extreme fuel risk area. During the summer, the entire community is vulnerable to wildland fire because most structures are constructed of wood and other flammable materials. Standing timber and other natural fuels interface with the community. History has demonstrated that fire bands can be carried by local winds up to 0.5 mile, jumping human-made fire lines and spreading fire across large areas. Most areas of Homer

Table 4-5: Overall Summary of Vulnerability

Hazard	Vulnerability
	are immediately adjacent to wildland areas and could be threatened by uncontrolled fire. Without mitigation or preparation efforts, the impacts of a wildland interface fire in Homer could grow into an emergency or disaster. In addition to impacting people, wildland fires may severely impact livestock and pets. Such situations may require emergency life support, evacuation, and alternative shelter. Indirect impacts of wildland fires can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, which increases flood and landslide potential, harms aquatic life, and degrades water quality.

Table 4-6: Value of Facilities Most Affected by Earthquake

Category	Total Value (Building and Contents)	Estimated Loss from M9.2 Earthquake	M9.2 Earthquake loss Ratio
Boat Dock	$16,366,000	$1,525,582	20.10%
City Office	$239,000	$12,850	5.38%
Airport	$15,416,800	$905,695	5.87%
School	$55,914,600	$3,163,500	11.41%
Emergency Shelter	$4,140,400	$229,649	10.95%
State Office	$2,271,800	$2,038,298	5.74%
Police Station	$2,064,500	$112,256	5.44%
Fire Station	$2,064,500	$112,256	5.44%

4.3 NATIONAL FLOOD INSURANCE PROGRAM INSURED STRUCTURES

The NFIP, managed by FEMA, provides flood insurance to property owners, and businesses. There are 26 NFIP-insured structures in the City of Homer. Of these, none are considered Repetitive Loss properties.

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5.0 MITIGATION STRATEGY

This section addresses Element C of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element C: Mitigation Strategy
C1. Does the Plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement § 201.6(c)(3))
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement § 201.6(c)(3)(i))
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))

5.1 AUTHORITIES, POLICIES, PROGRAMS, AND RESOURCES

The City of Homer's existing authorities, policies, programs, and resources available for hazard mitigation are provided in Table 5-1 (human and technical resources), Table 5-2 (financial resources), and Table 5-3 (planning and policy resources). The ways in which the City of Homer is looking to expand and improve on its hazard mitigation authorities, policies, programs, and resources are provided in Table 5-4.

Table 5-1: Human and Technical Resources for Hazard Mitigation

Staff/Personnel	Department/Agency	Principal Activities Related to Hazard Mitigation
Planner(s) and technical staff with knowledge of land development, land management practices, human-caused hazards, and natural hazards	City of Homer Planning Department	Anticipates and acts on the need for new plans, policies, and code changes. Applies the approved plans, policies, code provisions, and other regulations to proposed land uses.
Fire Chief	City of Homer Volunteer Fire Department	Provides fire protection services in the City of Homer.
Head of Public Works	City of Homer Public Works Department	Maintains the city's roads, drainage, water distribution, wastewater collection, buildings and facilities, and motor vehicles. Works with developers in conjunction with the planning department on proposed subdivisions, land use variances, right-of-way vacations, zoning changes, and building site plans.
Police Chief	City of Homer Police Department	Provides law enforcement services in the City of Homer.
Harbormaster	City of Homer City Department of Port and Harbor	Manages and maintains port and harbor facilities.
Emergency Manager	City of Homer City Manager's Office	Maintains and updates Homer's Emergency Operations Plan. In addition, coordinates local response and relief activities in the Emergency Operations Center; works closely with local, state, and federal partners to support planning and training and to provide information and coordinate assistance.
Engineers, construction project managers, and supporting technical staff	City of Homer Public Works Department	Provides direct or contract civil, structural, and mechanical engineering services, including contract, project, and construction management.
Engineer(s), project manager(s), technical staff, equipment operators, and maintenance and construction staff	City of Homer Public Works Department	Maintains and operates of a wide range of local equipment and facilities and assists members of the public. This includes providing sufficient clean fresh water, reliable sewer services, street maintenance, storm drainage systems, street cleaning, streetlights, and traffic signals.
Floodplain Administrator	City of Homer Planning Department	Enforces its floodplain requirements through the Flood Development Permit program.
Procurement Services Manager	City of Homer Finance Department	Provides a full range of municipal financial services and administers several licensing measures.

Table 5-1: Human and Technical Resources for Hazard Mitigation

Staff/Personnel	Department/Agency	Principal Activities Related to Hazard Mitigation
Public Information Officer	City of Homer City Management's Office	Coordinates and facilitates a public information program regarding activities of Homer and its various departments; actively promotes the services and successes of operating departments and the benefits to residents; proactively establishes and maintains productive relationships between Homer and any media; and performs related duties as required.

Table 5-2: Financial Resources for Hazard Mitigation

Type	Source	Purpose	Amount
General Fund	City of Homer Finance Department	Program operations and specific projects.	Variable
Enterprise Funds	City of Homer City Department of Port and Harbor	An enterprise fund is a self-supporting government fund that sells goods and services to the public for a fee. An enterprise fund uses the same accounting framework followed by entities in the private sector. Homer uses an enterprise fund for the port and harbor facilities.	Variable
General Obligation Bonds	City of Homer Police Department	General obligation bonds are appropriately used for the construction and/or acquisition of improvements to real property broadly available to residents and visitors. Such facilities include—but are not limited to—libraries, hospitals, parks, public safety facilities, and cultural and educational facilities. The city uses a general obligation bond for the police station.	Variable
Renewable Energy Fund	Alaska Energy Authority	Provides funding for the development of qualifying and competitively selected renewable energy projects in Alaska. The program is designed to produce cost-effective renewable energy for both heat and power For Fiscal Year 2019, $11 million has been allocated by the governor to fund the Renewable Energy Fund. This program runs through 2023.	Project-specific
HMA: Hazard Mitigation Grant Program (HMGP)	FEMA	Supports pre- and post-disaster mitigation plans and projects. Available to communities in Alaska after a presidentially declared disaster has occurred in Alaska.	Project-specific
HMA: Building Resilient Infrastructure and Communities (BRIC)	FEMA	Focuses on reducing the nation's risk by funding public infrastructure projects that increase a community's resilience before a disaster affects an area.	Project-specific

Table 5-1: Human and Technical Resources for Hazard Mitigation

Staff/Personnel	Department/Agency	Principal Activities Related to Hazard Mitigation	
HMA: Flood Mitigation Assistance	FEMA	Funds projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the NFIP.	Project-specific
Homeland Security Preparedness Technical Assistance Program	FEMA/Department of Homeland Security	Build and sustain preparedness technical assistance activities in support of the four homeland security mission areas (i.e., prevention, protection, response, recovery) and homeland security program management.	Project-specific
Assistance to Firefighters Grant Program	FEMA/U.S. Fire Administration	Provides equipment, protective gear, emergency vehicles, training, and other resources needed to protect the public and emergency personnel from fire and related hazards. Available to fire departments and nonaffiliated emergency medical services providers.	Project-specific
Community Action for a Renewed Environment	U.S. Environmental Protection Agency	Through financial and technical assistance, this program offers an innovative way for a community to organize and take action to reduce toxic pollution (e.g., stormwater) in its local environment. Through this program, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize exposure to them.	Project-specific
Community Block Grant Program Entitlement Communities Grants	U.S. Department of Housing and Urban Development (HUD)	Acquisition of real property; relocation and demolition; rehabilitation of residential and nonresidential structures; construction of public facilities and improvements, such as water and sewer facilities, streets, neighborhood centers; and the conversion of school buildings for eligible purposes.	Project-specific

Notes:

Table 5-3: Planning and Policy Resources for Hazard Mitigation

Name	Description	Hazards Addressed	Emergency Management
Homer City Ordinances Chapter 21.44 Slopes	The City of Homer has adopted local ordinances to define Steep Slope and to require engineering approval for any development of steep slopes in Homer (Homer City Code [HCC] 21.44.050).	Landslide	Mitigation
City of Homer Emergency Operations Plan	The plan describes the City of Homer's organizational structures, roles, and responsibilities; protocols for providing emergency response and short-term recovery; the purpose, situation, and assumptions; concept of operations, organization, assignment of responsibilities, and plan development and maintenance; authorities; and references.	Coastal Storm Surge/Erosion, Earthquake, Wildland Fire, Flood, Landslide, Tsunami, Volcano, Severe Weather	Response, Recovery
City of Homer Capital Improvement Plan 2019-2024	Identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan. The plan/program is usually short-range, 4 to 10 years.	Landslide, Coastal Storm Surge/Erosion, Flood	Mitigation, Preparedness
Homer Comprehensive Plan	Describes hazard areas and lists goals and policies to reduce the potential risk of death, injuries, and economic damage resulting from natural and human-caused hazards.	Erosion, Flood Landslide	Mitigation, Preparedness, Response
NFIP	Makes affordable flood insurance available to homeowners, business owners, and renters in participating communities. In exchange, those communities must adopt and enforce minimum floodplain management regulations to reduce the risk of damage from future floods.	Flood	Mitigation

Table 5-4: Ability to Expand Resources

Capability	Type/Description	Expansion
Human and Technical	Mitigation Specialist	Appoint or assign someone with Homer's government to oversee hazard mitigation grant opportunities, including notifying Homer's departments/agencies of upcoming grant cycles, and spearheading Notice of Intent applications, grant applications, and grant management requirements.
Financial	HMA funding	Apply for BRIC and HMGP funding as it becomes available. The focus should be on projects that mitigate critical infrastructure, provide protection for disadvantaged areas, and address climate change.
Planning and Policy	Climate Action Plan	Develop a Climate Action Plan to reduce or continue to greenhouse emissions through a series of local transportation, land use, building energy, water, waste, and green infrastructure programs and policies.

5.2 NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION

The NFIP aims to reduce the impact of flooding on residential and nonresidential buildings by providing insurance to property owners and encouraging communities to adopt and enforce floodplain management regulations. Participation in the NFIP is based on an agreement between local communities and the federal government.

The City of Homer joined the NFIP on May 19, 1981, the same day the city was mapped to a FIRM. The current FIRM date for Homer is October 20, 2016. As a participant of the NFIP, the Homer City Planning Department enforces a floodplain management ordinance and participates in FEMA's Community Assisted Visits, which occur on a 3- to 5-year cycle. FEMA's last Community Assisted Visit to Homer occurred in 2011.

5.3 MITIGATION GOALS

Mitigation goals are defined as general guidelines that explain what an agency wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range policy-oriented statements representing a community-wide vision. FEMA's 2022 Building Resilient Infrastructure and Communities priorities are the basis for the three goals (Table 5-5) for the 2022 LHMP.

Table 5-5: Mitigation Goals

Goal #	Description
1	Enhance climate protection and adaptation efforts
2	Create a healthy and safe community
3	Protect critical facilities and infrastructure against hazards

5.4 RECOMMENDED MITIGATION ACTIONS

Mitigation actions help achieve the goals of the LHMP. The recommended mitigation actions provided in Table 5-6 include: education and awareness; structure and infrastructure projects; preparedness and response; and local plans and regulations. This list addresses every hazard profiled in this plan and is based on the plan's risk assessment as well as lessons learned from recent disasters. It was developed using FEMA success stories and best management practices; FEMA job aids; local and regional plans and reports; and input from planning team members.

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
1	Critical Facility Auxiliary Power (Phase I)	All	Determine which critical facilities require auxiliary power in order to remain functional during de-energization or public safety power shutoff and/or general loss of power and install auxiliary power systems. Auxiliary power systems may include back-up generators, local Solar Photovoltaic plus storage, and microgrids.	Existing
2	Generators (Phase II)	All	Purchase and install generators with main power distribution disconnect switches for identified and prioritized critical facilities susceptible to short-term power disruption. (e.g., first responder, medical facilities, schools, correctional facilities, and water and sewage treatment plants)	New and existing
3	Emergency Radio Communication System Upgrade	All	Continue the city's systematic upgrade of its Emergency Radio Communication System.	Existing
4	Upslope Tidal Marshes	Climate Change	Create tidal marshes with resilience to climate change by providing space for the tidal marshes to spread vertically upslope when sea level rises.	New and existing
5	Downslope Tidal Marshes	Climate Change	Create tidal marshes with resilience to climate change by providing space for tidal marshes to spread vertically downslope to aid upland drainage to the sea	New and existing
6	Seismic Retrofits	Earthquake	Seismically retrofit existing critical facilities to make them more resistant to damage from earthquakes.	Existing
7	Earthquake-Resistant Pipes Replacement	Earthquake, Landslide	Replace aging critical pipes in areas of extreme or violent shaking hazard and landslide hazard areas to improve seismic reliability and safeguard critical water distribution lines against the potential destructive impacts of large-scale earthquakes and accompanying landslides.	Existing
8	Storm Drainage Improvements	Flood	Continue to make capacity/structural improvements to storm drains, channels, and pump stations, as well as green infrastructure systems (such as marshes) to enable them to perform to their capacity in handling water flows.	Existing

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
9	Bank and Shoreline Protection	Flood, Erosion	Develop mitigation initiatives such as: rip-rap (large rocks), sheet pilings, gabion baskets, articulated matting, concrete, asphalt, vegetation, or other armoring or protective materials to provide small scale site-specific shoreline bank protection.	New and existing
10	Shoreline Protection on the Homer Spit	Flood, Erosion	Develop mitigation initiatives such as: large-scale gravel placement to provide site-specific shoreline bank protection along the Homer Spit.	New and existing
11	Groundwater Protection	Flood, Erosion	Develop mitigation initiatives to provide site-specific protection for near-surface groundwater.	New and existing
12	Property Buyout on the Homer Spit	Flood, Erosion	Buyout property in areas that are prone to flooding or at risk from erosion, particularly on the Homer Spit, as an alternative to "defend in place" mitigation actions.	Existing
13	Flood Protection Ordinance/Overlay Zone	Flood	Adopt a comprehensive flood protection ordinance/overlay zone for areas that are in the SFHA or subject to flooding. Properties in this overlay are often subject to additional standards concerning development/land uses, building elevation, stream buffers, outdoor storage, building materials, and permitting procedures.	New and existing
14	Sterling Highway Drainage Improvements	Flood, Landslide	Continue implementing elements of the Green Infrastructure Stormwater Management Plan for drainage improvements at Sterling Highway Milepost 172.	Existing
15	Hillside Protection	Landslide	Stabilize landslide-prone areas through stability improvement measures, including interceptor drains, in situ soil piles, drained earth buttresses, and subdrains.	New and existing
16	Landslide Zone	Landslide	Regulate development through zoning and permitting in landslide-prone areas.	New
17	Tree Clearing	Severe weather	Develop and implement tree clearing education programs for residents to keep trees from threatening lives, property, and public infrastructure from severe weather events.	New and existing

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
18	Powerline Disconnects	Severe weather	Increase power line wire size and incorporate quick disconnects (breakaway devices) to reduce ice load and windstorm powerline failure during severe wind or winter ice storm events.	New and existing
19	Underground Powerlines	Severe weather	Continue to require new development to implement underground powerlines and relocate aboveground power lines to below ground where possible.	New and existing
20	StormReady Program	Severe weather	Complete certification for the StormReady program. The program encourages communities to take a proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations.	New and existing
21	TsunamiReady Program	Tsunami	Maintain certification for the TsunamiReady program. The main goal of the program is to improve public safety before, during, and after tsunami emergencies. It aims to do this by establishing guidelines for a standard level of capability to mitigate, prepare for and respond to tsunamis, and work with communities to help them meet the guidelines and ultimately become recognized as "TsunamiReady" by the National Weather Service.	New and existing
22	Tsunami Task Force Recommendations	Tsunami	Implement the recommendations provided by the Public Works Campus Tsunami Task Force, including developing a long-term plan to move the Public Works Campus.	Existing
23	Tsunami Vertical Evacuation Tower	Tsunami	Construct a tsunami vertical evacuation tower on the Homer Spit to provide temporary refuge above tsunami waves.	New
24	Tsunami Warning and Evacuation System	Tsunami	Develop a comprehensive approach to warning, evacuation, and preparedness in the event of a tsunami.	New and existing
25	Wastewater Treatment Upgrades	Volcano	Identify vulnerabilities in critical facilities—particularly air filtration and water systems—to deal with ashfall events.	Existing
26	Air Quality Clean Building	Volcano, Wildfire	Identify a building or room to be a designated "clean building" or "clean room" for use during periods of poor air quality created from wildfires, volcanic ash, or other poor air quality event. Acquire air filters and masks for distribution.	Existing

Table 5-6: Recommended Mitigation Actions

No.	Project Name	Hazard Mitigated	Project Description	Type of Development
27	Property Buyout near Bridge Creek Reservoir	Wildfire	Buyout property in areas that are prone wildfire, particularly on the near the Bridge Creek Reservoir to protect the drinking watershed.	Existing
28	Wildland-Urban Interface Ordinance/Overlay Zone	Wildfire	Adopt a Wildland-Urban Interface ordinance/overlay zone. Properties in this overlay area are often subject to additional standards concerning structure density and location, building materials and construction, vegetation management, emergency vehicle access, water supply, and fire protection.	New and existing
29	Critical Facility Fireproofing	Wildfire	Consider ways to protect radio sites from wildfire, including rebuilding using fire-resistant materials.	Existing
30	Wildfire Risk Coordination	Wildfire	Continue coordinating with and providing support to the Kenai Peninsula Borough and the Alaska Department of Natural Resources during their wildfire assessments and plan implementations.	New and existing
31	Water Supply	Wildfire	Water sources for both residential protections and firefighting capacity should be developed. This includes increased pumping capability at treatment plant, and two additional 10,000-gallon tanks buried along Skyline Drive.	New and existing
32	Water Lines and Hydrants	Wildfire	Provide additional water lines and fire hydrants to the residential neighborhoods along Skyline Drive.	New and existing

5.5 PRIORITIZED ACTION PLAN

A prioritized action plan is an itemized list of recommended mitigation actions that a community/agency hopes to put into practice to reduce its risks and vulnerabilities.

For the 2022 LHMP, the planning team created a two-tier prioritization process based on the following:

- High priority mitigation actions are those that address hazards of immediate concern and are also cost-effective (positive cost-benefit ratio) and may have an identified funding source.
- Medium priority mitigation actions are those that address hazards that are not of immediate concern and/or those that are of immediate concern but are not cost effective or do not have an identified funding source.

The City of Homer determined the hazards and threats of immediate concern based on the 2022 LHMP's hazard profiles, risk assessment, and capability assessment as follows: climate change, earthquake, erosion, flood, landslide, severe weather, tsunami, and wildfire.

The results of the prioritization process are provided in Table 5-7. For each mitigation action listed, potential funding sources, responsible departments or agencies, and implementation timelines have been identified.

Table 5-7: Prioritized Action Plan

No.	Project Name	Priority	Potential Funding Source	Responsibility	Timing
1	Critical Facility Auxiliary Power (Phase I)	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
2	Generators (Phase II)	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
3	Emergency Radio Communication System Upgrade	High	City of Homer	City of Homer Public Works Department	0 to 5 years
7	Earthquake-resistant pipes replacement	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
8	Storm Drainage Improvements	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
10	Shoreline Protection	High	FEMA BRIC/HMGP	City of Homer Planning Department	0 to 5 years
11	Groundwater Protection	High	City of Homer	City of Homer Planning Department	0 to 5 years
12	Property Buyout on the Homer Spit	Medium	HUD Community Block Grant Program	City of Homer City Manager's Office	0 to 5 years
14	Sterling Highway Drainage Improvements	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
15	Hillside Protection	High	FEMA BRIC/HMGP	City of Homer Planning Department	0 to 5 years
16	Landslide Zone	High	City of Homer	City of Homer Planning Department	0 to 5 years
17	Tree Clearing	Medium	City of Homer, FEMA BRIC/HMGP	City of Homer City Management's Office	0 to 5 years
19	Underground Power Lines	High	City of Homer	City of Homer Public Works Department	0 to 5 years
20	StormReady Program	Medium	City of Homer	City of Homer Planning Department	0 to 5 years
21	TsunamiReady Program	High	City of Homer	City of Homer Planning Department	0 to 5 years

Table 5-7: Prioritized Action Plan

No.	Project Name	Priority	Potential Funding Source	Responsibility	Timing
24	Tsunami Warning and Evacuation System	High	City of Homer	City of Homer City Manager's Office	0 to 5 years
27	Property Buyout near Bridge Creek Reservoir	High	City of Homer, HUD Community Block Grant Program	City of Homer City Manager's Office	0 to 5 years
28	Wildland-Urban Interface Ordinance/Overlay Zone	High	City of Homer	City of Homer Planning Department	0 to 5 years
29	Critical Facility Fireproofing	High	FEMA BRIC/HMGP	City of Homer Public Works Department	0 to 5 years
31	Water Supply	High	City of Homer	City of Homer Public Works Department	0 to 5 years

5.6 PLAN INTEGRATION

Information about how the 2022 LHMP will be integrated into Homer's relevant plans and programs moving forward is provided in Table 5-8.

Table 5-8: Integration of the 2022 LHMP

LHMP Section	Existing Plan/Policy/Program	Process/Timeframe
Section 3—Hazard Identification	Homer Comprehensive Plan	Update of the Homer Comprehensive Plan to address hazards in the LHMP that are not currently included in it. Consider creating a hazard profiles section in the Comprehensive Plan.
Section 4—Risk Assessment	City of Homer Emergency Operations Plan	Incorporate based risk assessment findings into the City of Homer Emergency Operations Plan to help identify and ensure critical resources to maintain operations internally and externally.
Section 5—Mitigation Strategy	City of Homer Capital Improvement Plan 2019-2024	Incorporate the mitigation actions provided in Table 5-7 into the City of Homer Capital Improvement Plan by further studying and evaluating the underlying problems or if studies exist that outline potential solutions. Begin the design stage to develop a plan for each identified project, the actions to be taken, engineering and construction required, schedule, and estimated costs.

6.0 PLAN REVIEW, EVALUATION, AND IMPLEMENTATION

This section addresses Element D of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element D: Plan Review, Evaluation and Implementation
D1. Was the plan revised to reflect changes in development? (Requirement § 201.6(d)(3))
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement § 201.6(d)(3))
D3. Was the plan revised to reflect changes in priorities? (Requirement § 201.6(d)(3))

6.1 CHANGES IN DEVELOPMENT

The 2022 LHMP was updated to reflect the following changes that affect development:

- Five additional critical facilities were added from the previous 2010 LHMP. Two are large docks on the Homer Spit. The ADOT&PF facility and two electrical substations were added. Linear features, such as roads, sewer lines, and telephone lines were excluded from this plan. In addition, the Port and Harbor office has been relocated since the 2010 LHMP.
- New residential development has occurred at a steady rate since the 2010 LHMP. New residential neighborhoods along West Hill Road and East Hill Road could be in areas of higher risk for landslides or wildfires. The City of Homer has actively curtailed development around the reservoir where there is substantial risk of wildfire.

6.2 PROGRESS IN LOCAL MITIGATION EFFORTS

The City of Homer reviewed its 2010 LHMP's mitigation strategy and documented progress made toward each local mitigation effort, provided in Table 6-1. Mitigation actions that had not been implemented were considered for the 2022 LHMP (Table 5-6).

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
A.1.1.1	Distribute, display, and educate about hazards, flood insurance, and the benefits of various protective measures in public outreach programs. Outreach maybe information in a newsletter, on utility bills, in newspapers, public workshops, kiosk at the fire/police hall, and the library.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
A.1.1.2	Provide the public library with documents about hazards, flood insurance, and the benefits of various protective measures.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
A.1.1.3	Provide information about hazards on the City's website and include links to relevant pages that have local conditions, protective measures, permit requirements and maps.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
B.1.1.1	Continue to participate in the National Weather Service/West Coast and Alaska Tsunami Warning Center TsunamiReady Program.	Ongoing, mitigation action included in the 2022 LHMP.
B.1.1.2	Maintain regular tsunami warning siren drills so that citizens can learn to recognize and expect.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.2.1.1	Continue to monitor the tsunami evacuation signs on the Homer Spit to Kachemak Drive, East to the junction with East End Road. This route directs people away from the Beluga Slough crossing, which is in the projected tsunami inundation zone.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.3.1.1	Reduce susceptibility to damage and disruption by incorporating the Tsunami Hazard and FIRMs into the City's planning and zoning process.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.3.1.2	New development in tsunami hazard areas to meet the same standards required in the coastal high hazard areas.	Ongoing, mitigation action modified and included in the 2022 LHMP.
B.3.1.2	Require the anchoring of fuel tanks, manufactured home, accessory structures, and recreational vehicles to be anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas..
C.1.1.1	Encourage homeowners and property owners to remove dead or diseased trees to create "defensible space."	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.1.1.2	Encourage home and business owners to complete a Fire Wise assessment of their home and/or business.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.1.1.3	Educate homeowners on wildfire resistive construction techniques and strategies to limit their exposure to wildfire.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.1.1.4	Provide interested residents with Fire Wise informational packets and brochures.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.2.1.1	Issue burn permits to Homer residents who wish to dispose of organic materials. Direct nonresidents to the Division of Forestry Website to obtain an open burning permit during the statutory fire season.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
C.3.1.1	Encourage use of composting, chipping, or grinding as an alternative to burning of woody debris.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
C.4.1.1	Maintain open lines of communication between the Division of Forestry, National Weather Service, and the Homer Volunteer Fire Department to determine when fire conditions warrant suspension of burn permits or open burning in general.	Ongoing, mitigation action modified and included in the 2022 LHMP.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
C.4.1.2	When conditions warrant suspension of burn permits or open burning in Homer, disseminate that information in the form of press-releases to the local radio and print media.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.4.1.3	When open burning is prohibited or burn permits are suspended, ensure that the Homer Police Department Dispatch center is notified so that they can advise people who call in to activate their individual permit that a temporary suspension has been placed on open burning.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.4.1.4	Complete a daily assessment of fire danger during closures or suspensions by 10:00 a.m. each day to determine the need to continue the closure or resend the closure.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.1.1	Develop list of known shelters (from Emergency Plan), safe zones, and critical infrastructure.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.1.2	Review wildfire fuel load and develop mapping of area in need of fuels management activities.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.1.3	Develop and implement fuel reduction plan.	Ongoing, mitigation action modified and included in the 2022 LHMP.
C.5.2.1	Attend local planning meetings when conducted.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
C.5.2.2	Review drafts of the Community Wildfire Protection Plan when available and provide feedback to the Alaska Division of Forestry as appropriate.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
D.1.1.1	Identify buildings and facilities that must be able to remain operable during and following a hazard event.	Ongoing, mitigation action included in the 2022 LHMP.
D.1.1.2	Contract a structural engineering firm to assess the identified buildings and facilities to determine their structural integrity and strategy to improve their earthquake resistance.	Ongoing, mitigation action modified and included in the 2022 LHMP.
D.1.2.1	Identify priorities and budget to retrofit existing infrastructure to existing earthquake resistive construction standards.	Ongoing, mitigation action included in the 2022 LHMP.
D.1.2.2	Develop a Request for Proposals to submit for design and construction of the retrofitting requirements.	Ongoing, mitigation action included in the 2022 LHMP.
D.2.1.1	Reference the International Residential Code (current edition) for seismic and wind load requirements.	Ongoing, mitigation action modified and included in the 2022 LHMP.
D.3.1.1	Compile list of available nonstructural mitigation resources available to the public.	Ongoing, mitigation action included in the 2022 LHMP.
E.1.1.1	Annually review the requirements of the NFIP to conform to enrollment objectives and criteria.	Ongoing, mitigation action included in the 2022 LHMP.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
E.2.1.1	Encourage FEMA to restudy and remap the city with an emphasis on the Homer Spit, Beluga Slough, and Beluga Lake.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
E.2.2.1	Acquire funds to develop a watershed and drainage management plan that identifies important natural water storage, low features critical to flood function, and predicts future flood hazards.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.1	Develop overlay map of existing infrastructure (drainages, culvert size, storm drains).	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.2	Identify high risk city structures.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.3	Establish an annual inspection of all stormwater management (public and private) and order maintenance as needed.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.3.2.4	Require maintenance logs on private and public stormwater plans.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
E.4.1.1	Require developers/landowners to provide documentation of compliance with existing Flood Damage Prevention requirements if the project is in a flood hazard area as defined by City Code.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
E.4.2.1	Acquire land in high hazard area to restore or retain flood functions.	Ongoing, mitigation action included in the 2022 LHMP.
E.4.2.2	Identify less hazard prone areas for development. Suitability study and map 2008.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.3	Create and maintain buffers and building setbacks from wetlands, creeks, shorelines and drainages.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.4	In the flood hazard areas and along the bluff, consider “relocatable structures” on skids or pilings versus permanent foundation structures.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.5.	Require the anchoring of fuel tanks, manufactured homes, and accessory structures to resist flotation, collapse, and lateral movement due to the effects of wind and water loads.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.6	Preserve open space and/or relocate structures out of high-risk areas.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.7	Provide a means to regulate clearing, filling, grading, dredging, and other development that may impact flood, drainage, and erosion damage.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.8	Minimize adverse impacts of alterations of ground and surface waters and natural flow patterns.	Ongoing, mitigation action modified and included in the 2022 LHMP.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
E.4.2.9	Maintain requirements for stormwater control and mitigation through the enforcement of HCC 21.74 Development Activity Plan and HCC 21.75 Stormwater Plan.	Ongoing, mitigation action modified and included in the 2022 LHMP.
E.4.2.10	Integrate hazard identification, ecosystem protection, protection of community infrastructure and shoreline management into zoning and subdivision ordinances.	Ongoing, mitigation action modified and included in the 2022 LHMP.
F.1.1.1	Do not operate nonessential equipment.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.2	Protect office equipment such as copiers, fax machines, and personal computers.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.3	Allow employees to get home before ashfall occurs.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.4	Limit outdoor activity.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.15	Close doors, windows, and vents.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.6	Do not run exhaust-circulating fans.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.7	Check and change (when needed) oil, oil filter, and air filters.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.8	Wear respirator and eye protection during ash cleanup.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
F.1.1.9	Establish a communication system to alert employees.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
F.1.1.10	Establish an email alert or a call-in voice recording.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.1.1	Install security systems where hazard materials are stored and/or transferred.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.2.1	Install security measure at the city water treatment plant.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.2.2	Secure all remote pump facilities.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.3.1	Create redundant/backup capability for landline telephone system.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.3.2	Develop off-site backup information technology system.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.3.3	Prepare for utility disruption.	Ongoing, mitigation action modified and included in the 2022 LHMP.
G.1.3.4	Secure vital records and other important document.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.4.1	Encourage local businesses to have adequate cash on hand for emergencies.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.4.2	Encourage local businesses to establish a regular off-site computer back-up system.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
G.1.4.3	Encourage local businesses to participate in the State's Continuity of Business program through the Department of Homeland Security and Emergency Management.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Table 6-1: Progress in Local Mitigation Efforts

Action #	Action	Status
H.1.1.1:	Safely store biological, chemical, and hazardous materials.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
H.1.1.2:	Continue to require Fire Marshal certification for all commercial buildings.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
H.1.1.3:	Monitor, in cooperation with the Department of Health, Public Health Center, spikes in illnesses that may indicate the spread of a natural or human-made pathogen among the population.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.
H.1.1.3:	Continue participation and leadership in the Community Based Emergency Planning Committee established by Public Health.	Ongoing, mitigation action no longer considered as part of the 2022 LHMP due to focus on new and emerging mitigation actions and ideas.

Notes: Regarding Action Numbers, A=public education actions; B=tsunami actions; C=wildfire actions; D=earthquake actions; E=flood actions; F=ash actions; G=technological hazard actions; H= biological, chemical and hazardous materials actions.

In addition, supporting local plans, studies, and programs were reviewed to determine progress in local mitigation efforts. Relevant ongoing actions are provided in Table 5-6.

6.3 CHANGES IN PRIORITIES

The 2010 LHMP's mitigation strategy was prioritized using the STAPLEE (social, technical, administrative, political, legal, environmental, and economic), which FEMA recommended (FEMA 386-9) as a prioritization method in the early to mid-2000s. While the STAPLEE has been replaced in the 2022 LHMP by a more streamlined prioritization process, the priorities (listed below) have not changed:

- To build a culture and practice of disaster resilience by addressing hazards of immediate concern, a mitigation project must have social support.
- To be implemented in a timely manner, a mitigation project must be economically feasible and have an identified funding source.

7.0 PLAN ADOPTION

This section addresses Element E of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element E: Plan Adoption
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5)) E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))

7.1 FORMAL ADOPTION

The 2022 LHMP was formally adopted on [date] by the Homer City Council. A copy of the adoption resolution in on file with the community and the Alaska Division of Homeland Security and Emergency Management.

8.0 APPENDICES

APPENDIX A—FIGURES

Figure 1: Overview Map

Figure 2: Earthquake Hazard Areas

Figure 3: Flood Hazard Areas

Figure 4: Land Failure Hazard Areas

Figure 5: Bluff Point Landslide Area

Figure 6: Tsunami Hazard Areas

Figure 7: Maximum Estimated Tsunami Inundation, Downtown Homer

Figure 8: Volcanic Ash Hazard Areas

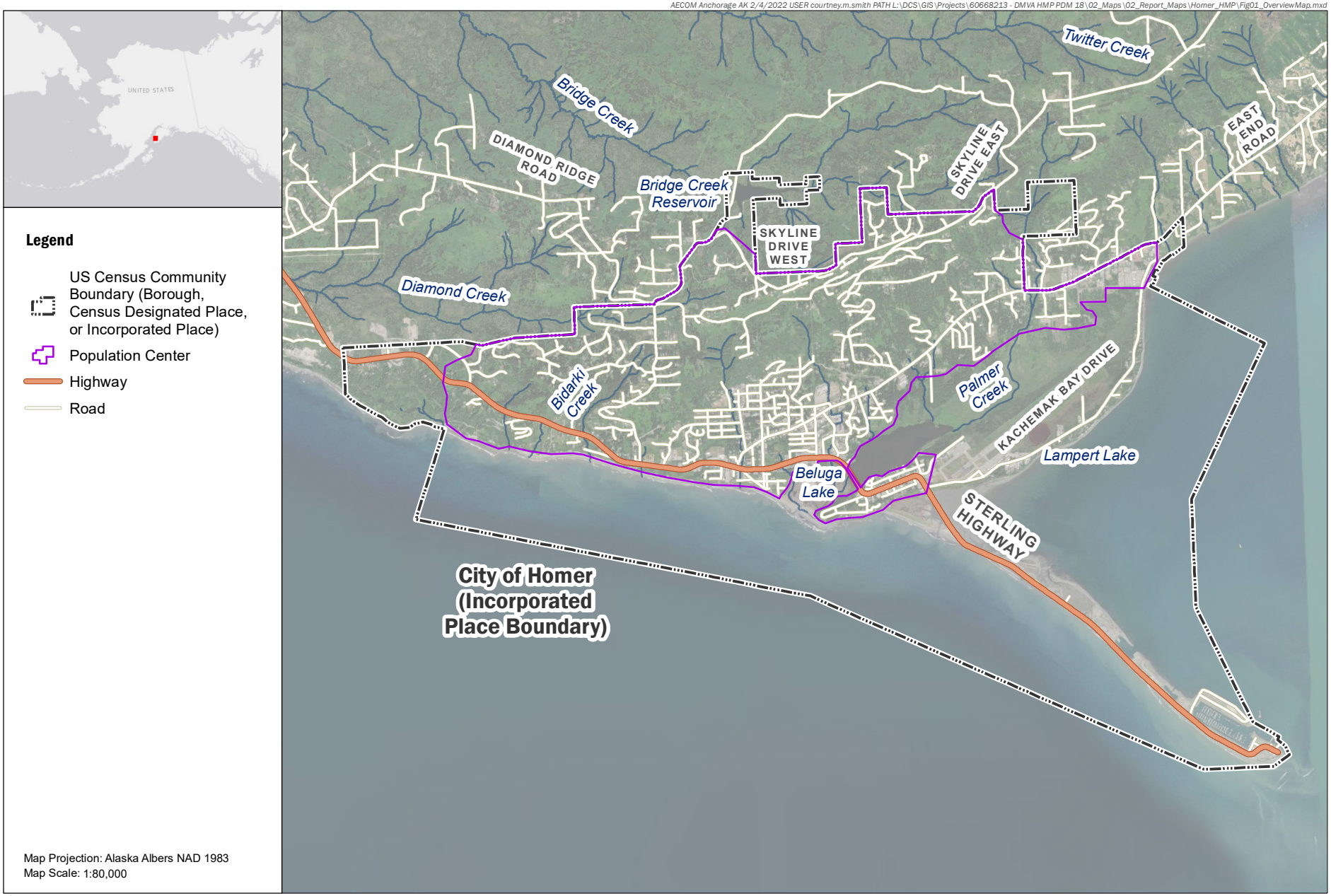
Figure 9: Wildfire Hazard Areas

Figure 10: Critical Facilities

APPENDIX B—FEMA DOCUMENTATION

[This appendix will contain the FEMA LHMP Review Tool]

APPENDIX C—PLANNING PROCESS



US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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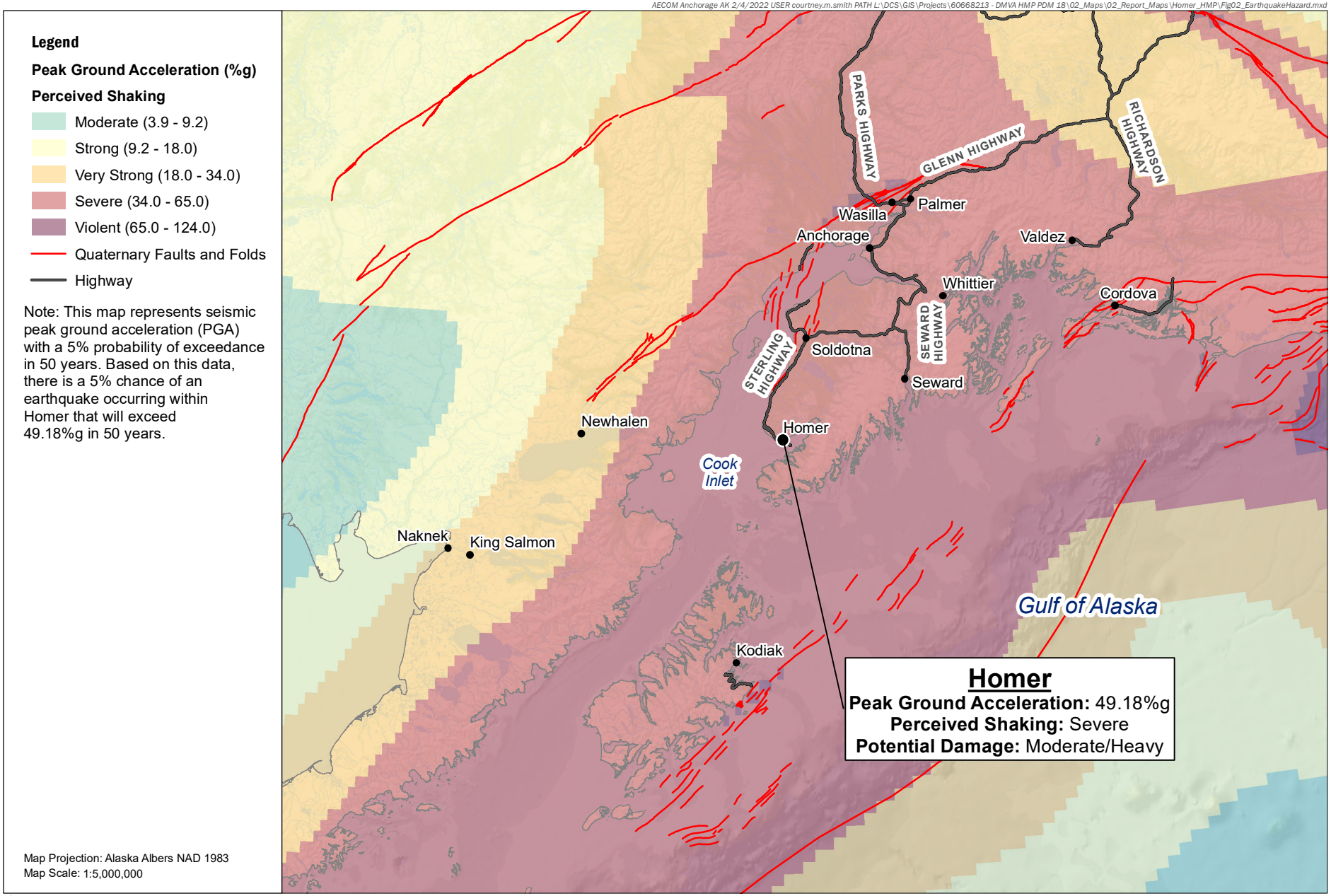
Local Hazard Mitigation Plan

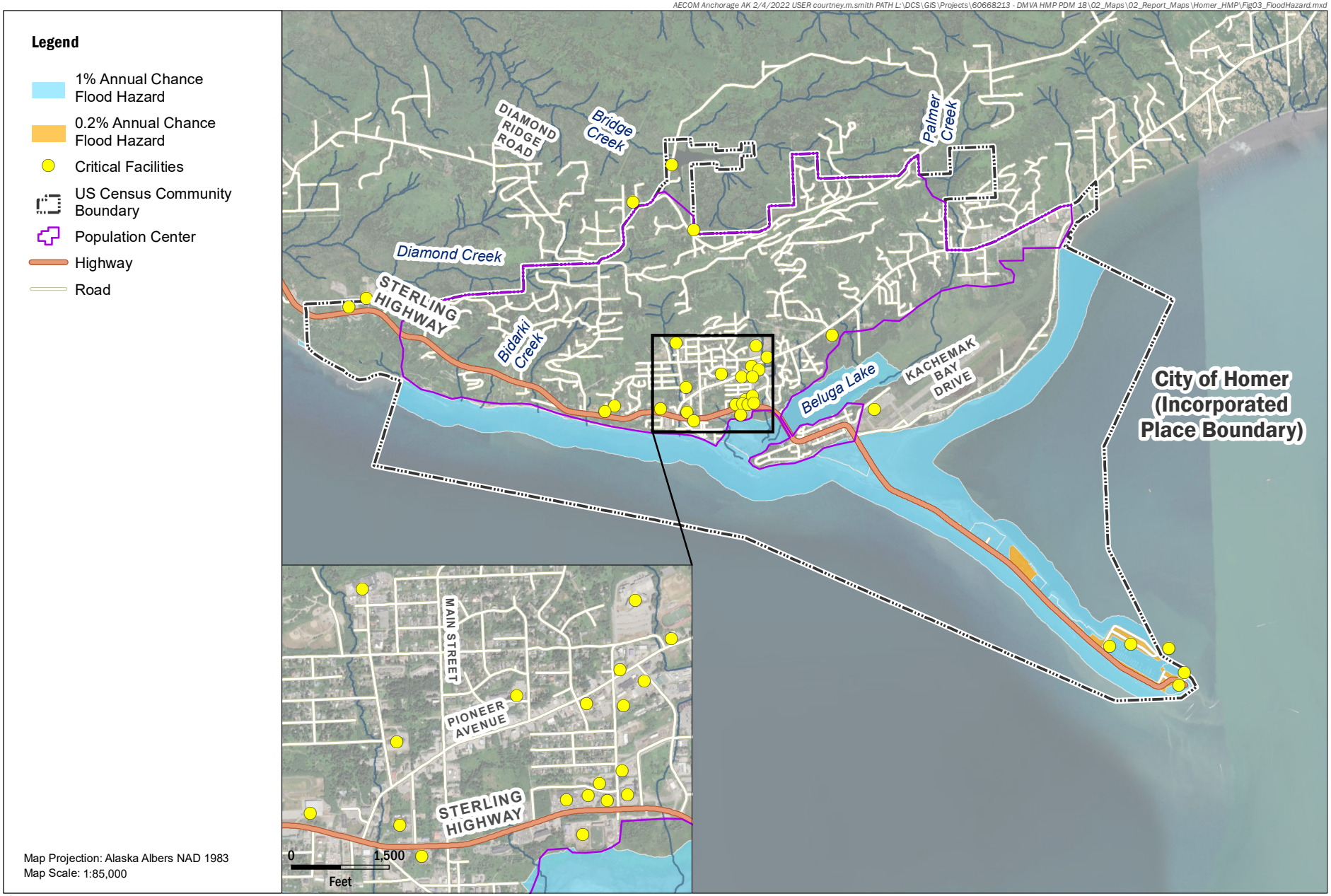
OVERVIEW MAP

Figure 1



EARTHQUAKE HAZARD AREAS

Figure 2



FEMA (2021); US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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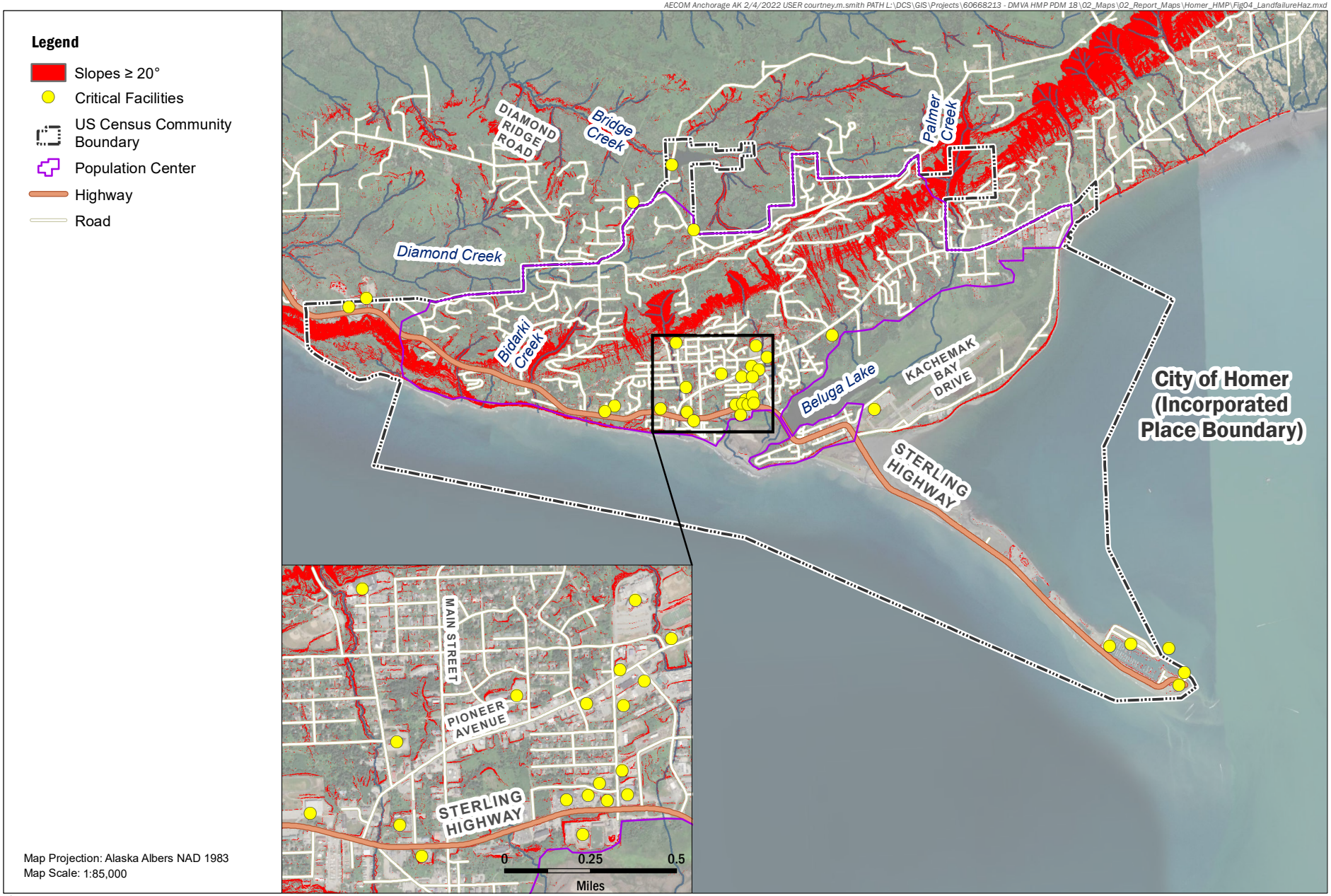
FLOOD HAZARD AREAS

Figure 3



US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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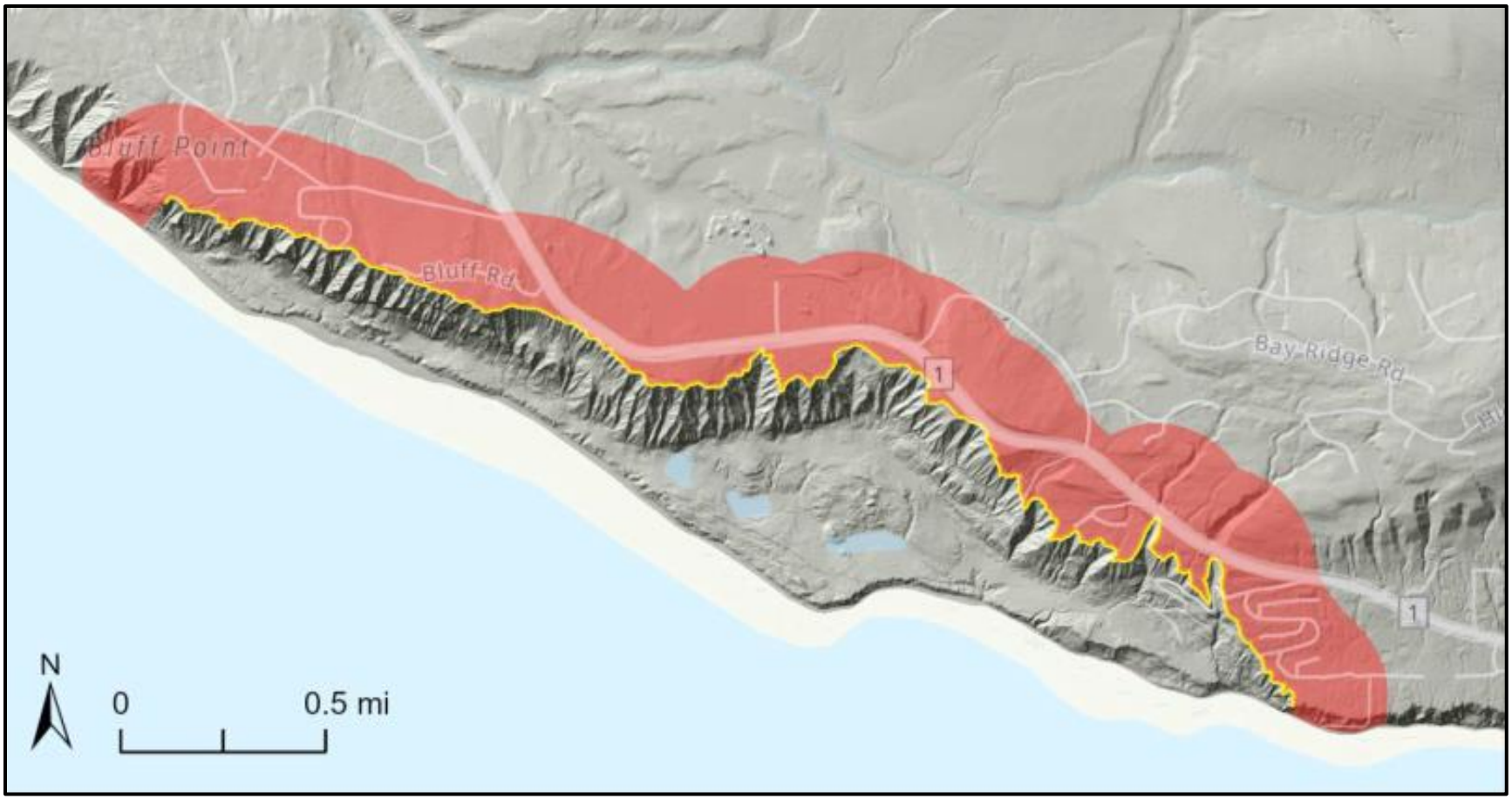
LAND FAILURE HAZARD AREAS

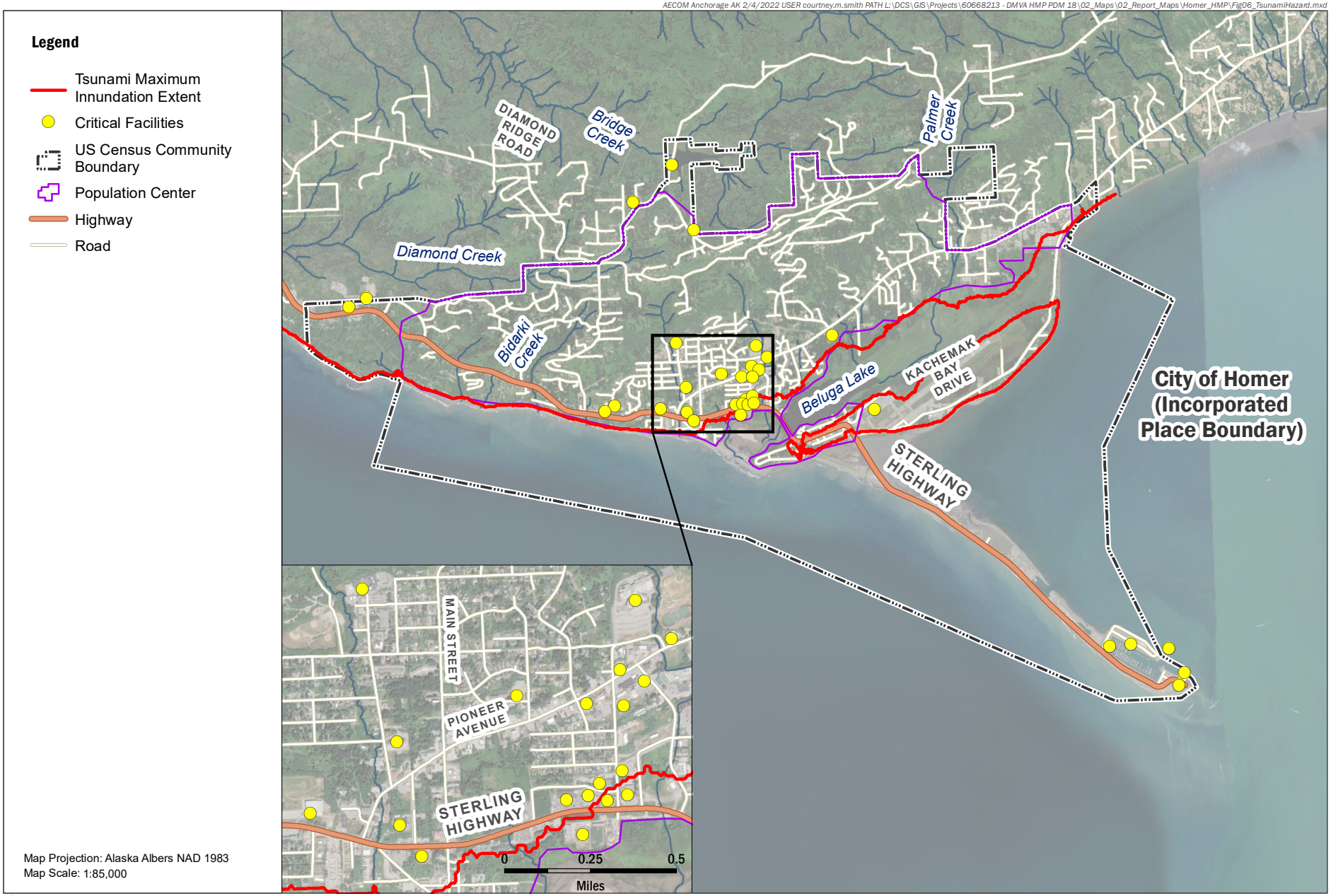
Figure 4



BLUFF POINT LANDSLIDE AREA

Figure 5

Deep-seated landslide susceptibility near the Bluff Point Landslide. Note that the landslide body (southwest of the yellow headscarp line) is also a landslide deposit and is highly susceptible to repeated failure.



DGGS (2019); US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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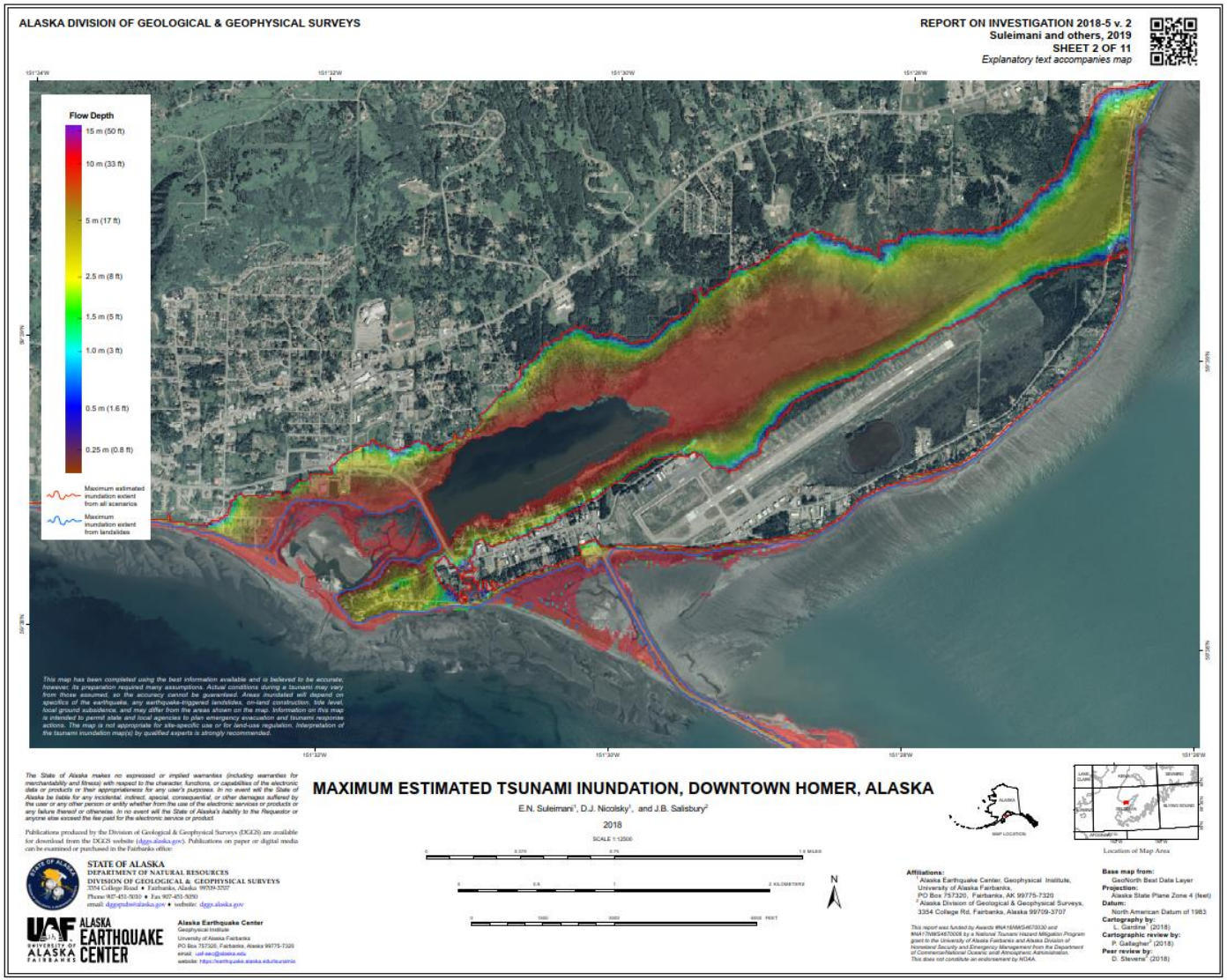
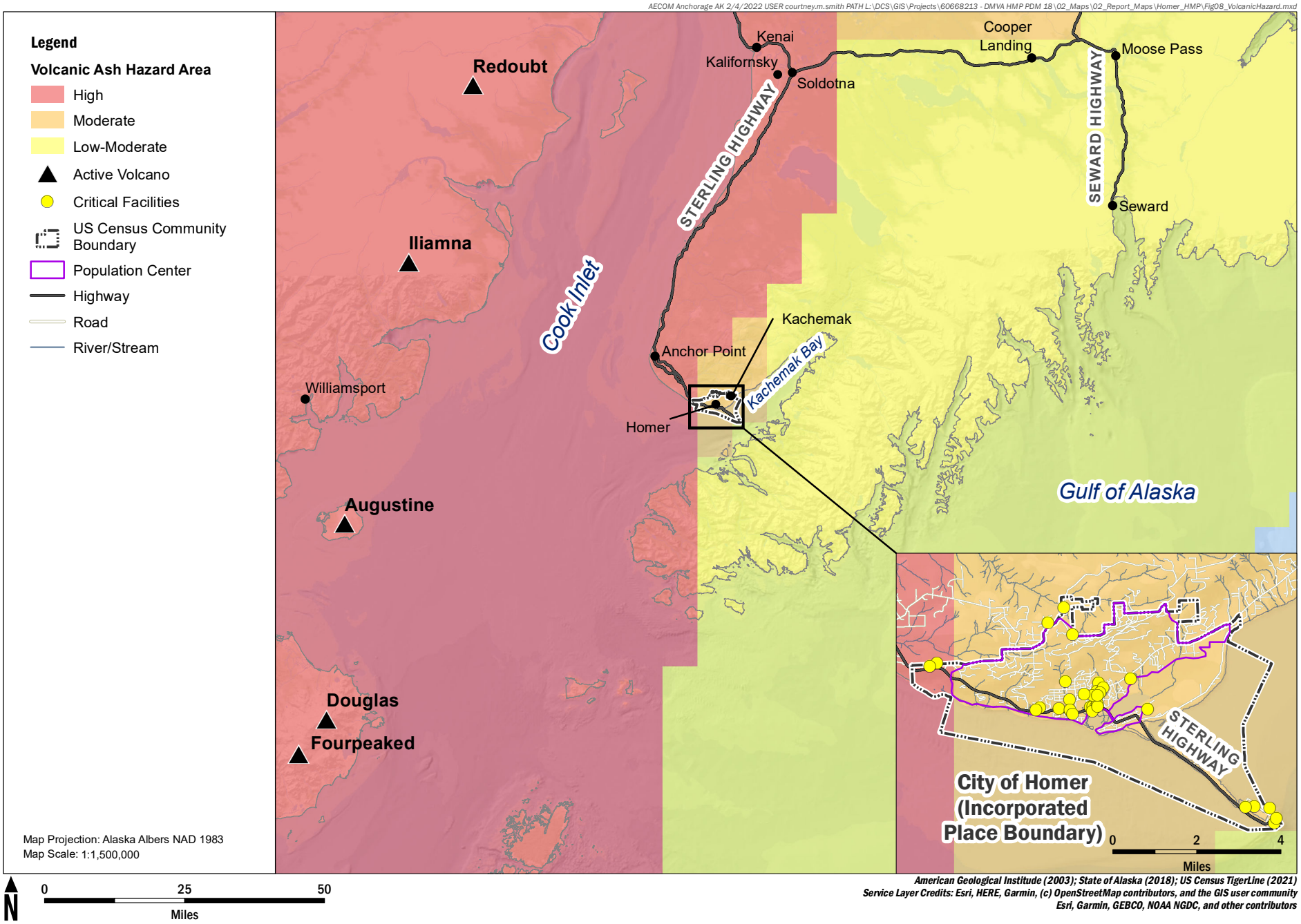
TSUNAMI HAZARD AREAS

Figure 6



MAXIMUM ESTIMATED TSUNAMI INUNDATION, DOWNTOWN HOMER

Figure 7



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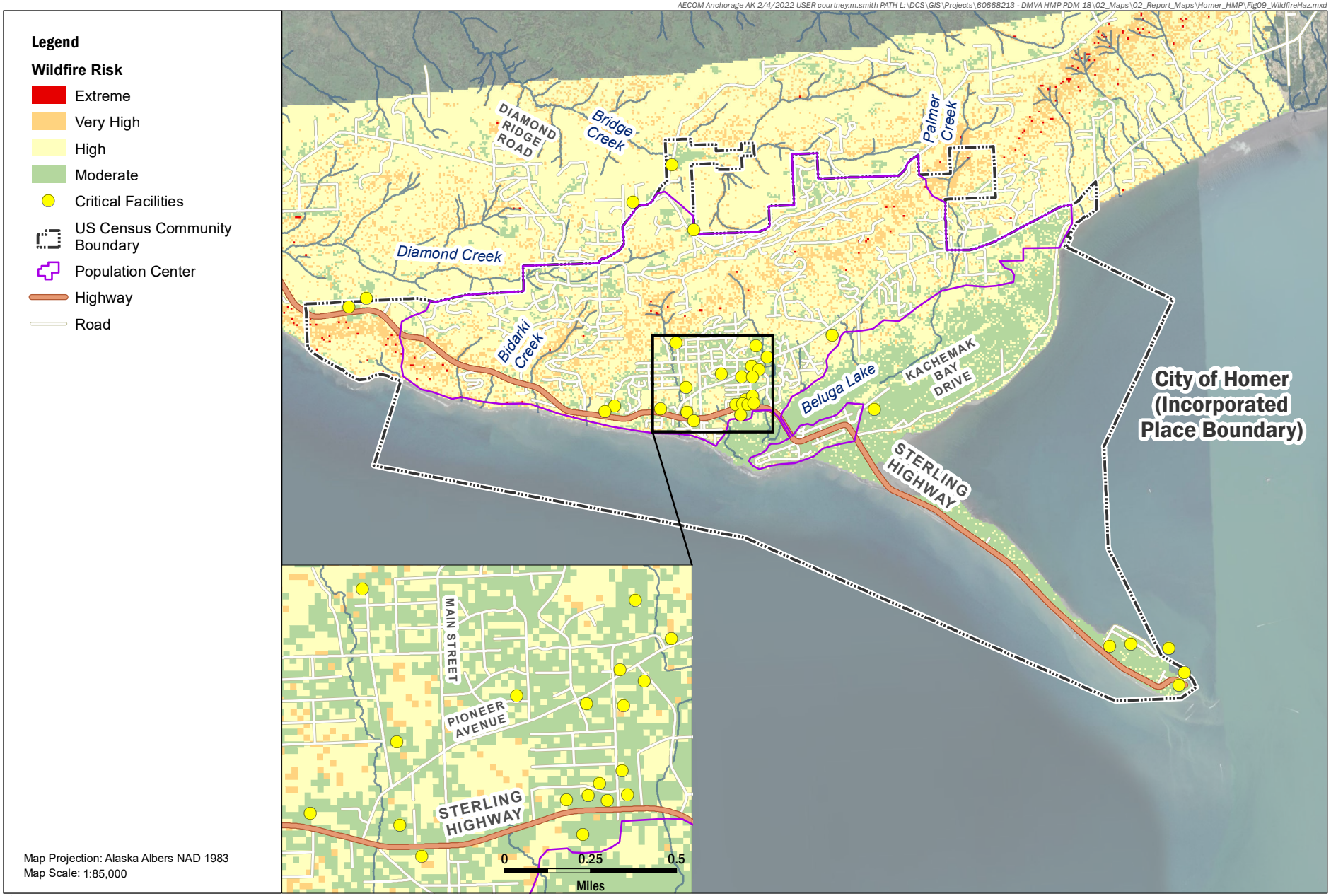
VOLCANIC ASH HAZARD AREAS

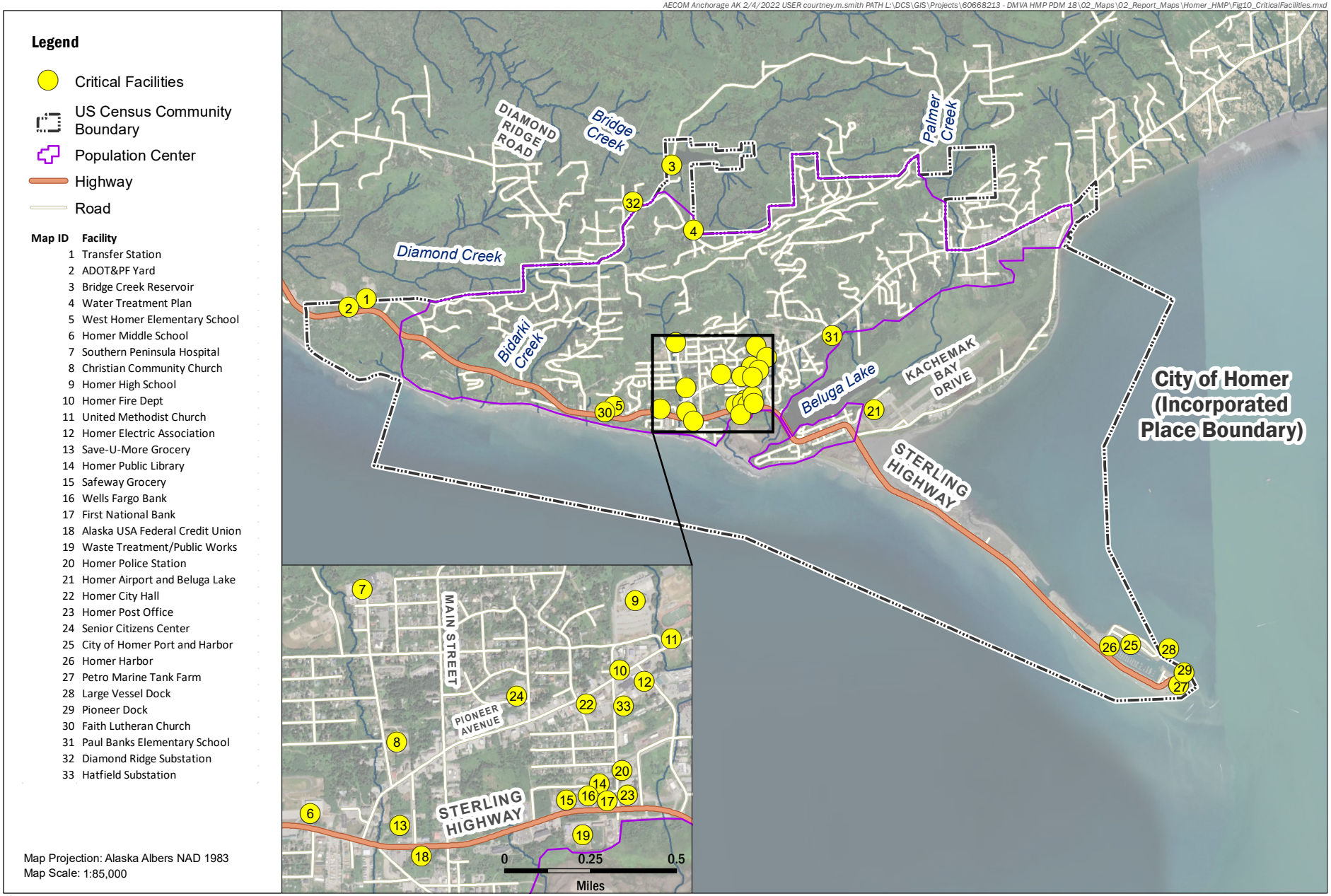
Figure 8



US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

WILDFIRE HAZARD AREAS

Figure 9



US Census TigerLine (2021)
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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CRITICAL FACILITIES

Figure 10

City Planner Abboud responded to the concerns of Mr. Ginnever stating that the right of way would not affect any properties outside the proposed actions. He then clarified that the easements would not affect any private lands outside the subject area.

Vice Chair Highland closed the public comment period and opened the floor to questions from the Commission, hearing none, she requested a motion and second.

VENUTI/BENTZ MOVE TO ADOPT STAFF REPORT 22-21 AND RECOMMEND APPROVAL OF THE LLOYD RACE & EKER ESTATES LUJAN 2022 PRELIMINARY PLAT TO SHIFT A COMMON LOT LINE BETWEEN TWO PARCELS RESULTING IN TWO PARCELS OF ROUGHLY FIVE ACRES EACH.

City Planner Abboud provided clarification that staff recommendations should be included in the motion for the record in response to questions from Vice Chair Highland.

VENUTI/BENTZ MOVED TO AMEND THE MOTION TO INCLUDE STAFF RECOMMENDATIONS:
1.DEDICATE A 15 FOOT UTILITY EASEMENT FRONTING RACE ROAD.
2. DEDICATE A 30 FOOT DRAINAGE EASEMENT CENTERED ON THE CREEK.
3.DEDICATE A 15 FOOT UTILITY EASEMENT ALONG MISSION RAOD AND BARANOF AVENUE
4. MISSION ROAD APPEARS TO BE 40 FEET WIDE ALONG LOT 1 A. VERIFY THE WIDTH OF MISSION ROAD ALONG LOT 1-A AND DEDICATE ANY ADDITIONAL RIGHT OF WAY NEEDED TO CREATE FORTY FEET OF RIGHT OF WAY FROM CURRENT CENTER OF THE RIGHT OF WAY AS SHOWN ON THE MAP, NOT AS CONSTRUCTED.)

There was no discussion.

VOTE (Amendment) NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

There was no further discussion on the main motion as amended.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

PENDING BUSINESS

NEW BUSINESS

A. Staff Report 22-22, 2022 Local Hazard Mitigation Plan

Vice Chair Highland introduced the item and invited City Planner Abboud to provide his report for the Commission.

City Planner Abboud provided a summary of Staff Report 22-22 for the Commission noting the processes to date and next steps.

City Planner Abboud facilitated discussion on the draft local hazard mitigation plan for the following points:

- Coordination with existing plans such as the Transportation Plan and Comprehensive Plan

Table 2-3: Existing Plans and reports - Opportunity to incorporate information from or point to these plans in more detail:

Comp Plan: The land use planning process can help drive investments in nearly every type of nature-based solution to natural hazards. Preserving parks and greenways before all remaining land is developed may be most important.

Transportation Plan: Managing flooding and erosion

- Section 3: Hazard Identification Climate Change:
    - Add bullet: Introduction of harmful or invasive species, with changing weather patterns and warming creating a change in the migration patterns.
        - If the species have a more prolonged existence in the County, there may also be a greater number of infestation events or a higher value of loss tied to infestation. Some invasive plants have been shown to destabilize soil due to high densities and shallow root systems, negatively impacting nearby buildings and septic systems. Other invasive plant species such as have been known to clog culverts and streams, increasing flooding risk. Utilities may be interrupted by invasive plants, blocking the water intakes of treatment plants and power generation facilities. Marine invasive can be hazardous to port and harbor facilities, including biofouling of encrusting organisms like tunicates, and habitat and bank stabilization issues with European Green Crab. [1]
- Pg 43. Flooding. Recurrence probability. Address fall flood events- frozen ground with extensive rainfall. Less predictable events with changing climate and weather patterns.
- Section 5: Mitigation Strategy
    - 5-2 wrong heading on pg 63. Human not financial resources
    - Financial resources include:
        - Other External Grants:
        - In addition to applying for hazard mitigation grants, this community could apply for habitat conservation grants, water quality grants, and coastal resilience grants.
        - NOAA's Community-Based Restoration Program
        - National Coastal Resilience Fund
        - Capital Improvement Plan
        - Stormwater Utility Fees and Incentives
        - Clean Water State Revolving Fund (EPA)
        - Incentivizing Private Investment
    - Mitigation: Actions might include wetland protection, low impact development, and use of green infrastructure
- Table 5-3: Planning and Policy Resources for Hazard Mitigation
    - Add other city zoning code? Or Building Code?
        - One of the most cost-effective ways to safeguard our communities against natural disasters is to adopt and follow hazard-resistant building codes. Not only are casualties

[1] Resource provided by Commission Bentz:
https://www.tompkinscountyny.gov/files2/planning/Climate_Adaptation/Section%205.4.6%20-%20Infestation%20and%20Invasive_032521_dfr.pdf

reduced, but the cost of building damage is also reduced during a natural disaster. Building codes also help communities get back on their feet faster by minimizing indirect costs such as business interruptions and lost income.

- 5.4 Table 5-6: Recommended action Add: Property buyout of wetlands with green infrastructure value
  - Inclusion of the information on earthquakes, expressed concerns on the hillside behind the hospital and then questioned the steep slopes code and if that should be reviewed.

City Planner Abboud responded that they can revisit the code and there is always room for improvement, he reported that he has been working with the Public Works Director/City Engineer on the coastal setback items which fits into the steep slope guidelines and can get more complex but they can have an evaluation done as it plays along with erosion and destabilization. They are better off than most communities in Alaska but not to the degree that California is.

Further discussion on these topics ensued:

- the condition of the Bridge Creek Dam
  - this has not been spoken of pointedly
  - not sure of any mitigation proposals if something happened with the dam
- Page 60, Emergency Shelters – the city has several places that are designated as emergency shelters and concerns were raised during previous earthquakes, regarding the use of the schools as an emergency shelter due to possible structural damage. It was noted during the visioning event that more table top exercises should be conducted.
- the amount of valuation of the new police station should be corrected
- Reviewing the document brings forth that the City is involved in many things that can go awry even in their small little town
- additional errors noted on table 4.6 page 60 of the packet

A. Minutes for Regular Meeting March 2, 2022

Vice Chair Highland introduced the items and invited Commissioner Venuti to bring forth his comments on the section of the minutes regarding the memorandum.

Commissioner Venuti expressed that the minutes reflected that not all Commissioners were supportive of building code and he believed that to be incorrect as he did not recall that any Commissioners were against establishing building code.

City Planner Abboud reported that he included the unapproved minutes as an attachment to the memorandum in response to questions on whether City Council has seen the minutes.

Additional comments from the Commission ensued that there was unanimous consent on the implementation of building code but not for establishing a building department.

Deputy City Clerk Krause responding to questions on process stated that she can review the audio and correct the minutes if the Commission believes that they currently do not reflect the action and discussion taken. The Commission can then approve the corrected minutes at the next meeting. Mrs.

FEMA Region 10 Natural Hazards Mitigation Planning Process

Local governments have the responsibility to protect the health, safety, and welfare of their citizens through mitigation. Mitigation is most effective when it is based on a comprehensive, long-term plan that is developed before a disaster occurs. The purpose of mitigation planning is to identify local policies and actions that can be implemented over the long term to reduce risk and future losses from hazards.

It's important to recognize that the process is as important as the plan itself. In mitigation planning, as with most other planning efforts, the plan is only as strong as the process and variety of stakeholders involved in its development. The plan should also serve as the written record, or documentation, of the planning process.

TEAMWORK/ENGAGEMENT | **CAPABILITIES/LOCAL RESOURCES** | **ASSESSMENT/ANALYSIS**

FORM A KNOWLEDGEABLE AND DIVERSE PLANNING TEAM THAT WILL CHAMPION MITIGATION

- Form a multi-disciplinary mitigation planning team with staff from multiple departments
- Seek team members who have experience with socioeconomic conditions, built and natural environments, and hazards and disaster history
- Reach out to neighboring jurisdiction(s) and external stakeholders to inform and invite them to participate in the process

CREATE A PUBLIC OUTREACH STRATEGY

- Provide a deliberate opportunity for the general public to be involved to help build support for mitigation in the greater community
- Consider implementing various outreach methods, such as roundtables/forums, community events, and surveys
- Create messaging targeted to specific groups to demonstrate the value of mitigation and how it impacts them directly

REVIEW YOUR CURRENT CAPABILITIES TO MITIGATE HAZARD IMPACTS

- Inventory your community's ordinances, policies, local laws, and plans that relate to guiding and managing growth and development
- Identify community staff, their skills, and available tools to use for implementing mitigation actions
- Research financial resources that the community has access to or is eligible for to fund mitigation actions

DESCRIBE WHAT'S IMPORTANT IN YOUR COMMUNITY

- People: Identify areas of greater population density and those with unique vulnerabilities or who may be less able to respond and recover
- Economy: Identify major employers and primary economic sectors; assess dependencies between economic sectors, businesses, and infrastructure
- Property: Identify the use, age, and construction type for existing structures, cultural resources, infrastructure, and critical facilities; consider current and future growth
- Environment: Identify the most valuable areas that can provide protective functions to reduce the impact of hazard events; identify critical habitat areas and other environmental features

IDENTIFY NATURAL HAZARDS

- Describe each natural hazard in terms of location and strength or magnitude
- Consider effects of long-term changes in weather patterns and climate on hazards
- Communicate the location of hazard-prone areas with maps and other visual aides

EXPLAIN POTENTIAL IMPACTS

- Describe how the hazards could affect the population, economy, property, and environment.
- Describe changes in recent development and evaluate how vulnerability has changed
- Summarize vulnerable assets and potential impacts with problem or [illegible] statements

DEVELOP A MITIGATION ACTION PLAN

- Develop and prioritize strategies to reduce long-term impacts to the population, economy, property, and environment
- Identify who will champion the project, what funding will be needed, and the timeframe to complete the strategy
- Ensure all strategies are developed to address the areas of greatest risk identified in the risk assessment

CELEBRATE SUCCESS

- Issue a press release on plan adoption and approval
- Distribute notices of approval to stakeholders
- Announce the first project to be initiated

YEAR 1–4 | **YEAR 4-5**

YEAR 1-4
PLANNING TEAM MEETS FREQUENTLY
Identify the frequency the planning team will meet to discuss progress on mitigation projects, identifying funding sources, and review integration opportunities into local plans.

YEAR 2-3
REGULARLY ENGAGE THE PUBLIC
Identify various events and opportunities to obtain the public's input on risk-reduction strategies and projects.

YEAR 3-4
REVIEW THE PLAN ANNUALLY AND AGAIN AFTER DISASTERS
After each disaster in your community, assemble the planning team to identify and gain public support for projects to implement, and consider new information to add to the plan.

UPDATE THE PLAN EVERY FIVE YEARS
The plan must be updated every five years to account for changes in development, vulnerabilities, and progress on mitigation activities.

FEMA

REGION X

BENEFITS OF NATURAL HAZARD MITIGATION PLANNING

Mitigation is most effective when it is based on a comprehensive, long-term plan that is developed before a disaster occurs. The purpose of mitigation planning is to identify local policies and actions that can be implemented over the long term to reduce risk and future losses from hazards. These mitigation policies and actions are identified based on an assessment of an area's hazards, vulnerabilities, and risks, and the participation of a wide range of stakeholders and the public in the planning process.

A Federal Emergency Management Agency-approved hazard mitigation plan (HMP) is a requirement for receiving certain types of non-emergency disaster assistance, including funding for mitigation projects. Ultimately, hazard mitigation planning enables action to reduce loss of life and property, lessening the impact of disasters.

HMPs ensure communities are eligible for hundreds of millions of dollars in support each year to:

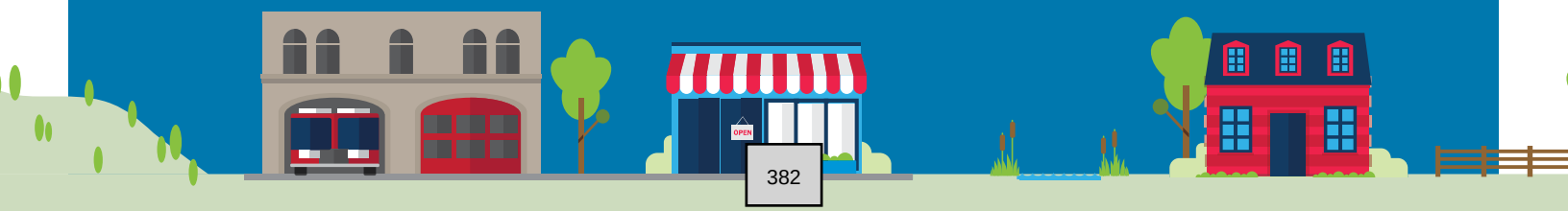
- Retrofit roads, bridges culverts, and similar structures to prevent recurring damage from winter storms and seasonal flooding;
- Buy properties in high-risk floodplains and convert them into local parks and trails; and
- Develop HMPs and additional planning mechanisms that integrate hazard mitigation information.

Less widely known, the hazard mitigation planning process further helps local governments by bringing community partners together to identify vulnerabilities and reduce risk through planning, public works projects, and emergency management functions.

For example, while an emergency management department may facilitate and coordinate the hazard mitigation planning process, the land use planning and public works departments share information to propose mitigation strategies related to their long-term strategic goals, as well as daily permitting efforts.

Your Federal and State partners are available to support your community in this process to help make the most of your mitigation planning process. We can:

1. Contribute to technical assistance in risk analysis;
2. Assist in identifying effective mitigation actions;
3. Provide examples of creative planning processes;
4. Suggest examples for integrating with other planning mechanisms or community goals; and
5. Provide ideas to increase participation by other departments in the planning process.



GET THE MOST OUT OF YOUR HAZARD MITIGATION PLAN

- **Focus on the mitigation strategy.** The mitigation strategy is the plan's primary purpose. All other sections contribute to and inform the mitigation strategy and specific hazard mitigation actions.
- **Emphasize that the planning process is as important as the plan itself.** In mitigation planning, as with most other planning efforts, the plan is only as good as the process and people involved in its development. The plan should also serve as the written record, or documentation, of the planning process.
- **Use the plan and a tool to capture your community's identity.** To have value, the plan must represent the current needs and values of the community and be useful for local officials and stakeholders. Develop the mitigation plan in a way that best serves your community's purpose and people.

MITIGATION ACTION BENEFIT BY SECTOR

Land Use Planning

- Mitigation action can support land use planning and decision making by protecting lives, future development, substantially damaged or improved structures, and other local priorities for maintaining the local economy and a community's identity.

Public Works

- Protect infrastructure investments, either through siting or design improvements, achieved through mitigation action.

Emergency Management

- The HMP is a tool for bringing many departments together to strategize and prioritize mitigation actions. Mitigation actions can complement all areas of emergency management including the preparedness, response, and recovery of a community post-event.

Economic/Community Development

- Mitigation actions implemented strategically throughout a jurisdiction contribute to continuity of operations and help foster effective community development.

Some examples include altering green and grey stormwater infrastructure to account for extreme weather events, purchasing generators to help maintain continuity of operations post-disaster, or integrating risk data into ordinances and building codes to influence future development for the purpose of protecting lives and investments in locations vulnerable to natural hazards.

ADDITIONAL RESOURCES

FEMA Hazard Mitigation Webpage
https://www.fema.gov/hazard-mitigation-planning

Washington State Enhanced Plan
https://mil.wa.gov/other-links/enhanced-hazard-mitigation-plan

Oregon Hazard Mitigation
http://www.oregon.gov/oem/hazardsprep/Pages/Hazard-Mitigation.aspx

Idaho Hazard Mitigation
https://ioem.idaho.gov/Pages/Plans/Mitigation/MitigationPlanning.aspx

Alaska Hazard Mitigation
https://ready.alaska.gov/Plans/Mitigation

COMPONENTS OF NATURAL HAZARD MITIGATION PLANNING

Three key components contribute to natural hazard mitigation planning.

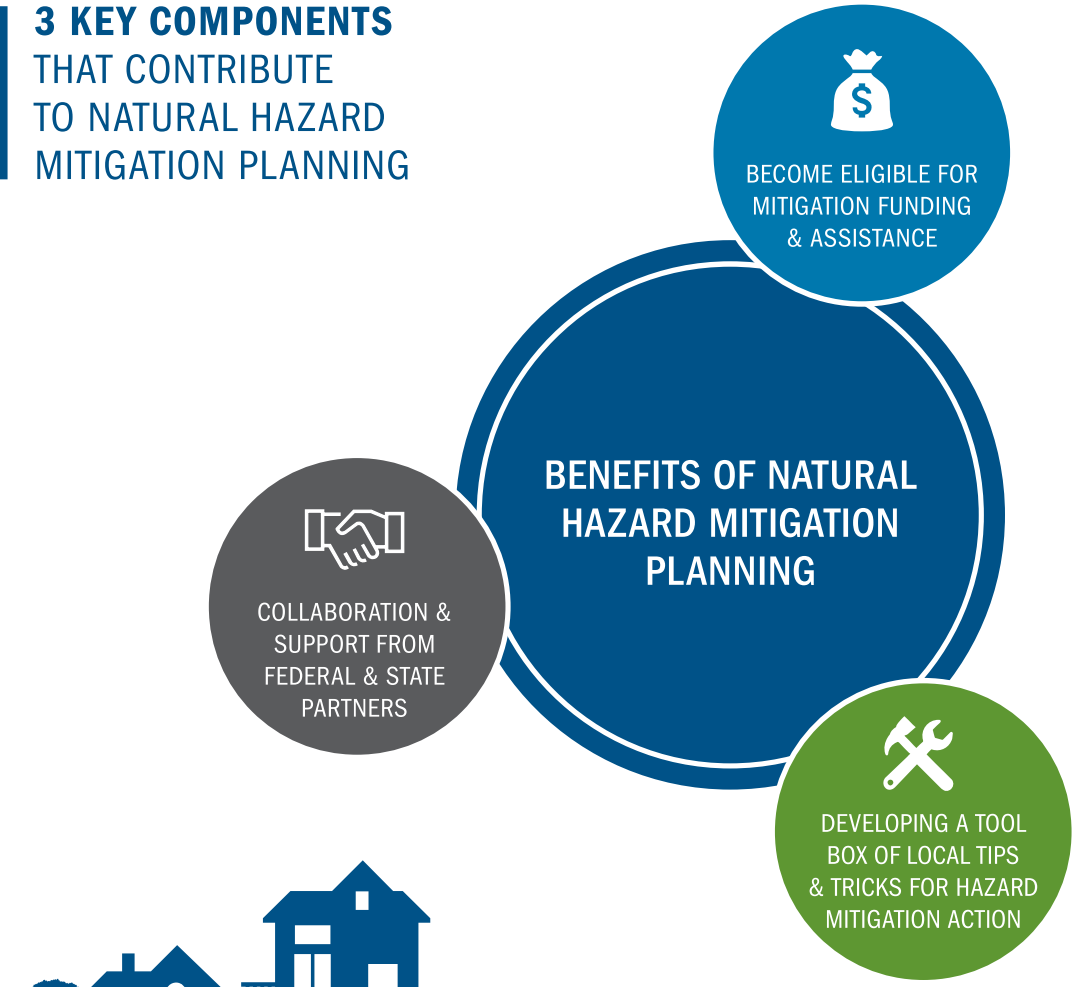
1. Funding: Local and State hazard mitigation plans make communities eligible for hundreds of millions of dollars each year to support:
   - Retrofitting projects;
   - Critical facility resilience;
   - Buyout programs; and
   - Planning development.
2. Coordinated Partner Support: Your Federal and State partners are available to help your community make the most of your mitigation planning process. We can:
   - Contribute to technical assistance in risk analysis;
   - Assist in identifying effective mitigation actions;
   - Provide examples of creative planning processes and plan integration; and
   - Provide ideas to increase participation.
3. Get the most out of your Hazard Mitigation Plan:
   - Focus on the mitigation strategy;
   - Emphasize that the planning process is as important as the plan itself; and
   - Ensure this plan is representative of your community's priorities and values.

BENEFITS OF NATURAL HAZARD MITIGATION PLANNING

MITIGATION ACTION CAN SUPPORT:

- Land use planning and decision making by protecting lives, future development, substantially damaged or improved structures, and other local priorities for maintaining the local economy and a community's identity;
- The protection of infrastructure investments;
- Collaboration of many departments to strategize and prioritize mitigation actions;
- All areas of emergency management including the preparedness, response, and recovery of a community post-event; and
- Continuity of operations and fostering effective community development

3 KEY COMPONENTS THAT CONTRIBUTE TO NATURAL HAZARD MITIGATION PLANNING



MITIGATION ACTION CAN SUPPORT:

- Land use planning and decision making by protecting lives, future development, substantially damaged or improved structures, and other local priorities for maintaining the local economy and a community's identity;
- The protection of infrastructure investments;
- Collaboration of many departments to strategize and prioritize mitigation actions;
- All areas of emergency management including the preparedness, response, and recovery of a community post-event; and
- Continuity of operations and fostering effective community development

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

RESOLUTION 22-052

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA AUTHORIZING TASK ORDERS TO KINNEY ENGINEERING, HDL ENGINEERING, AND NELSON ENGINEERING FOR PAVEMENT RESTORATION PROJECTS AND AUTHORIZING THE CITY MANAGER TO NEGOTIATE AND EXECUTE THE APPROPRIATE DOCUMENTS.

WHEREAS, A Pavement Restoration Program was funded by Ordinance 22-26; and

WHEREAS, Public Works has reassessed the City's paved roads, identified what they feel are the most pressing needs, and developed a schedule of improvements and finds that some of the projects require design or other preparatory work; and

WHEREAS, Term contracts with Kinney Engineering, HDL Engineering, and Nelson Engineering were approved by Resolution 22-038; and

WHEREAS, Public Works requested proposals for the necessary design work from multiple engineering firms, that were directed to use local surveying firm, regardless if they had their own in-house survey team.

NOW, THEREFORE BE IT RESOLVED that the City Council of Homer, Alaska Authorizes task orders to Kinney Engineering, HDL Engineering, and Nelson Engineering and authorizes the City Manager to negotiate and execute the appropriate documents as follows:

Firm	**Project**	**Estimated Cost**
Kinney Engineering	Bay Avenue/B. Street/E. Street	$69,925
HDL Engineering	Develop Grind/Pave Specifications	$8,680
Nelson Engineering	Ohlson Lane/Bunnell Avenue	$55,518
Nelson Engineering	Island View Court	$69,320

PASSED AND ADOPTED by the Homer City Council this ___ day of _____ 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____

MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal Note: Ordinance 22-26 Fund 160

City of Homer
www.cityofhomer-ak.gov

Public Works
3575 Heath Street
Homer, AK 99603
publicworks@cityofhomer-ak.gov
(p) 907- 235-3170
(f) 907-235-3145

Memorandum 22-106

TO: City Council

THROUGH: Rob Dumouchel, City Manager

FROM: Janette Keiser, PE, Director of Public Works

DATE: June 1, 2022

SUBJECT: Task Orders for Engineering Services for Pavement Restoration Projects

I. Issue: The purpose of this Memorandum is to recommend award of Task Orders for engineering services for Pavement Restoration projects.

II. Background:

Ordinance 22-26 appropriated $500,000 to the Pavement Restoration Program. We've reassessed the City's paved roads, identified the most pressing needs, and developed a schedule of improvements. (See attached spreadsheet.) Most of the projects require design or other preparatory work, which is extensive enough that it is unlikely we can design and construct the projects in the same year. Our implementation strategy is to do the preparatory work for a road project in Year 1 and construct the improvements in Year 2.

We have issued Term Contracts, pursuant to Resolution 22-038, to a number of engineering firms capable of performing the design work for the subject projects. As you may recall, work for a particular project is authorized by issuing Task Orders for that project. We requested proposals for the necessary design work from multiple engineering firms. The engineering firms were directed to use local surveying firms, even if the firms had their own in-house survey teams, which a number of the Anchorage-based firms do. The estimated level of effort includes the projected survey costs.

Firm assigned	Project	Estimated cost
• Kinney Engineering	Bay Avenue/B. Street/E. Street	$69,925
• HDL Engineering	Grind & Pave Specifications	$8,680
• Nelson Engineering	Ohlson Lane/Bunnell Ave	$55,518
• HDL Engineering	Island View Court	$69,320

III. Recommendations

That the City Council award Task Orders to the engineering firms listed above.

PRICE PER TASK SUMMARY

FIRM: Kinney Engineering, LLC	PROJECT TITLE: Bay Ave / B St / E St Rehab	DATE: 5/30/22

GROUP	TASK	TASK NAME	LABOR (or FP)	EXPENSES	TOTAL COST	FIRM'S TOTAL PRICE	*SUB-CONTRACTS	PRICE PLUS SUBS
A	1	Survey	$ 1,930.00	$ 105.00	$ 2,035.00	$ 2,035.00	$8,190	$ 10,225.00
A	2	35% Plans, Memos and Cost Estimate	$ 25,905.00	$ 105.00	$ 26,010.00	$ 26,010.00	$ -	$ 26,010.00
A	3	100% Plans, Cost Estimate and Technical Specifications	$ 33,585.00	$ 105.00	$ 33,690.00	$ 33,690.00	$ -	$ 33,690.00

*Subcontractors for negotiated professional or technical services, products, etc. (Commodity items available to the general public at market prices, equipment use, and unit priced items are generally included in estimate as expenses.)

ESTIMATED TOTALS	LABOR (or FP)	EXPENSES	TOTAL COST	FIRM'S TOTAL PRICE	*SUB-CONTRACTS	PRICE PLUS SUBS
FOR FIRM:	**$ 61,420.00**	**$ 315.00**	**$ 61,735.00**	**$ 61,735.00**	**$ 8,190.00**	**$ 69,925.00**

COST ESTIMATE PER TASK

FIRM:	Kinney Engineering, LLC		**PROJECT TITLE:**	Bay Ave / B St / E St Rehab	
TASK NO:	1	**TASK DESCRIPTION:**	Survey		**DATE:** 30-May-22
GROUP:	A	**METHOD OF PAYMENT:**		**FP** ☐ **T&** ✓ **CPFF** ☐	**PREPARED BY:** Leon Galbraith / Randy Kinney

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Princ. Eng. (Kinney)	Senior Professional Engineer 1 (Galbraith)	Engineering Intern EI /EIT-Senior	CADD Technician - Jr							
1.1	Survey	2	4		8							
TOTAL LABOR HOURS		2	4	0	8	0	0	0	0	0	0	0
*** LABOR RATES ($/HR)**		$245.00	$170.00	$115.00	$95.00							
LABOR COSTS ($)		$490.00	$680.00	$0.00	$760.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
	Printing and Publishing Costs	1	$100.00	$100.00
	Round Trip Airfare (1 for PM, 1 for Geotech, 1 for Sr Env Analysist, 1 for Env Analysist)	0	$400.00	$0.00
	Rental Car (1 days for Geotech, 1day for P.I., 1 day for Wetlands)	0	$100.00	$0.00
	Parking at ANC	0	$25.00	$0.00
	Test Pit / Backhoe per hour	0	$200.00	$0.00
	Soil Testing	0	$2,000.00	$0.00
				$0.00
			TOTAL EXPENSES:	**$100**

SUB-CONTRACTORS: Firm Initials and Price Per Task

FIRM:		**Surveys**					
AMOUNT:		$7,800					

COMMENTS:

KE Time to review and cleanup sub's survey CAD files.

FIRM'S TOTAL COST OF LABOR (or Fixed Price):	**$1,930**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES + 5% Markup:	**$105**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$2,035**
TOTAL SUBCONTRACTOR PRICES +5% Markup:	**$8,190**

COST ESTIMATE PER TASK

FIRM:	**Kinney Engineering, LLC**		**PROJECT TITLE:**	**Bay Ave / B St / E St Rehab**	
TASK NO:	2	**TASK DESCRIPTION:**	35% Plans, Memos and Cost Estimate		**DATE:** 30-May-22
GROUP:	A	**METHOD OF PAYMENT:**	**FF** ☐ **FP** ☐ **T&** ☑ **CPFF** ☐	**PREPARED BY:**	Leon Galbraith/ Randy Kinney

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Princ. Eng. (Kinney)	Senior Professional Engineer 1 (Galbraith)	Engineering Intern EI /EIT-Senior	CADD Technician - Jr							
2.0	35% Plans, Memos and Cost Estimate	4.00										
2.1	Drawings 18 sheets total											
	Cover Sheet, 1 sheet		1	1	4							
	Key Map, 1 sheet	Not in 35% Submittal										
	Legend / Abbreviations, 1 sheet	Not in 35% Submittal										
	Notes, 1 sheet	Not in 35% Submittal										
	Estimate of Quantities, 1 sheet	Not in 35% Submittal										
	Pay Item Summary Tables, 2 sheets	Not in 35% Submittal										
	Typical Sections, 1 sheet		4	8	12							
	Roadway Plan & Profile, 5 sheets		16	40	64							
	Sign Summary, 1 sheet	Not in 35% Submittal										
	Intersection / Approach Typ Plans 1 sheet	Not in 35% Submittal										
	Review Std. Dwgs, Determine Applicability	Not in 35% Submittal										
	Additional Road / Drainage Details 2 sheets	Not in 35% Submittal										
	Lift Station Access Lid Detail 1 sheet		4	12	12							
2.2	Memorandum											
	Drainage condition review & design recommendations		2	8	4							
	Pavement section design recommendation		2	6	2							
2.3	Specifications	Not in 35% Submittal										
2.4	Cost Estimates		4	12								
TOTAL LABOR HOURS		4	33	87	98	0	0	0	0	0	0	0	0
*** LABOR RATES ($/HR)**		$245.00	$170.00	$115.00	$95.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
LABOR COSTS ($)		$980.00	$5,610.00	$10,005.00	$9,310.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
	Misc Costs	1	$100.00	$100.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			TOTAL EXPENSES:	**$100**

SUB-CONTRACTORS: Firm Initials and Price Per Task

FIRM:							
AMOUNT:							

COMMENTS:

1. Project Length = 2,200'. All Plan views will be 1"=40' on 11 x 17 sheet size to keep plan views at approximately 450' per sheet.
2. Drainage improvements include ditches and cross culverts
3. No ADEC permitting included.

FIRM'S TOTAL COST OF LABOR (or Fixed Price):		**$25,905**
***IF CPFF*, TOTAL INDIRECT COST @**	**0.00%**	**$0**
FIRM'S TOTAL EXPENSES + 5% Markup:		**$105**
FIRM'S TOTAL COST (no Subcontracts or Fee)		**$26,010**
TOTAL SUBCONTRACTOR PRICES +5% Markup:		**$0**

COST ESTIMATE PER TASK

FIRM: Kinney Engineering, LLC				**PROJECT TITLE:**	Bay Ave / B St / E St Rehab		
TASK NO:	3	**TASK DESCRIPTION:**	100% Plans, Cost Estimate and Technical Specifications			**DATE:**	5/30/22
GROUP:	A	**METHOD OF PAYMENT:**	**FP** ☐ **FPPE** ☐ **T&E** ✓ **CPFF** ☐			**PREPARED BY:**	Leon Galbraith, Randy Kinney

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Princ. Eng. (Kinney)	Senior Professional Engineer 1 (Galbraith)	Engineering Intern EI /EIT-Senior	CADD Technician - Jr	0	0	0	0	0		
3.0	100% Plans, Cost Estimate and Technical Specifications	4										
3.1	Design team review meeting & address 35% comments	1	4	4								
3.1	Drawings 18 sheets total											
	Cover Sheet, 1 sheet		1	1	1							
	Key Map, 1 sheet		1	2	4							
	Legend / Abbreviations, 1 sheet		1	2	4							
	Notes, 1 sheet		2	2	4							
	Estimate of Quantities, 1 sheet		2	4	4							
	Pay Item Summary Tables, 2 sheets		2	4	4							
	Typical Sections, 1 sheet		2	4	4							
	-											
	Roadway Plan & Profile, 5 sheets		8	16	24							
	-											
	Sign Summary, 1 sheet		2	4	4							
	Intersection / Approach Typ Plans 1 sheet		4	12	16							
	Review Std. Dwgs, Determine Applicability		4	6								
	Additional Road / Drainage Details 2 sheets		2	8	12							
	Lift Station Access Lid Detail 1 sheet		2	4	4							
3.3	DOT ROW Approach Permit(s)		2	4	4							
3.4	QA / QC Review & address comments	8	4	8	8							
3.5	Technical Specifications		12									
3.6	Cost Estimates		4	12								
TOTAL LABOR HOURS		13	59	97	97	0	0	0	0	0	0	0
*** LABOR RATES ($/HR)**		$245.00	$170.00	$115.00	$95.00	$0.00	$0.00	$0.00	$0.00	$0.00		
LABOR COSTS ($)		$3,185.00	$10,030.00	$11,155.00	$9,215.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
	Misc Costs	1	$100.00	$100.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
		TOTAL EXPENSES:		**$100**

SUB-CONTRACTORS: Firm Initials and Price Per Task

FIRM:							
AMOUNT:							

COMMENTS:

FIRM'S TOTAL COST OF LABOR (or Fixed Price):	**$33,585**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES + 5% Markup:	**$105**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$33,690**
TOTAL SUBCONTRACTOR PRICES +5% Markup:	**$0**

HDL ENGINEERING Consultants LLC

May 31, 2022

Janette Keiser,PE
Director of Public Works
City of Homer
3575 Heath Street
Homer, AK 99603

Subject: Design Fee Proposal
Pavement Restoration – Grind and Pave Specification

As requested, HDL Engineering Consultants, LLC (HDL) has prepared a fee proposal to develop a standard specification for grind and pave applications of pavement restoration projects.

Scope of Services

Standard Specification Development

HDL's engineering design staff will research existing Department of Transportation and Public Facilities (DOT&PF) and other agency specification for grinding and paving asphalt and review existing COH asphalt removal and replacement specifications. Upon identifying potential specifications, our team will begin developing a specification that coordinates the necessary items and is consistent with existing COH specification format and style. Additionally, we will review existing construction costs to develop a range of potential costs to complete grind and pave by specific types of units. After preparing the first draft of the specification, we will submit the draft documents for review by COH personnel. Submittals will be digital in PDF and Word documentation. A meeting will be held virtually with COH personnel to discuss any substantive comments.

Basic Assumptions

The following basic assumptions were used to prepare this estimate:

- This task doesn't include design documentation.
- No site visits are required.
- COH will provide current specifications and bidding information for HDL to format new specs similarly.

Schedule

Upon Notice to Proceed, HDL will begin researching grind and pave specifications for COH specification development. Our team will develop and submit the draft grind and pave specifications within 30 business days of receiving NTP.

Fee

HDL will provide the aforementioned basic services on a time and expenses basis at our contract hourly rates for an estimated fee of $8,680. See the attached fee estimate.

We appreciate the opportunity to provide this proposal and look forward to assisting the COH on this project. If you have any questions, please contact me at 564-2136.

Sincerely,
HDL Engineering Consultants, LLC

Nick M. Oliveira, PE, PTOE
Principal Civil Engineer/Project Manager
e: noliveira@HDLalaska.com | o: 907.564.2120 | d: 907.382.7656

Attach: Fee Estimate Spreadsheet (1 Page)

Project: Pavement Restoration - Grind and Pave Specification Design

PERSONNEL DESCRIPTION	Principal Eng	Civil Engr	Eng Ast	Drafter	Expenses	Subconsultant
E-Codes	E30	E21	E15	E14		
TASK DESCRIPTION						
Project Management/Coordination	2					
Research Agency Specifications		2	4			
Compile and Develop COH Spec		8				
Develop Standard Details		4	8	8		
Develop Cost Estimating System		4	8			
Compile into Memorandum Format		2	2			
QA/QC Review	4					
Specification Review Meeting	2	2				
Final Documentation		4	4	2		
*ADD ALTERNATE						
Total Hours	8	26	26	10		
Basic Hours	8	26	26	10		
ADD ALTERNATE						
BILLING RATE	$180.00	$135.00	$105.00	$100.00	1.10	1.10
Basic Services	$1,440.00	$3,510.00	$2,730.00	$1,000.00		
* Add Alternate						

	Basic		*Add Alternate		
LABOR	$8,680				
SUBCONSULTANT					
Expenses					
TOTAL COST	$8,680				

NELSON ENGINEERING
CONSULTING ENGINEERS
155 BIDARKA STREET
(907) 283-3583

STRUCTURAL CIVIL
KENAI, ALASKA 99611

June 6th 2022
Janette Keiser, PE, Public Works Director
3575 Heath Street
Homer, Alaska 99603

RE: Task Order 22-01 Ohlson Ln and W. Bunnell Ave Repaving- Fee Proposal.

Dear Ms. Keiser,

I have prepared the attached fee proposal for the Ohlson Ln and W. Bunnell Ave. repaving project for your review. Our fee includes estimates for a field survey and a geotechnical investigation. It is assumed that there will be some removal and replacement of the pavement subbase. The roads to be designed include:

> Ohlson from Sterling Highway to W. Bunnell Ave. at the south end., 950 ft +/-
> W. Bunnell Ave. from Ohlson Ln to Main St. 450' +/-

Road Section
The road improvement project will consist of excavating and importing gravel and pavement as required to provide a typical structural section that conforms to the City of Homer's standard. It is the City's intent that a concrete curb and asphalt sidewalk be placed on at least one side of the roadway to allow for safe pedestrian access. We will work with you to determine the amount and placement of sidewalk that is desired based on the project budget. We will also design ADA ramps from the street to the sidewalks.

Storm Drainage
Drainage along W. Bunnell will be directed to an existing storm drain on the North side of the road. We will investigate potential storm water improvements such as adding curb inlets on the south side of Bunnell that would tie into the existing storm drain.

Surface runoff on Ohlson will be directed to ditches or curbs along both sides of the street. Runoff from Ohlson Road ditches will be directed to existing storm drain system along W. Bunnell. The south end of Ohlson Dr does not have a clear route for stormwater. We will evaluate options to gather and convey stormwater from this section of road.

Water/Sewer Improvements
We will provide details for adjustments of water valve boxes and sewer manholes as required for the new road grades. Additional work related to modifying water/sewer services, or water/sewer mains will be addressed in a task order modification if required.

Permitting Efforts
We will coordinate with ADOT regarding the approach to the Sterling Highway, and the connection at Main St. An approach permit will be required at both locations. I have assumed that no other permitting efforts will be required for either wetlands or drainage.

Construction Phase Services
I would be glad to provide a separate proposal if you would like to have us provide construction phase inspection services.

Submittals and Deliverables
Preliminary Plans will be submitted on 11x17 sheets and will include the proposed grades/vertical alignment and typical details. The plans will consist of base maps on 11x17 plan and profile sheets at 1"=100' scale. The horizontal and vertical alignment for the proposed improvements will be indicated. We will include a cost estimate for the preliminary design. The plans will be approximately 35% complete.

The Final Plans will be bid ready and will be submitted on both 11x17 and 22x34 formats. 22x34 format will be at 1"=50' horizontal scale. We will include a cost estimate with the final design package.

As-built drawings will be submitted on either 22x34 or 24x36 Mylar and/or pdf format, whichever the City prefers.

Fee
I propose a time and expenses fee with a not to exceed total of $55,518.00 for design. This includes an estimate of $5000 for Survey. A spreadsheet depicting how my fee was determined is attached for your use.

Billing
We will bill you monthly based on the percent complete.

Schedule
An exact schedule has not been set however; I understand that the City would like to bid the work this winter, for construction next spring.

Here is a proposed schedule:

Notice to Proceed	June 15th 2022
Survey & Test Holes	July 2022
35% Submittal	October 2022
95% Submittal	November 2022
100% Design complete/submittal	December 2022
Bid Advertised	January 2023
Bids Open	February 2023
Construction NTP	March 2023
Paving Complete	July 2023

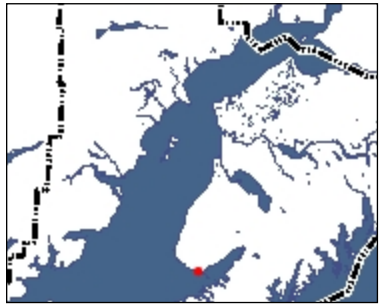
Sincerely,

Matthew Dura, PE

City of Homer							
Ohlson and W Bunnell Repaving							
Nelson Engineering, PC							
Task	Principal	PE	EIT	Cadd	Clerical	Expense	Description
Rate/hr	$165	$147	$115	$105	$70		
Phase 1 - Conceptual Design							**$20,487**
Review Existing Information		2	2				
Obtain Asbuilts (Water/Sewer/Storm)			2				
Site Visit		4	4				
Meet with City	1	2					
Geotechnical Investigation	1	4	12			$9,480	Discovery Drilling
Site Survey	1					$5,000	Estimate
Phase 2 - Preliminary Design							**$16,598**
Title sheet/Control/Index			2				
Plan & Profile (3 shts)	0.5	8	24				
Details	0.5	8	16				
Coordinate Utility Conflicts		2	8				
Storm Sewer/Drainage		8	16				
Driveways		2	8				
Culverts		2	8				
Preliminary Specifications	0.5	2	8				
Preliminary Cost Estimate	0.5	2	8				
Phase 3 - Final Design							**$18,433**
Meet w/City-Review	2	2					
Finalize Plan & Profile	0.5	2	16				
Details	0.5	8	24				
Storm Sewer/Drainage		8	16				
Quantity Calcs		2	8				
Final Specifications	0.5	8	8				
Final Cost Estimate	0.5	4	8				
ADOT/Approach Permits		16	8				
Printing						$275	
Phase 4 Construction Phase							**$0**
Construction Administration							
						$14,755	Subtotal Expenses
						$1,476	Markup on Expenses
	9	96	206	0	0	**$16,231**	**Total Expenses**
Fee	$1,485	$14,112	$23,690	$0	$0	**$39,287**	**Total Fee**
Total:						**$55,518**	**Total Fee+Expen.**

Geographic Information Systems
144 North Binkley Street, Soldotna, Alaska 99669

Map title goes here.



Legend

- Mileposts
- City Limits
- Highways
- Major Roads
- Roads
  - Town Medium Volume
  - Town Low/Seasonal; Other
  - Proposed
- Parcels

Notes

Enter map notes here.

399

DATE PRINTED: 6/6/2022

P.O. Box 111165
Anchorage, Alaska 99511
(907) 344-6431
Fax (866) 901-3499

June 6, 2022 Quote #22-251

Matthew Dura P.E., S.E.
Nelson Engineering P.C.
155 Bidarka Street
Kenai, AK 99611

Discovery Drilling Inc. is pleased to submit this cost estimate for Geotechnical Drilling Services in Homer, Alaska. We plan to field a Geoprobe 7822DT or truck-mounted CME-75 operated by a two-man crew to complete this work.

Discovery Drilling understands the scope of work to be as follows:

- Mobilize/demobilize drill, equipment, & crew to site.
- Drill, sample, and backfill (8) soil borings to approximately 6' each, collecting split spoon samples at standard geotechnical intervals. Assume hollow stem auger work.
- Asphalt will need to be cut and patched for (6) of the holes.
- It is understood that the locations of the borings are on low speed/traffic roads and Discovery setting up signs/cones will be an appropriate amount of traffic control.

Discovery Drilling assumes the following regarding this work:

- Utilities will be located and marked as necessary by others.
- No wage requirements apply to this work.
- Any required Right of Way permits will be acquired by others.

Mobilization/Demobilization of drill, equipment, & crew to site – LS:	$4,200
Geotechnical Drilling Services – estimate 1 day @ $5,100/day:	$5,100
Asphalt cut & patch materials – estimate 6 @ $30/ea:	$180
Estimated Project Total:	**$9,480.00**

We look forward to working with you on this project; please call with any questions you may have.

Sincerely,

DJ Wardwell
General Manager
Discovery Drilling Inc.

June 6, 2022

Janette Keiser,PE
Director of Public Works
City of Homer
3575 Heath Street
Homer, AK 99603

Subject: Design Fee Proposal
Pavement Restoration – Island View Court

As requested, HDL Engineering Consultants, LLC (HDL) has prepared a fee proposal to provide design services for the Island View Court Pavement Restoration project that includes a large culvert replacement within the corridor. The project will include survey and design.

Scope of Services

Topographic Survey & Coordination

HDL's engineering design staff will perform a site visit to evaluate and inventory site features within the Island View Court corridor. The evaluations and inventory will include signs, drainage facilities, above ground utilities, and other features that may affect the design. After performing the evaluations and inventory, our team will coordinate the survey effort with Geovera, LLC to collect topographic, Right-of-Way (ROW), and utility features necessary to provide a complete design for the project. For more information regarding the survey, see Geovera's fee proposal.

Task 2 – Design.

HDL will prepare design documents for the proposed pavement and drainage improvements on Island View Court. The design improvements will consist of improving the roadway asphalt throughout Island View Court along with driveway culverts and a 36-inch cross culvert that is structurally deficient. Improvements may also include signage improvements. HDL will also review potential Traffic Control alternatives with the COH to determine how to provide acceptable access to the residents during construction of the large culvert crossing.

HDL will develop and submit the 35% and Final (100% complete) PS&E documents for review and use by COH personnel. Submittals will include digital half-size plan sets; specifications (in COH Format); and engineer's estimate using COH standard bid items. At each milestone deliverable (35% and Final PS&E), a meeting will be held virtually with COH personnel to discuss any substantive comments.

Basic Assumptions

The following basic assumptions were used to prepare this estimate:

- HDL will perform one site visit to inventory and evaluate the corridor features.
- The project design will use COH specifications format and COH standard bid items. Specifications will be prepared for Final (100% complete) documents.
- Storm Water Pollution Prevention Plan will be developed with the 100% complete design.
- COH will pay any utility company fees related to utility locate requests.
- Survey and mapping will be performed in summer conditions.
- Drainage improvements are not included in this fee proposal.
- We anticipate the structural section work will consist of reclamation or a combination of structural section improvements with repaving. Geotechnical investigations and engineering is not included in this contract.
- Electrical engineering, environmental, and public involvement is not included in this fee, but can be added by amendment.
- ROW acquisitions are not anticipated. Easement or permit acquisition documents are not included, but can be added by amendment.
- Coordination with utilities and utility relocation services are not included, but can be added by amendment.
- Bidding assistance and construction assistance are not included in this task, but can be added by amendment.

Schedule

Upon Notice to Proceed, HDL will begin coordinating the survey and evaluating/inventorying features in the corridor. We anticipate survey to occur fall/summer 2022. Our team will begin the design after receiving the survey basemap and complete the 35% PS&E submittal package within 40 business days.

Fee

HDL will provide the aforementioned basic services on a time and expenses basis at our contract hourly rates for an estimated fee of $69,320. See the attached fee estimate.

We appreciate the opportunity to provide this proposal and look forward to assisting the COH on this project. If you have any questions, please contact me at 564-2136.

Sincerely,
HDL Engineering Consultants, LLC

Nick M. Oliveira, PE, PTOE
Principal Civil Engineer/Project Manager
e: noliveira@HDLalaska.com | o: 907.564.2120 | d: 907.382.7656

Attach: Fee Estimate Spreadsheet (1 Page)
Geovera, LLC Fee Estimate (1 Page)

Project: Pavement Restoration - Island View Court Design

	PERSONNEL DESCRIPTION	Principal Eng	Civil Engr	Eng Ast	Drafter	Enviro Ana	Expenses	Subconsultant
	E-Codes	E30	E21	E15	E14	E20		
	TASK DESCRIPTION							
	Project Management/Coordination	4						
	Inventory Review and Compile		8	8			$300	
	Survey Coordination	2	4		2			
	Compute Political Boundaries/ACAD							$1,200
	Topographic/Planimetric Survey							$2,400
	Post-Process/ACAD Drawing/SCS							$2,400
	Utility As-Built Review		2	4	4			
	SWPPP Plan Development		4			20		
1	Cover			1	1			
1	Legend, Index, Notes			1	1			
1	Survey Control Sheet		2		2			
7	Layout Plans (1"=20')		40	80	80			
1	Typical Sections/Details		4	8	8			
	Drainage Improvements		20	40	40			
2	Summary Tables		6	12	12			
1	Sign Summary		4	8	8			
	Traffic Control	4	4		4			
	35% QA/QC Review	8						
	35% Estimate		8	16				
	35% Design Review Meeting		2	2				
	Site Visit	4	4				$300	
	Final QA/QC Review	6						
	Final Plan Technical Specifications		16					
	Final Estimate		4	8				
	*ADD ALTERNATE							
	Total Hours	28	132	188	162	20	$600	$6,000
	Basic Hours	28	132	188	162	20	$600	$6,000
	ADD ALTERNATE							
	BILLING RATE	$180.00	$135.00	$105.00	$100.00	$130.00	1.10	1.10
	Basic Services	$5,040.00	$17,820.00	$19,740.00	$16,200.00	$2,600.00	$660.00	$6,600.00
	* Add Alternate							

	Basic		*Add Alternate				
LABOR	$62,060						
SUBCONSULTANT	$6,600						
Expenses	$660						
TOTAL COST	**$69,320**						

Geovera, LLC

PO Box 3235 • Homer, Alaska 99603 • (907) 399-4345 • scsmith@gci.net

Island View Court Pavement Restoration Project
Surveying Proposal

June 3, 2022

HDL Engineering Consultants, LLC
Nick Oliveira, P.E.
3335 Arctic Blvd., Suite 100
Anchorage, Alaska 99503

Nick,

This letter is to outline the Geovera, LLC scope and costs for the Island View Court Pavement Restoration Project design survey.

This proposal includes topographic/planimetric surveying of approximately 1000 feet of Island View Court from Towne Heights Lane to the Island View Court cul-de-sac deliverable in AutoCad Civil3D. Design survey to include the following:

- Topographic/Planimetric survey to cover the entire right-of-way corridor to ten to fifteen feet past the right-of-way limits
- Roadway, driveways, utilities, culvert inverts/drainage structures, signing
- Topographic/Planimetric survey of main drainage / culvert detail
- Survey control sheet on HDL or Geovera title block

The costs break down as follows:

Compute political boundaries / AutoCad drawing
8 Hours @$150.00 - $1,200.00

Topographic/Planimetric survey
16 Hours @$150.00- $2,400.00

Post-Process field data / AutoCad drawing / Survey Control Sheet
16 Hours @$150.00 - $2,400.00

Total cost for the items described in this proposal is $6,000.00

Please let me know if you have any questions or require clarification of any of the items in this proposal.

Stephen C. Smith, P.L.S.

Road	Condition	Conceptual Cost of Restoration	Strategy	Engineer assigned to project	Estimated Design cost
Bay View Avenue	asphalt cracking & other wear	$220,000	2022 - grind & pave	HDL	$ 8,680
Bay Avenue/ B Street/E Street	asphalt cracking, raveling & other wear, lift station access, located near the middle of an intersection, needs replacement	$460,000	2022 - Design 2023 - construct	Kinney	$ 69,925
Ohlson Lane/Bunnell Ave	drainage & storm drain issues; pavement deterioration	$560,000	2022 - design, incorporate pedestrian means 2023 - construct	Nelson	$ 55,518
Island View Court	failing culvert, asphalt cracking	$280,000	2022 - purchase culvert so we have it on hand in the case of emergency & design 2023 - construct	HDL	$ 69,320
Heath Street	possible storm drain issues; subgrade and ADA ramp issues; pavement deteriorating;	$520,000	2023 - design 2024 - construct	TBD	
Bayview Court & Calhoun Court	asphalt cracking & other wear, drainage issues, road ends need to be addressed	$200,000	2022 - Conduct public outreach to discuss cul de sac configuration 2023 - design 2024 - construct	TBD	
Elderberry Drive/ Elderberry Court	asphalt cracking & other wear	$270,000	2024 - grind & pave	TBD	

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

ORDINANCE 22-26

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING THE FY22 CAPITAL BUDGET BY APPROPRIATING $500,000 FROM THE HOMER ACCELERATED ROADS AND TRAILS (HART) ROAD FUND TO ESTABLISH A PAVEMENT RESTORATION PROGRAM.

WHEREAS, $177,895 was budgeted in the FY 22/23 Capital Budget for grinding and paving East Bayview Ave, which had been assessed, using the PACER condition evaluation methodology we introduced in 2020, as being in dire need of pavement restoration; and

WHEREAS, The Road Financial Plan calls for the investment of two – $175,000 grind and pave projects every other year; and

WHEREAS, We have learned this is not enough because due to the substantial increases in the cost of oil, which is a necessary component of asphalt, the cost of asphalt has sky-rocketed; and

WHEREAS, We're finding more of our paved roads need restoration than previously thought and some of them don't need just a face lift, but a complete reconstruction.

WHEREAS, We have commissioned one of our Term Contract engineers to help us evaluate our pavements and identify the most cost effective options for restoration so we can update the Road Financial Plan in a sensible way; and

WHEREAS, We know we need to work on a couple of high traffic roads and the $177,895 that is currently in the budget will not cover the costs; and

WHEREAS, We'd like to create a Pavement Restoration Program, which we can access for high priority projects.

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. The FY 22 Capital Budget is hereby amended by appropriating $500,000 from the HART Road Fund to create the Pavement Restoration Program as follows:

Fund	Description	Amount
160	Pavement Restoration Fund	$500,000

Section 2. This is a budget amendment ordinance only, is not permanent in nature, and shall not be codified.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA, this 24th day of May, 2022.

CITY OF HOMER

KEN CASTNER, MAYOR

ATTEST:

Renee Krause

RENEE KRAUSE, MMC, ACTING CITY CLERK

YES: 6
NO: Ø
ABSTAIN: Ø
ABSENT: Ø

First Reading: 5/9/22
Public Reading: 5/23/22
Second Reading: 5/23/22
Effective Date: 5/24/22

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

RESOLUTION 22-053

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA AUTHORIZING TASK ORDERS TO BISHOP ENGINEERING, LLC TO DESIGN NON-MOTORIZED TRANSPORTATION PROJECTS AND AUTHORIZING THE CITY MANAGER TO NEGOTIATE AND EXECUTE THE APPROPRIATE DOCUMENTS.

WHEREAS, A Non-Motorized Transportation Opportunity Fund was established by Ordinance 22-25; and

WHEREAS, The 2022 Non-Motorized Trails and Transportation Priority List identifies the highest priority opportunities to develop non-motorized transportation routes and has been discussed with the City Council, Parks Art Recreation and Culture Advisory Commission, Economic Development Advisory Commission, and the Planning Commission; and

WHEREAS, The City approved a term contract with Bishop Engineering, LLC by Resolution 22-038 for engineering services; and

WHEREAS, Public Works requested proposals for the for the West Fairview Avenue Extension, Adams Drive Bike Path, and West Hill Road Connection, and the cost of services includes the necessary survey work, which will be performed by a local surveying firm.

NOW, THEREFORE BE IT RESOLVED that the City Council of Homer, Alaska Authorizes task orders to Bishop Engineering, LLC and authorizes the City Manager to negotiate and execute the appropriate documents as follows:

Non-motorized Route	**Estimated Cost**
West Fairveiw Avenue Extension	$12,960
Adams Drive Bike Path	$12,360
West Hill Road Connection	$27,000

PASSED AND ADOPTED by the Homer City Council this ___ day of _____. 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____

MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal Note: Ordinance 22-25 Funds 160 & 165

City of Homer
www.cityofhomer-ak.gov

Public Works
3575 Heath Street
Homer, AK 99603
publicworks@cityofhomer-ak.gov
(p) 907- 235-3170
(f) 907-235-3145

Memorandum 22-107

TO: City Council

THROUGH: Rob Dumouchel, City Manager

FROM: Janette Keiser, PE, Director of Public Works

DATE: June 1, 2022

SUBJECT: Task Orders for Engineering/Survey Services for Sidewalk/Path Projects

I. Issue: The purpose of this Memorandum is to recommend award of Task Orders for engineering and survey services for sidewalk and path projects.

II. Background:

Ordinance 22-25 appropriated $850,000 to the Non-Motorized Transportation Opportunity Program. We've identified the highest priority opportunities to develop non-motorized routes, where opportunities have arisen because of recent or concurrent development activity in the area. Each of these opportunities are identified in the 2022 Non-Motorized Trails and Transportation Priority List, which we've discussed before with the City Council, PARCAC, the Planning Commission, and the EDC.

We have issued Term Contracts, pursuant to Resolution 22-038, to a number of engineering firms capable of performing the design and/or survey work for the subject projects. Bishop Engineering, LLC is the engineer of record for the local developments we're interested in. Thus, they are well positioned to cost effectively expand their scope to provide design and survey services for the non-motorized routes. We requested proposals for the routes we are interested in. The estimated cost of services for West Fairview Ave and Adams Drive include survey work, to be performed by a local surveyor. The work will be complete by the end of July, which should enable us to construct the routes this season. The schedule for the West Hill Road Connection depends on negotiations with the AK DOT and available funding.

Non-motorized Route	**Estimated Cost of Services**
• West Fairview Avenue Extension	$12,960
• Adams Drive Bike Path	$12,360
• West Hill Road Connection	$27,000

III. Recommendations

That the City Council authorize Task Orders to Bishop Engineering LLC for the subject projects.

Address: PO Box 2501, Homer, AK 99603-2501 ● **Telephone**: (907) 299-7609 ● **Website:** www.bishop-engineering.com

May 24, 2022

Ms. Janette Keiser, PE
Public Works Director
City of Homer
3575 Heath Street
Homer, AK 99603

RE: Professional Civil Engineering Design Services (Task Order 22-01)
Fairview Avenue – Eric Lane Sidewalk/Path Design

Dear Ms. Keiser:

BISHOP ENGINEERING, LLC is pleased to submit this proposal to provide professional engineering services for the development of plans specifications and estimate (PS&E) for a sidewalk and path along Fairview Avenue and Eric Lane from Mullikin Avenue, heading west to meet the existing sidewalk along Eric Lane. We will provide survey and plans, specifications, and estimate for the project at 35%, 65%, and 100% milestones.

Scope of Work Tasks:

1. Perform design survey of the corridor along Fairview Avenue and Eric Lane from Mullikin Avenue, heading west to the existing sidewalk along Eric Lane.
2. Provide 35% design level plans with construction cost estimate for City review.
3. Provide 65% design level plans, specifications and construction cost estimate with revisions addressing City review comments of 35% plans and estimate.
4. Provide 100% construction ready plans, specifications, and construction cost estimate with revisions addressing City review comments on 65% submittal.

All plans on 11" x 17" pdfs. Final submittal of plans in pdf and AutoCAD formats. Project does not include bidding and construction assistance.

Schedule:

1. Tasks 1 will be completed by June 10, 2022 assuming an NTP by May 30, 2022.
2. Task 2 will be completed by June 17, 2022.
3. Task 3 will be completed by July 8, 2022 with 1 week review period for City review of 35% package.
4. Task 4 will be completed by August 12, 2022 with 1 week review period for City review of 65% package.

Fee:

The total engineering and survey fee for the completion of all tasks for Task Order 22-01 is $12,960.00. Invoicing will occur at month end on a percent complete basis per task during the subject month.

Feel free to call me with any questions you may have at (907) 299-7609.

Respectfully,

John S Bishop

John S. Bishop, SE, PE

BISHOP ENGINEERING, LLC

TASK ORDER #22-01 (FAIRVIEW AVENUE ERIC LANE SIDEWALK/PATH DESIGN)

BISHOP ENGINEERING, LLC - LABOR CHARGES				
		GOEVARA SubConsultant Surveyor	John Bishop, SE Senior Civil Engineer	
		$150.00/hr	$160.00/hr	
PART 2.0 - SCOPE OF SERVICES TO BE PERFORMED BY ENGINEER				
TASK NO.	DESCRIPTION	**HOURS**	**HOURS**	**COST**
1	Design Survey	12	2	$2,120.00
2	Prepare 35% preliminary design plans and estimate	4	32	$5,720.00
3	Prepare 65% PS&E	0	24	$3,840.00
4	Prepare a 100% Bid Ready PS&E	0	8	$1,280.00
		16	**66**	**$12,960.00**

BISHOP ENGINEERING, LLC - DIRECT COST ITEMS				
DIRECT COSTS				
	DESCRIPTION			

TOTAL FEE	**$12,960.00**

Address: PO Box 2501, Homer, AK 99603-2501 ● **Telephone**: (907) 299-7609 ● **Website:** www.bishop-engineering.com

May 24, 2022

Ms. Janette Keiser, PE
Public Works Director
City of Homer
3575 Heath Street
Homer, AK 99603

RE: Professional Civil Engineering Design Services (Task Order 22-02)
Adams Drive Bike Path Design

Dear Ms. Keiser:

BISHOP ENGINEERING, LLC is pleased to submit this proposal to provide professional engineering services for the development of plans specifications and estimate (PS&E) for a bike path along Adams Lane from East End Road heading south to Jack Gist Park using the pedestrian easement Parcel 17924036 and Jack Gist Lane. We will provide survey and plans, specifications, and estimate for the project at 35%, 65%, and 100% milestones.

Scope of Work Tasks:

1. Perform design survey of the corridor along Adams Drive, pedestrian easement and Jack Gist Lane.
2. Provide 35% design level plans with construction cost estimate for City review.
3. Provide 65% design level plans, specifications and construction cost estimate with revisions addressing City review comments of 35% plans and estimate.
4. Provide 100% construction ready plans, specifications, and construction cost estimate with revisions addressing City review comments on 65% submittal.

All plans on 11" x 17" pdfs. Final submittal of plans in pdf and AutoCAD formats. Project does not include bidding and construction assistance.

Schedule:

1. Tasks 1 will be completed by June 8, 2022 assuming an NTP by May 30, 2022.
2. Task 2 will be completed by June 17, 2022.
3. Task 3 will be completed by July 8, 2022 with 1 week review period for City review of 35% package.
4. Task 4 will be completed by July 29, 2022 with 1 week review period for City review of 65% package.

Fee:

The total engineering and survey fee for the completion of all tasks for Task Order 22-02 is $12,360.00. Invoicing will occur at month end on a percent complete basis per task during the subject month.

Feel free to call me with any questions you may have at (907) 299-7609.

Respectfully,

John S Bishop

John S. Bishop, SE, PE

BISHOP ENGINEERING, LLC

TASK ORDER #22-02 (ADAMS DRIVE BIKE PATH DESIGN)

BISHOP ENGINEERING, LLC - LABOR CHARGES				
		GOEVARA SubConsultant Surveyor $150.00/hr	John Bishop, SE Senior Civil Engineer $160.00/hr	
PART 2.0 - SCOPE OF SERVICES TO BE PERFORMED BY ENGINEER				
TASK NO.	DESCRIPTION	**HOURS**	**HOURS**	**COST**
1	Design Survey	8	2	$1,520.00
2	Prepare 35% preliminary design plans and estimate	4	32	$5,720.00
3	Prepare 65% PS&E	0	24	$3,840.00
4	Prepare a 100% Bid Ready PS&E	0	8	$1,280.00
		12	**66**	**$12,360.00**

BISHOP ENGINEERING, LLC - DIRECT COST ITEMS				
DIRECT COSTS				
	DESCRIPTION			

TOTAL FEE	**$12,360.00**

BISHOP ENGINEERING, LLC

Address: PO Box 2501, Homer, AK 99603-2501 ● **Telephone**: (907) 299-7609 ● **Website:** www.bishop-engineering.com

June 6, 2022

Ms. Janette Keiser, PE
Public Works Director
City of Homer
3575 Heath Street
Homer, AK 99603

RE: Professional Civil Engineering Design Services (Task Order 22-XX)
West Hill Road Bike Path Design

Dear Ms. Keiser:

BISHOP ENGINEERING, LLC is pleased to submit this proposal to provide professional engineering services for the development of plans specifications and estimate (PS&E) and obtaining necessary permitting for a bike path along West Hill Road from the Sterling Highway to a location near Eric Lane within Alaska DOT (ADOT) right-of-way. We understand Geovera, LLC is currently performing a project survey of the bike path corridor and will provide mapping for design and permitting purposes. We will provide all design services to complete plans, specifications, and estimate for the project at 35%, 65%, and 100% milestones in addition to completing a wetland delineation along the project footprint, working with the City to obtain the Army Corps of Engineers (ACOE) Section 404 permit, and obtaining approvals and permits from ADOT.

Scope of Work Tasks:

1. Project Management for the project to include project development team (PDT) meetings with the City, ADOT, ADEC, and ACOE during design and permitting efforts and agency coordination.
2. Perform a wetland delineation for the project corridor within the anticipated area of impact and request a preliminary jurisdictional determination from ACOE. Submit a Section 404 permit application with the design plans and exhibits showing the areas and volumes of wetland impacts.
3. Coordinate with ADOT reviewers during the design process and submit the permit application and obtain approval to construct the bike path within the ADOT right-of-way. This may include traffic control plans.
4. Provide 35% design level plans with construction cost estimate for City review.
5. Provide 65% design level plans, specifications and construction cost estimate with revisions addressing City review comments of 35% plans and estimate.
6. Provide 100% construction ready plans, specifications, and construction cost estimate with revisions addressing City review comments on 65% submittal.
7. Develop SWPPP details in the plans and SWPPP documentation for filing of NOI by City.

All plans on 11" x 17" pdfs. Final submittal of plans in pdf and AutoCAD formats. Project does not include bidding and construction assistance.

Schedule:

1. Tasks 1 will be ongoing throughout the project development schedule.
2. Task 2 wetland delineation will be completed by July 29, 2022 assuming an NTP on July 1, 2022. Section 404 permitting will be completed by January 31, 2023.
3. Task 3 efforts will be ongoing during the design phase with full ADOT permitting approval obtained by February 28, 2023.
4. Task 4 will be completed by September 2, 2022.
5. Task 5 will be completed by November 4, 2022 with 2 week review period for City review of 35% package.
6. Task 6 will be completed by December 23, 2022 with 2 week review period for City review of 65% package.
7. Task 7 efforts will be completed by January 31, 2023.

Fee:

The total engineering fee for the completion of all tasks for the West Hill Bike Path is $27,200.00. Invoicing will occur at month end on a percent complete basis per task during the subject month.

Feel free to call me with any questions you may have at (907) 299-7609.

Respectfully,

John S Bishop

John S. Bishop, SE, PE
BISHOP ENGINEERING, LLC

TASK ORDER #22-XX (WEST HILL BIKE PATH DESIGN FROM STERLING HIGHWAY TO ERIC LANE)

BISHOP ENGINEERING, LLC - LABOR CHARGES			
		John Bishop, PE Senior Civil Engineer $160.00/hr	
PART 2.0 - SCOPE OF SERVICES TO BE PERFORMED BY ENGINEER			
TASK NO.	DESCRIPTION	**HOURS**	**COST**
1	Project Management - PDT Meetings and Review Agency Coordination	12	$1,920.00
2	Wetland Delineation and ACOE Permitting	40	$6,400.00
3	ADOT&PF Review and Permitting	16	$2,560.00
4	Prepare 35% Preliminary Design Plans and Estimate	28	$4,480.00
5	Prepare 65% PS&E	40	$6,400.00
6	Prepare 100% Bid Ready PS&E	18	$2,880.00
7	SWPPP Plans and Documentation for Filing NOI by City	16	$2,560.00
		170	**$27,200.00**

BISHOP ENGINEERING, LLC - DIRECT COST ITEMS		
DIRECT COSTS DESCRIPTION		

TOTAL FEE	**$27,200.00**

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

RESOLUTION 22-054

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA AUTHORIZING A TASK ORDER TO RESPEC COMPANY TO DEVELOP AN ENGINEERED SOLUTION FOR THE WASTE WATER TREATMENT PLANT CLARIFIER AND AUTHORIZING THE CITY MANAGER TO NEGOTIATE AND EXECUTE THE APPROPRIATE DOCUMENTS.

WHEREAS, The belt-driven clarifiers at the Waste Water Treatment Plant are in need of immediate repair; and

WHEREAS, The City approved a term contract with RESPEC Company by Resolution 22-038 for engineering services; and

WHEREAS, RESPEC has a mechanical engineer based in Homer who has the technical expertise to assist the City in developing an engineered solution for the belt-driven clarifiers.

NOW, THEREFORE BE IT RESOLVED that the City Council of Homer, Alaska Authorizes a task order to RESPEC Company to develop an engineered solution for the Waste Water Treatment Plant and authorizes the City Manager to negotiate and execute the appropriate documents.

PASSED AND ADOPTED by the Homer City Council this ___ day of _____. 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal Note: Ord 22-34 Sewer Capital Asset Repair and Maintenance Allowance Fund

City of Homer
www.cityofhomer-ak.gov

Public Works
3575 Heath Street
Homer, AK 99603
publicworks@cityofhomer-ak.gov
(p) 907- 235-3170
(f) 907-235-3145

Memorandum 22-108

TO: Mayor Castner and Homer City Council

THROUGH: Rob Dumouchel, City Manager

FROM: Janette Keiser, PE, Director of Public Works

DATE: June 1, 2022

SUBJECT: Task Orders for Engineering Services for WWTP Clarifier Belt Repairs

I. Issue: The purpose of this Memorandum is to recommend award of a Task Order for engineering services related to the WWTP Clarifier Belt Repairs.

II. Background:

Memorandum 22-103 identifies the urgent need for repairs to the City's belt-driven clarifiers at the Waste Water Treatment Plant (WWTP).

We have issued Term Contracts, pursuant to Resolution 22-038, to a number of engineering firms capable of performing the professional services for a wide variety of engineering disciplines, including RESPEC Company. RESPEC is a national engineering firm, with one mechanical engineer, Luke Rubalcava, PE, based in Homer. We asked Mr. Rubalcava to visit the WWTP to view the problems first hand and offer suggestions. While we have not done business with RESPEC before, we have confidence that Mr. Rubalcava can help us, mostly because the problem needs on-site attention. We asked RESPEC to submit a proposal for Mr. Rubalcava's services to help us develop an engineered solution.

III. Recommendations

That the City Council authorize a Task Order to RESPEC Company in the amount of $22,840 to help us find an engineered solution to the clarifier problems.

STATEMENT OF SERVICES

CITY OF HOMER

TASK ORDER #22-01: WWTP CLARIFIER BELT

MAY 2022

CITY OF HOMER
TASK ORDER #22-01: WWTP CLARIFIER BELT
HOMER, ALASKA

The City of Homer (CITY) has requested that RESPEC Company, LLC (ENGINEER) provide engineering services to identify options for repairing/replacing the clarifier mechanism at the WWTP, develop specifications for procurement and installation of the selected repair/replacement option, provide construction administration support to facilitate procurement of equipment/labor, and perform quality control during construction.

1.0 PROJECT SCOPE SUMMARY

This Statement of Services details the scope to be provided by RESPEC Company, LLC (ENGINEER or RESPEC).

1.1 DEFINITIONS

- CITY – City of Homer
- ENGINEER – RESPEC
- QC – Quality Control
- RFI – Requests for Information
- WWTP – Wastewater Treatment Plant

1.2 SCOPE OF WORK TO BE PROVIDED BY RESPEC

1. Research options for repairing or replacing the clarifier equipment
2. Develop specifications for repair/replacement work
3. Help CITY procure vendor(s) for equipment/labor
4. Provide QC during installation and commissioning process

2.0 ENGINEERING REQUIREMENTS

Upon this Agreement becoming effective, the ENGINEER shall perform the tasks:

- Assessment and Option Analysis
- Procurement/Design Documents
- Bid Phase Services
- Construction Administration and Commissioning

2.1 ASSESSMENT AND OPTION ANALYSIS

- Perform site investigation(s) to collect information needed to identify and evaluate equipment repair/replacement options – In Process
- Coordinate with existing equipment vendor (Evoqua) – In Process
- Coordinate with alternative equipment vendor (TBD)
- Develop summary memo for repair/replacement options (including rough order of magnitude cost estimate)
- Review summary memo with the CITY and adjudicate questions/comments

2.2 PROCUREMENT/DESIGN DOCUMENTS

- Develop design narrative for selected repair/replacement option with the following appendices:
  - Redlined edits to existing record drawings
  - Stamped and Signed Specifications
- Coordinate with selected basis of design vendor to develop design narrative appendices
- Review design narrative with the CITY and adjudicate questions/comments

2.3 BID PHASE SERVICES

- Respond to contractor questions
- Respond to equipment vendor questions

2.4 CONSTRUCTION ADMINISTRATION AND COMMISSIONING

- Respond to contractor RFIs
- Review contractor and vendor submittals
- Perform QC site visits during construction and record findings in site visit reports
- Perform commissioning of new equipment with assistance from equipment vendor, contractor, and/or CITY staff

3.0 ASSUMPTIONS

1. The procurement and installation of the repair/replacement equipment will be fully described in the design narrative and appendices (described above). A drawing package is not required for this scope of work.
2. Electrical engineering scope has been included in the latter phases of work to account for the required design associated with replacing the existing motors and variable frequency drives (VFDs). If the selected repair/replacement option does not include electrical scope, this portion of scope can be disregarded.
3. The total price does not include additional labor and expenses from the schedule being delayed by the CITY, the contractor, or the equipment vendor.

4.0 CITY RESPONSIBILITIES

1. Provide record drawings and O&M data for the WWTP Clarifier Equipment- Completed
2. Select the preferred repair/replacement from the repair/replacement option summary memo.

5.0 SCHEDULE

The schedule for the project is as follows, or to be determined, pending coordination with the CITY:

/ Official Notice to Proceed	June 1, 2022
/ Preliminary Pricing	June 13, 2022
/ Assessment and Option Analysis	June 22, 2022
/ Procurement/Design Documents	TBD
/ Bid Phase Services	TBD
/ Construction Administration and Commissioning	TBD

6.0 METHOD OF PAYMENT

The Consultant will perform the services on a time and expenses not-to-exceed basis for $22,840. See attachment for additional information.

END OF STATEMENT OF SERVICES

	Phase	Mechanical	Electrical	Total
1	#401 - Assessment and Option Analysis	$3,725.00	$0.00	$3,725.00
2	#441 - Procurement/Design Documents	$6,145.00	$1,620.00	$7,765.00
3	#490 - Bid Phase Services	$1,320.00	$580.00	$1,900.00
4	#901 - Construction Administration and Commissioning	$8,580.00	$870.00	$9,450.00

	Total			$22,840.00

Phase

#401 - Assessment and Option Analysis	Senior Mech Eng	Lead Mech Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$180.00	$165.00	$115.00		
Task				0	$0.00
Site Investigation		4		4	$660.00
Coordination w/ Existing Equipment Vendor		4		4	$660.00
Coordination w/ Alternative Equipment Vendor		4		4	$660.00
Summary Memo for Repair/Replacemnt Options		4	2	6	$890.00
QC Review	2	1		3	$525.00
Review Alternatives with City and Adjudicate Questions/Comments		2		2	$330.00
Hourly Subtotal	2	19	2	23	
Cost	$360.00	$3,135.00	$230.00		$3,725.00

Phase #441 - Procurement/Design Documents	Senior Mech Eng	Lead Mech Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$180.00	$165.00	$115.00		
Task				0	$0.00
Coordination w/ Basis of Design Vendor		6		6	$990.00
Design Narrative (DN)		4	2	6	$890.00
Redlined Edits to Existing Drawings (Appendix to DN)		4		4	$660.00
General "Front-End" Specifications (Appendix to DN)		4	2	6	$890.00
Mechanical Equipment Specifications (Appendix to DN)		6	3	9	$1,335.00
QC Review	4	2		6	$1,050.00
Review Design with City and Adjudicate Questions/Comments		2		2	$330.00
Hourly Subtotal	4	28	7	39	
Cost	$720.00	$4,620.00	$805.00		$6,145.00

Phase

#490 - Bid Phase Services	Senior Mech Eng	Lead Mech Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$180.00	$165.00	$115.00		
Task				0	$0.00
Respond to Contractor Questions		4		4	$660.00
Respond to Bidding Vendor Questions		4		4	$660.00
Hourly Subtotal	0	8	0	8	
Cost	$0.00	$1,320.00	$0.00		$1,320.00

Phase

#901 - Construction Administration and Commissioning	Senior Mech Eng	Lead Mech Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$180.00	$165.00	$115.00		
Task				0	$0.00
Respond to Contractor Requests for Information (RFIs)		8		8	$1,320.00
Submittal Reviews		8		8	$1,320.00
Site Visits During Construction		20		20	$3,300.00
Construction QC Reports		8		8	$1,320.00
Commissioning		8		8	$1,320.00
Hourly Subtotal	0	52	0	52	
Cost	$0.00	$8,580.00	$0.00		$8,580.00

Mechanical Hours	6	107	9	113	
Mechanical Cost	$1,080.00	$17,655.00	$1,035.00		$19,770.00

Phase

#401 - Assessment and Option Analysis	Senior Elec. Eng	Project Elec. Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$200.00	$145.00	$115.00		
Task				0	$0.00
Hourly Subtotal	0	0	0	0	
Cost	$0.00	$0.00	$0.00		$0.00

Phase

#441 - Procurement/Design Documents	Senior Elec. Eng	Project Elec. Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$200.00	$145.00	$115.00		
Task				0	$0.00
Coordination w/ Basis of Design Vendor		3		3	$435.00
Design Narrative (DN)		2		2	$290.00
Electrical Equipment Specifications (Appendix to DN)		2	1	3	$405.00
QC Review	1	1		2	$345.00
Review Design with City and Adjudicate Questions/Comments		1		1	$145.00
Hourly Subtotal	1	9	1	11	
Cost	$200.00	$1,305.00	$115.00		$1,620.00

Phase

#490 - Bid Phase Services	Senior Elec. Eng	Project Elec. Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$200.00	$145.00	$115.00		
Task				0	$0.00
Respond to Contractor Questions		2		2	$290.00
Respond to Bidding Vendor Questions		2		2	$290.00
Hourly Subtotal	0	4	0	4	
Cost	$0.00	$580.00	$0.00		$580.00

Phase

#901 - Construction Administration and Commissioning	Senior Elec. Eng	Project Elec. Eng	Tech Editor	Hourly Subtotal	Cost
Billing Rate	$200.00	$145.00	$115.00		
Task				0	$0.00
Respond to Contractor Requests for Information (RFIs)		2		2	$290.00
Submittal Reviews		4		4	$580.00
Hourly Subtotal	0	6	0	6	
Cost	$0.00	$870.00	$0.00		$870.00

Electrical Hours	1	19	1	20	
Electrical Cost	$200.00	$2,755.00	$115.00		$3,070.00

CITY OF HOMER
HOMER, ALASKA

Mayor

RESOLUTION 22-055

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA DIRECTING THE CITY MANAGER TO PRESENT AN ORDINANCE TO FUND THE DEMOLITION OF THE HERC II BUILDING.

WHEREAS, The restricted use of the HERC buildings has continued while the City searches for new space solution to meet the City's needs; and

WHEREAS, The HERC II (the original school building) has reached a level of diminished structural integrity where the Public Works Director believes that occupancy should be forbidden; and

WHEREAS, The structure, now serving no useful purpose, is an attractive nuisance, which should be demolished; and

WHEREAS, There is community sentiment to assist in the building demolition to help resource costs.

NOW, THEREFORE, BE IT RESOLVED that the City Manager is directed to present the City Council with an ordinance to fund the demolition project.

PASSED AND ADOPTED by the Homer City Council this ___ day of _____. 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal note: N/A

ORDINANCE REFERENCE SHEET
2022 ORDINANCE
ORDINANCE 22-29

An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget and Authorizing an Additional Expenditure of $150,000 from the Sewer Capital Asset Repair and Maintenance Allowance (CARMA) Fund for Sewer Manhole Repair or Replacement Related to the Alaska Department of Transportation and Public Facilities (AKDOT/PF) East Hill Road Repaving Project.

Sponsor: City Manager/Public Works Director

1. City Council Regular Meeting May 9, 2022 Introduction

   Memorandum 22-086 from Public Works Director as backup.

2. City Council Regular Meeting June 13, 2022 Public Hearing and Second Reading

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

ORDINANCE 22-29

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA, AMENDING THE FY22 CAPITAL BUDGET AND AUTHORIZING AN ADDITIONAL EXPENDITURE OF $150,000 FROM THE SEWER CAPITAL ASSET REPAIR AND MAINTENANCE ALLOWANCE (CARMA) FUND FOR SEWER MANHOLE REPAIR OR REPLACEMENT RELATED TO THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES EAST HILL ROAD REPAVING PROJECT.

WHEREAS, A City of Homer's sewer main runs down East Hill Road, which is in the process of being repaved by the Alaska Department of Transportation and Public Facilities (AK DOT/PF); and

WHEREAS, The City and AKDOT/PF had entered into a cooperative Utility Agreement, whereby repairs, beyond minor grade adjustments, necessary to accommodate the new paving, would need to be funded by the City; and

WHEREAS, On October 25, 2021, Council appropriated funding for work that included making various adjustments to manholes, water valves, etcetera with Ordinance 21-16; and

WHEREAS, South Central Construction, the AK DOT/PF's contractor, discovered ten of the sewer manhole cones have shifted and are broken, probably the result of earthquake activity; and

WHEREAS, These manholes need to be repaired or replaced to prevent water infiltration, sewage leakage and otherwise protect the integrity of the City's sewer system and such work would be done as a change order to South Central's contract with the AKDOT/PF and as an adjustment to the Utility Agreement; and

WHEREAS, South Central estimates the cost to repair or replace these manholes is up to $10,000 for each manhole and the AKDOT/PF estimates this effort will require additional traffic control, which will also cost additional money, bringing the total estimated cost of this work to $150,000; and

WHEREAS, There are sufficient funds in the Sewer CARMA fund to cover this amount.

NOW THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. The City of Homer's FY 22 Capital Budget is hereby amended to authorize the expenditure of up to $150,000 from the Sewer CARMA Fund for sewer manhole repair or replacement on East Hill Road as follows:

Fund	Description	Amount
256-0379	Sewer CARMA	$150,000

Section 2. This is a budget amendment ordinance, is not permanent in nature, and shall not be codified.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA, this _____th day of _____, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

YES:
NO:
ABSENT:
ABSTAIN:

Introduction:
Public Hearing:
Second Reading:
Effective Date:

City of Homer
www.cityofhomer-ak.gov

Public Works
3575 Heath Street
Homer, AK 99603
publicworks@cityofhomer-ak.gov
(p) 907- 235-3170
(f) 907-235-3145

Memorandum 22-086

TO: City Council

THROUGH: Rob Dumouchel, City Manager

FROM: Janette Keiser, PE, Director of Public Works

DATE: May 10, 2022

SUBJECT: East Hill Road Repaving Project – sewer manhole repairs

I. Issue: The purpose of this Memorandum is to request an additional appropriation from the CARMA Sewer Fund to repair/replace sewer manholes on East Hill Road.

II. Background:

The State of Alaska Department of Transportation and Public Facilities' (AKDOT/PF) Contractor, South Central Construction, was scheduled to adjust a number of the City's concrete sewer manholes. During the course of this work, South Central informed us that the manholes were severely damaged, probably from past earthquakes, which caused the concrete barrel sections to shift. We investigated the extent of the damage, evaluated options, and determined the best course of action was to repair the manholes and if the damage too far gone, to replace them. South Central's estimated cost for this work is up to $10,000 per manhole and there are ten of them. The AKDOT/PF told me they will probably need additional traffic control to accomplish this work, which could cost up to $50,000.

The good news is that South Central told us they are able to source the required materials. The bad news is that they needed to know immediately if we want to do this work in order for them to maintain their schedule. The Sewer CARMA fund is able to support the expense of around $150,000. I informed the AKDOT/PF's Project Manager that the City did want to proceed with the work.

III. Recommendation:

That the City Council support the expenditure of up to $150,000 to repair/replace concrete sewer manholes in East Hill Road and appropriate funds from the Sewer CARMA Fund for this purpose.

CITY OF HOMER
FINANCIAL SUPPLEMENT

PROJECT NAME	East Hill Sewer Manhole Repair or Replacement	DATE	05/17/2022
DEPARTMENT	Public Works	SPONSOR	City Manager/PW Director
REQUESTED AMOUNT	$ 150,000		

DESCRIPTION	The AK DOT/PF's Contractor, South Central Construction, was scheduled to adjust a number of the City's concrete sewer manholes. During the course of this work, South Central informed us that the manholes were severely damaged, probably from past earthquakes, which caused the concrete barrel sections to shift. We investigated the extent of the damage, evaluated options, and determined the best course of action was to repair the manholes and if the damage too far gone, to replace them. South Central's estimated cost for this work is up to $10,000 per manhole and there are ten of them. The AK DOT/PF mentioned they will probably need additional traffic control to accomplish this work, which could cost up to $50,000.

FUNDING SOURCE(S)	OPERATING	GF CARMA	GF FLEET CARMA	PORT RESERVES	WATER CARMA
	0%	0%	0%	0%	0%
	HAWSP	HART-ROADS	HART-TRAILS	PORT FLEET RESERVES	SEWER CARMA
	0%	0%	0%	0%	100%

FUNDING SOURCE 1: SEWER CARMA		FUNDING SOURCE 2:		FUNDING SOURCE 3:	
Current Balance	$ 1,535,611	Current Balance		Current Balance	
Encumbered	$ 932,043	Encumbered		Encumbered	
Requested Amount	$ 150,000	Requested Amount		Requested Amount	
Other Items on Current Agenda	$ 0	Other Items on Current Agenda		Other Items on Current Agenda	
Remaining Balance	$ 453,568	Remaining Balance		Remaining Balance	

FUNDING SOURCE 4:		FUNDING SOURCE 5:		FUNDING SOURCE 6:	
Current Balance		Current Balance		Current Balance	
Encumbered		Encumbered		Encumbered	
Requested Amount		Requested Amount		Requested Amount	
Remaining Balance		Remaining Balance		Remaining Balance	

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

ORDINANCE 21-61

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING THE FY22 CAPITAL BUDGET AND APPROPRIATING AN ADDITIONAL $30,953 FOR A TOTAL EXPENDITURE OF $128,953 DIVIDED EQUALLY BETWEEN THE WATER AND SEWER CAPITAL ASSET REPAIR AND MAINTENANCE ALLOWANCE FUNDS FOR EAST HILL ROAD CITY UTILITY BETTERMENTS AS PART OF THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES REPAVING PROJECT.

WHEREAS, As part of the State's East Hill Road Repaving Project, the State's construction contractor will be adjusting City-owned manholes and water valves and the State will be paying for this work as part of their project; and

WHEREAS, A number of these utility appurtenances need more serious repair, which are considered "betterments" to the State's Project; and

WHEREAS, It is in the City's best interests to repair these utilities, while the East Hill Road Project is under construction; and

WHEREAS, THE City Council adopted Ordinance 21-15 appropriating $98,000, which would be paid to the Alaska Department of Transportation and Public Facilities (ADOT&PF) to reimburse that agency for the cost of the City's "betterments"; and

WHEREAS, The ADOT&PF advertised Invitations to Bid and opened bids for the East Hill Road Repaving Project; and

WHEREAS, The as-bid cost of the "betterments" is $128,953, $30,953 more than the original estimate of $98,000 and the amount authorized in Ordinance 21-15; and

WHEREAS, The City's Water and Sewer CARMA Accounts have sufficient funds to contribute an equal share of the total cost of the "betterments".

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. The City of Homer's 2021 Capital Budget is hereby amended by appropriating an additional $30,953 for a total expenditure of $128,953 to pay for the "betterments" as follows:

Account No.	Description		Amount
256-0378	Water CARMA		$15,476.50
256-0379	Sewer CARMA		$15,475.50
		Total	$30,953

Section 2. This is a budget amendment ordinance, is not permanent in nature, and shall not be codified.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA, this 25th day of October, 2021.

CITY OF HOMER

KEN CASTNER, MAYOR

ATTEST:

MELISSA JACOBSEN, MMC, CITY CLERK

YES: 5
NO: 0
ABSTAIN: 0
ABSENT: 1

First Reading: 10.11.21
Public Hearing: 10.25.21
Second Reading: 10.25.21
Effective Date: 10.26.21

ORDINANCE REFERENCE SHEET
2022 ORDINANCE
ORDINANCE 22-30

An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget An Ordinance of the City Council of Homer, Alaska Amending the FY22 Capital Budget by Appropriating $18,150 from the General Fund Capital Asset Repair and Maintenance (CARMA) Fund for the Purpose of Upgrading Software Licenses for the City's Security-Camera Systems.

Sponsor: City Manager

1. City Council Regular Meeting May 23, 2022 Introduction

   Memorandum 22-087 from Police Chief as backup.
   Memorandum 22-088 from Library Director as backup.

2. City Council Regular Meeting June 13, 2022 Public Hearing and Second Reading

CITY OF HOMER
HOMER, ALASKA

City Manager

ORDINANCE 22-30

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING THE FY22 CAPITAL BUDGET BY APPROPRIATING $18,150 FROM THE GENERAL FUND CAPITAL ASSET REPAIR AND MAINTENANCE (CARMA) FUND FOR THE PURPOSE OF UPGRADING SOFTWARE LICENSES FOR THE CITY'S SECURITY-CAMERA SYSTEMS.

WHEREAS, Most city buildings utilize camera systems for security at their locations; and

WHEREAS, The current "Professional" licenses the City has through Milestone Systems are being phased out and their proposed "Professional+" license does not offer all the features the City needs; and

WHEREAS, Quotes were received from three providers and App Techs is able to provide the license level required by the City to meet our security camera requirements.

NOW, THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1. The Homer City Council hereby amends the FY22 Capital Budget by appropriating $18,150 from the General Fund CARMA Fund as follows:

Fund	Description	Amount
156	General Fund CARMA	$18,150

Section 2. This is a budget amendment ordinance, is not permanent in nature, and shall not be codified.

ENACTED BY THE CITY COUNCIL OF HOMER, ALASKA, this __th day of ___, 2022.

CITY OF HOMER

_____
KEN CASTNER, MAYOR

ATTEST:

_____
MELISSA JACOBSEN, MMC, CITY CLERK

YES:
NO:
ABSENT:
ABSTAIN:

Introduction:
Public Hearing:
Second Reading:
Effective Date:

This is a PEPPM Contract Proposal

A Proposal for:

City of Homer
Attention: Nick Poolos

Date: 4/29/2022
Quote #: AAAQ7955
Project Name: PEPPM XProtect License Upgrades

Prepared by: App-Techs Corporation
Jenny Romanosky
jromanosky@app-techs.com

505 Willow Lane, Lancaster PA 17601
717-735-0848 * 717-735-0851 (Fax)

QUOTE

Reference: AAAQ7955
Date: Apr 29, 2022
Project Name: PEPPM XProtect License Upgrades

To:

City of Homer
Nick Poolos
491 E. Pioneer Avenue
Homer, AK 99603

907-435-3156

Prepared By:

Jenny Romanosky

jromanosky@app-techs.com
717-735-0848 x190

Overview

App-Techs has been providing technology solutions since 2003 and specializes in Video Surveillance Systems, Information Technology, Access Control and Industrial Wireless and Fiber-Optic systems. The convergence of these technologies has enabled App-Techs to provide high-value, reliable and affordable solutions to our clients. Businesses, educational facilities and government institutions throughout the United States choose App-Techs because of the value we provide by combining networking expertise with our knowledge of surveillance, security and communications systems. App-Techs is a preferred Milestone Solutions Diamond Partner that offers all of the hardware, software, support and services needed for a reliable and affordable world-class video surveillance solution.

Our early focus on IP video surveillance systems has led to the development and manufacturing of our own line of surveillance servers, portable and covert systems, server health monitoring software, access control integration software, a cloud-based device mapping and maintenance system, and other surveillance-related applications. We are a GSA contract holder and approved COSTARS and PEPPM supplier. App-Techs is also an awarded vendor within the Pennsylvania Statewide ITQ contract for security, surveillance and fire system maintenance. Please refer to the App-Techs website (www.app-techs.com) for additional information.

This proposal provides PEPPM pricing to upgrade your Milestone XProtect licenses associated with SLC: M01-C05-212-01-6C403A. This will convert your existing XProtect Professional+ SLC to two new SLC's (XProtect Corporate and XProtect Expert).

Pricing

Mfg / Part #	Description	Unit Price	Qty	Ext. Price
MILESTONE XPCOBT	XProtect Corporate Base Server License	$2,368.74	1	$2,368.74
MILESTONE XPCODL	XProtect Corporate Device Channel License	$244.84	33	$8,079.72
MILESTONE Y2XPCOBT	Two Years Care Plus for XProtect Corporate Base Server License	$710.70	1	$710.70
MILESTONE Y2XPCODL	Two Years Care Plus for XProtect Corporate Device Channel License	$74.42	33	$2,455.86
Milestone MCPR-Y2XPCOBT	Two Years Care Premium for XProtect Corporate Base Server License	$308.09	1	$308.09
Milestone MCPR-Y2XPCODL	Two Years Care Premium for XProtect Corporate Device License	$32.00	33	$1,056.00
Milestone XPETBL	XProtect Expert Base Server License	$1,487.63	1	$1,487.63
Milestone XPETDL	XProtect Expert Device Channel License	$200.19	55	$11,010.45
Milestone Y2XPETBL	Two Years Care Plus for XProtect Expert Base Server License	$446.51	1	$446.51
Milestone Y2XPETDL	Two Years Care Plus for XProtect Expert Device Channel License	$60.28	55	$3,315.40
Milestone MCPR-Y2XPETBL	Two Years Care Premium for XProtect Expert Base Server License	$193.49	1	$193.49
Milestone MCPR-Y2XPETDL	Two Years Care Premium for XProtect Expert Device Channel License	$26.05	55	$1,432.75
App-Techs Credit	Credit for Professional+ Trade-In	-$14,715.87	1	-$14,715.87

Subtotal	$18,149.47
Sales Tax	Tax Exempt
Shipping	$0.00
Total	**$18,149.47**

Terms of Sale

Hardware

A down-payment of any Component (Hardware / Software) cost, plus applicable sales tax, is due at the time of order. The down-payment amount is described on the Project Approval page. The balance plus applicable sales tax is due at the time of delivery. Hardware-related items and / or quantities may be revised during installation. In such cases, additional charges will be invoiced as they are incurred, and are payable upon invoice receipt.

Labor

Payment, plus applicable sales tax, is due at the time of delivery. Extended labor is invoiced on a weekly, or otherwise agreed basis, and is payable upon receipt of invoice. Labor is rounded to the nearest quarter-hour.

Payment Method

Make checks payable to "App-Techs Corporation", and send to the mailing address on the letterhead of this document or an invoice.

If payment by credit card is desired, App-Techs accepts Visa, MasterCard, American Express and Discover. Call the App-Techs Accounting Department to submit credit card information and execute the appropriate transaction. Note that credit card transactions are subject to a three-percent (3%) surcharge. If your card is declined, the fee will increase to five-percent (5%) of the transaction amount.

Returns / Restocking Fee

Returns must be requested within 30 days of receipt of merchandise.

Merchandise which is accepted for return will be subject to a 20% restocking fee.

All returned merchandise must be returned in its original packaging and pass a quality control inspection. ALL returns must be authorized by App-Techs, must be accompanied by a Return Material Authorization code (RMA) and must be shipped prepaid freight and later invoiced for all open-account customers, and is FOB Lancaster, PA. Items returned in any other manner will be rejected. The RMA code will be valid for a period of 30 days from the date of issue. App-Techs will, for a specified period from the date of shipment, repair without charge any merchandise proven defective in material or workmanship. Please see supporting documentation for each product for warranty length. Complete terms of the written warranty are set forth on the warranty cards that may be packed with the product, or are otherwise available for the customer's examination from App-Techs prior to purchase. Replacement parts are warranted for a period of 90-days.

Warranty

All App-Techs hardware is warranted against manufacturing defects in materials or workmanship for a period of one year from the date of delivery. Certain manufacturers' warranties may be longer. In cases where a manufacturer's warranty is less than one year, App-Techs will nevertheless provide its own one-year warranty against manufacturing defects in materials or workmanship. Certain manufacturers' warranties may contain language specific to their product(s). In such cases, App-Techs may defer to those details, i.e. safety instructions; references to consumables; shipping locations; specific care and handling; packing instructions.

All App-Techs warranties apply only to the original user.

App-Techs will repair or replace (at our option) any parts found to be defective during the warranty period.

Conditions

1. This warranty will be honored only on the presentation of the original dated bill of sale or sales receipt.
2. Transportation of the product to the designated App-Techs location is the responsibility of the user. Repaired or replaced product will be returned prepaid (paid by App-Techs), and if within the United States of America, during the warranty period.

Exclusions

1. This warranty does not cover adjustment of customer-operated controls. It also does not cover products that have been altered, abused, or have missing or altered serial numbers.

2. This warranty does not apply to unpacking, setup, installation, or the removal and reinstallation of products after repair.

3. This warranty does not apply to repairs or replacements necessitated by any cause beyond the result of manufacture including, but not limited to: any malfunction, defects or failure caused by or resulting from unauthorized service or parts; improper maintenance, modification or repair by the user; abuse, misuse, neglect, accident, fire, flood, or other acts of God; incorrect line voltage, damage or image burns to displays caused by or attributable to the use of any accessory, electronics game, or device; or damaged caused to image detectors by excessive light.

The foregoing is in lieu of all other expressed warranties and App-Techs does not authorize any party to assume for us any other obligation or liability. In no event shall we be liable for incidental or consequential damages arising from the use of App-Techs products, or for any delay in the use of App-Techs products due to causes beyond our control.

Note: Always use discretion when installing video and / or surveillance equipment especially when there is perceived privacy, or an expectation of privacy. Inquire regarding federal, state and / or local regulation applicable to the lawful installation of video and / or audio recording or surveillance equipment. Party consent may be required.

Software Upgrade Plans

Subscriptions to annual maintenance plans - e.g. "SUP" (software upgrade protection) entitle you to the latest release of given software packages. These releases typically include new features, improvements, and bug fixes. They also insure compatibility with contemporaneous releases of Windows, Milestone XProtect and/or other related software and hardware.

Experience suggests that it is more cost-effective to "stay current" than to allow software to become obsolete. If a maintenance plan / SUP is purchased as part of this quote, we will notify you when new releases become available, and work with you to install the updated software as needed. Likewise, we will notify you as the renewal period approaches in order to determine if renewal is appropriate.

Project Approval

Quote Code -----> AAAQ7955

If applicable, please indicate any Options you have selected: **Quantity (If Required)**

[ ] Section / Option 1

[ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G [ ] H [ ] I [ ] J [ ] K [ ] L Quantity _____

[ ] Section / Option 2

[ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G [ ] H [ ] I [ ] J [ ] K [ ] L Quantity _____

[ ] Section / Option 3

[ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G [ ] H [ ] I [ ] J [ ] K [ ] L Quantity _____

[ ] Section / Option 4

[ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G [ ] H [ ] I [ ] J [ ] K [ ] L Quantity _____

[ ] Section / Option 5

[ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G [ ] H [ ] I [ ] J [ ] K [ ] L Quantity _____

[ ] Section / Option 6

[ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G [ ] H [ ] I [ ] J [ ] K [ ] L Quantity _____

Upon receipt of this signed document (page) and the specified down-payment amount, App-Techs will commence with delivery and / or installation of the project.

Approved (signature): -----> _____

(Your signature represents approval to the applicable project costs.)

Approved (print name): -----> _____

Date -----> _____

Down-payment Amount -----> 100%

(Project will commence after down-payment is received.)

Payment Method -----> [ ] Check [ ] Credit Card [ ] Lease

(See attached leasing information page, if applicable.)

If Credit Card (type & number) -----> _____

Add 3% fee to all credit card transactions. If the card is declined, you will be billed 5% of the transaction amount.

-----> _____

If Credit Card (exp. date & security code)

Sales Quote - MSRP

End Customer
City of Homer
491 E Pioneer Ave
Homer, AK 99603-7645
United States

Milestone Systems A/S
Banemarksvej 50C
2605 Brøndby
Denmark

Creation Date	19 April 2022
Quote No.	2153328
Prices Including VAT	No

Phone No.	+45 88 300300
Home Page	www.milestonesys.com
E-Mail	sales@milestonesys.com
Valid until	See below*
Salesperson	Jenny Browne
Quoted By	Barbara Erickson

SKU ID	Description	Quantity	Unit Cost MSRP	Total Cost MSRP
	M01-C05-212-01-6C403A			
UXPAACL	Trade-in AAC license for 1 Smart Client w/C-Plus	-2		
UXPPPLUSDL	Trade-in XProtect Professional+ DL w/ C-Plus	-88	169.00	-14,872.00
UXPPPLUSBL	Trade-in XProtect Professional+ BL w/ C-Plus	-1	499.00	-499.00
YXPPPLUSDL	1 Year Care Plus for XProtect Professional+ DL	-88	31.00	-2,728.00
MXPPPLUSDL	1 Month Care Plus for XProtect Professional+ DL	-968	2.60	-2,516.80
MCPR-YXPPPLUSDL	1 Year Care Premium for XProtect Professional+ DL	-88	12.00	-1,056.00
MCPR-MXPPPLUSDL	1 Month Care Premium for XProtect Professional+ DL	-968	1.00	-968.00
XPCOBT	XProtect Corporate Base License (BL)	1	3,183.00	3,183.00
XPCODL	XProtect Corporate Device License (DL)	33	329.00	10,857.00
XPSWBL	XProtect Smart Wall Base License (BL)	1		
XPAACL	AAC license for 1 XP Smart Client	2		
YXPCOBT	1 Year Care Plus for XProtect Corporate BL	1	575.00	575.00
MXPCOBT	1 Month Care Plus for XProtect Corporate BL	11	48.00	528.00
YXPCODL	1 Year Care Plus for XProtect Corporate DL	33	60.00	1,980.00
MXPCODL	1 Month Care Plus for XProtect Corporate DL	363	5.00	1,815.00
MCPR-YXPCOBT	1 Year Care Premium for XProtect Corporate BL	1	223.00	223.00
MCPR-MXPCOBT	1 Month Care Premium for XProtect Corporate BL	11	18.60	204.60
MCPR-YXPCODL	1 Year Care Premium for XProtect Corporate DL	33	24.00	792.00
MCPR-MXPCODL	1 Month Care Premium for XProtect Corporate DL	363	2.00	726.00
XPETBL	XProtect Expert Base License (BL)	1	1,999.00	1,999.00
XPETDL	XProtect Expert Device License (DL)	55	269.00	14,795.00
XPAACL	AAC license for 1 XP Smart Client	2		
YXPETBL	1 Year Care Plus for XProtect Expert BL	1	360.00	360.00
MXPETBL	1 Month Care Plus for XProtect Expert BL	11	30.00	330.00
YXPETDL	1 Year Care Plus for XProtect Expert DL	55	49.00	2,695.00
MXPETDL	1 Month Care Plus for XProtect Expert DL	605	4.10	2,480.50
MCPR-YXPETBL	1 Year Care Premium for XProtect Expert BL	1	140.00	140.00
MCPR-MXPETBL	1 Month Care Premium for XProtect Expert BL	11	11.70	128.70
MCPR-YXPETDL	1 Year Care Premium for XProtect Expert DL	55	19.00	1,045.00
MCPR-MXPETDL	1 Month Care Premium for XProtect Expert DL	605	1.60	968.00

33 for City of Homer PD - XPCO

Sales Quote - MSRP

End Customer
City of Homer
491 E Pioneer Ave
Homer, AK 99603-7645
United States

Milestone Systems A/S
Banemarksvej 50C
2605 Brøndby
Denmark

Creation Date	19 April 2022
Quote No.	2153328
Prices Including VAT	No

Phone No.	+45 88 300300
Home Page	www.milestonesys.com
E-Mail	sales@milestonesys.com
Valid until	See below*
Salesperson	Jenny Browne
Quoted By	Barbara Erickson

SKU ID	Description	Quantity	Unit Cost MSRP	Total Cost MSRP
	55 for City of Homer - XPET			
			Total USD	**23,185.00**

* This quote is a price estimate, subject to change based on current pricelist, partner discount, device license count, Milestone Care and project discount validity. Please confirm the quote online or with Milestone before issuing a Purchase Order.

SHERMAN TECHNOLOGIES

Quote #: COH-22-001

To: Nick Poolos
City of Homer

Date: 4/25/2022
Prepared By: Adam Moore

adam@shermantechnologies.com
907-444-3601

Desc: Milestone Licensing

Material and Equipment Quote

Item	Description	Quantity	UOM	Manufacturer	Part #	Price Each	Price Extended
1	33 - XPCO Licenses & 55 - XPET Licenses	1	EA	Milestone	Quote No. 2153328	$ 21,186.00	$ 21,186.00
2						$ -	$ -
3						$ -	$ -
4						$ -	$ -
5						$ -	$ -
6						$ -	$ -
7						$ -	$ -
8						$ -	$ -
9						$ -	$ -
10						$ -	$ -
11						$ -	$ -
12						$ -	$ -
13						$ -	$ -
14						$ -	$ -
15						$ -	$ -
16						$ -	$ -
17						$ -	$ -
18						$ -	$ -
19						$ -	$ -
20						$ -	$ -
21						$ -	$ -
22						$ -	$ -
23						$ -	$ -

Exclusions: IP addressing Cams, Installation or programming

Sub Total: $ 21,186.00
Shipping:
Total Cost: $ 21,186.00

Written approval required before procurement of equipment .To accept this quotation, sign here and return:

Name and Title: _____

Date: _____

PO# _____

City of Homer
www.cityofhomer-ak.gov

Police Department
625 Grubstake Avenue
Homer, Alaska 99603
police@cityofhomer-ak.gov
(p) 907-235-3150
(f) 907-235-3151/ 907-226-3009

Memorandum 22-087

TO: City Manager Dumouchel

FROM: Chief Robl

DATE: 5-6-2022

SUBJECT: City Security Camera System Licenses

Every city department with the exception of Public Works utilizes security cameras for some purpose. Our system is built on the Xprotect software from Milestone. We currently operate on their "Professional" package and have "Professional" licenses for every camera in the city. Milestone is phasing out the "Professional" licenses very soon. They have offered to upgrade us to the "Professional+" licenses at no additional cost but the "Professional+" license does not offer all of the features the City needs.

Most cameras in the City can run on the "Expert" level licenses. The cameras in the Police Station need the "Corporate" license. The software provided under this license meets Criminal Justice Information Security standards and will provide us with 90 to 180 days of storage capability which is critical to our operations. It also enables a single workstation to handle upgrades and control all of the cameras. It permits a single viewing station to switch between all of the camera inputs allowing a single dispatcher to monitor all of the cameras from one dispatch position.

The cost to upgrade our software including the license fees for the first two years is $18,149.47. This price includes a rebate of $14,715.87 for our old licenses. After two years our annual licensing fees will be approximately $5,000 spread between the departments. We have obtained MSRP and 2 different quotes, including one derived from a competitively bid contract for this software from different vendors.

Recommendation
We request council approval of CARMA funding for this upgrade and purchase approval to App-Techs Corporation in the amount of $18,149.47.

City of Homer
www.cityofhomer-ak.gov

Homer Public Library
500 Hazel Avenue
Homer, AK 99603
library@cityofhomer-ak.gov
(p) (907)-235-3180
(f) (907)-235-3136

Memorandum 22-088

TO: City Manager Rob Dumouchel

FROM: David Berry, Library Director

DATE: May 3, 2022

SUBJECT: Milestone Licenses for Security Cameras

Milestone Systems manages the servers that store footage from all the security cameras in the City. At the moment, all the City cameras are on "Professional" licenses, based on a version that Milestone is retiring.

Milestone has offered a more-or-less free upgrade to the new "Professional+" license with a yearly support renewal, but the Professional+ level does not offer all the features the City needs. Maintaining highly redundant service across all City sites requires higher-level licenses than we currently have.

Most cameras in the City can run on the "Expert" level, which offers the following important features:

- Hot and cold failover recording—allows two servers to back each other up, so that if one fails, the other automatically takes over storing data from the cameras connected to the lost equipment. Prevents gaps in the recorded data.
- Can be managed and "federated" to a central site, just like our current architecture.

The cameras in the police station need the "Corporate" level, which includes these features:

- Can centrally manage distributed sites—a single workstation can handle upgrades and controls for all the cameras in the City. This allows IT to efficiently manage, configure and control cameras across the City.
- Smart Wall—permits a single viewing station to switch between dozens of cameras, which makes police monitoring much easier.

The City currently pays about $16,000/year for the existing licenses. Attached are three quotes for upgrades, from different sources.

Including trade-in rebates and savings in client support costs, we estimate the true added cost at roughly $5,000/year less than the quoted prices.

RECOMMENDATION

Upgrade existing Milestone licenses to higher tiers of service.

CITY OF HOMER
FINANCIAL SUPPLEMENT

PROJECT NAME	Upgrade License Software for City Security Cameras	DATE	05/17/2022
DEPARTMENT	Police	SPONSOR	City Manager/Police Chief
REQUESTED AMOUNT	$ 18,150		

DESCRIPTION	
	Request is to upgrade license software used for city security cameras. The existing licenses are being phased out and the proposed replacement does not meet the needs of the City. Quotes were received from three providers and App Techs is able to provide the licenses level required by the City to meet our security camera requirements.

FUNDING SOURCE(S)	OPERATING	GF CARMA	GF FLEET CARMA	PORT RESERVES	WATER CARMA
	0%	100%	0%	0%	0%
	HAWSP	HART-ROADS	HART-TRAILS	PORT FLEET RESERVES	SEWER CARMA
	0%	0%	0%	0%	0%

FUNDING SOURCE 1: GF CARMA		FUNDING SOURCE 2:		FUNDING SOURCE 3:	
Current Balance	$ 2,760,297	Current Balance		Current Balance	
Encumbered	$ 908,309	Encumbered		Encumbered	
Requested Amount	$ 18,150	Requested Amount		Requested Amount	
Other Items on Current Agenda	$ 0	Other Items on Current Agenda		Other Items on Current Agenda	
Remaining Balance	$ 1,833,838	Remaining Balance		Remaining Balance	
FUNDING SOURCE 4:		**FUNDING SOURCE 5:**		**FUNDING SOURCE 6:**	
Current Balance		Current Balance		Current Balance	
Encumbered		Encumbered		Encumbered	
Requested Amount		Requested Amount		Requested Amount	
Remaining Balance		Remaining Balance		Remaining Balance	

City of Homer
www.cityofhomer-ak.gov

Office of the City Manager
491 East Pioneer Avenue
Homer, Alaska 99603
citymanager@cityofhomer-ak.gov
(p) 907-235-8121 x2222
(f) 907-235-3148

Memorandum

TO: Mayor Castner and Homer City Council

FROM: Melissa Jacobsen, Acting City Manager

DATE: June 9, 2022

SUBJECT: City Manager's Report for June 13, 2022 Council Meeting

Tsunami Warning

Thursday, June 2nd the Tsunami Warning Sirens in Homer were activated at approximately 8:30 a.m. without any indication of earthquake activity in or around Homer. Fire Chief Kirko reported he and Homer Police Department were initially challenged in getting answers because they were unable to connect KPB Office of Emergency Management. Chief Kirko connected with KPB Emergency Manager Brenda Ahlberg via cell phone, and she confirmed at approximately 9:07 a.m. that it was a National Weather Service Test that was intended to be a silent test, but was done as an audible test in error. She advised they were conducting all clear messages for the effected communities. On Friday, all stakeholders met by Zoom to go over the events, lessons learned, and steps to prevent similar mistakes in the future.

Bunnell Avenue and Kachemak Drive Fires

During the early morning hours of June 4th the Homer Volunteer Fire Department (HVFD) responded to a report of a fully involved commercial structure fire in the Old Town area of Homer. Dispatch received the first report at 2:40 a.m. and 6 trained firefighters, including the Chief, responded along with 3 EMT's from HVFD and 7 additional personnel from mutual-aid departments, Kachemak Emergency Services (KESA) and Western Emergency Services (WES). The three departments were actively engaged in suppression efforts until approximately 8:30 a.m. when Chief Kirko called the fire under control. KESA and WES units were released from the scene by 9:00 a.m. and HVFD engine-2 was released about a half an hour later. The cause of the fire is still under investigation and Chief Kirko is working with the State Fire Marshal's Office, Homer Police Department, and a Fire and Arson investigator representing the insurance carrier to try and determine the cause.

At 11:36 that same morning, HVFD was paged out to a residence on Kachemak Drive for a reported small fire on a residential deck. Chief Kirko turned command of the Bunnell fire over to Firefighter Larson and responded to the Kachemak Drive fire along with Engine-2 and Medic-2. Chief Kirko returned to the Bunnell incident at 12:15 and resumed command of the scene. Tanker-2 remained on scene at Kachemak Drive working residual hot spots until 12:54 when they were released.

Little Libraries are up!

In December 2021 Council accepted a grant from the Institute of Museum and Library Services for $5,950 for installing Little Libraries. The Parks Division has installed them at Mariner Park, the Nick Dudiak Fishing Lagoon, Karen Hornaday Park, and WKFL Park (pictured).

Ocean Drive Loop Seawall

Public Works Director Keiser has received some positive feedback from property owners along the seawall following the first season of winter storm activity. Martin Renner shared the following comment and photos-

I've walked the length of the wall a few times since April. There is great news: this winter, waves deposited a lot of material, rather than eroding this section of coastline. The new material may be up to 1.5 me thick, covering up most, in a few cases all of the new riprap. This obviously makes for excellent protection for the time being. But what the waves give, they can also take away again. It's conceivable that the riprap helped slow down wave action near the wall, dissipating rather than reflecting wave energy, and thereby contributing to this accumulation of sediment, but that's hard to know. We'll see what the next winter will bring. In any case, the raised beach has covered all of the exposed foot of the wall and should protect it very well from wave-driven erosion. Cheers, Martin

John Szajkowski sent some historical photos and shared that this doesn't happen anymore-the armor rock revetment works!

Early and Absentee Voting

Early and Absentee Voting was open for the State Special Primary Election during regular business hours May 27th through June 10th. As of the writing of this report in person voter turnout was small, ranging between 8 voters and 22 voters per day, but that was anticipated since voters received their ballots in their mailboxes. The City provided messaging when early and absentee voting was available through the City Website and Facebook page, in the Clerk's weekly meeting notice in the paper, and on the Clerk's Calendar recording on KBBI. Clerk's office staff also coordinated with Chief Kirko for messaging and placement of the electronic reader board on the Sterling Highway. It was a good introduction to the State's early voting process and the Clerk's Office looks forward to providing support for the upcoming State Primary in August and General Election in November.

Enclosures:

1. June Employee Anniversaries

City of Homer
www.cityofhomer-ak.gov

Office of the City Manager
491 East Pioneer Avenue
Homer, Alaska 99603
citymanager@cityofhomer-ak.gov
(p) 907-235-8121 x2222
(f) 907-235-3148

Memorandum

TO: MAYOR CASTNER AND CITY COUNCIL

FROM: Andrea Browning

DATE: June 13, 2022

SUBJECT: June Employee Anniversaries

I would like to take the time to thank the following employees for the dedication, commitment and service they have provided the City and taxpayers of Homer over the years.

Melissa Jacobsen	**Clerks**	**18**	**Years**
Mike Illg	**Admin**	**16**	**Years**
Rachel Tussey	**Clerks**	**11**	**Years**
Mike Szocinski	**Public Works**	**10**	**Years**
Jessica Poling	**Police**	**5**	**Years**
Bethany Christman	**Public Works**	**3**	**Years**
Russell Anderson	**Public Works**	**3**	**Years**
James Tingley	**Public Works**	**2**	**Years**
Winifred Shigley	**Police**	**2**	**Years**
James Young	**Port**	**2**	**Years**

City of Homer
www.cityofhomer-ak.gov

Office of the City Clerk
491 East Pioneer Avenue
Homer, Alaska 99603
clerk@cityofhomer-ak.gov
(p) 907-235-3130
(f) 907-235-3143

Memorandum 22-109

TO: MAYOR CASTNER AND CITY COUNCIL

FROM: MELISSA JACOBSEN, MMC, CITY CLERK

DATE: JUNE 8, 2022

SUBJECT: REQUEST FOR EXECUTIVE SESSION PURSUANT TO AS 44.62.310 (A-C)(1 & 5) MATTERS, THE IMMEDIATE KNOWLEDGE OF WHICH WOULD CLEARLY HAVE AN ADVERSE EFFECT UPON THE FINANCES OF THE GOVERNMENT UNIT AND ATTORNEY/CLIENT PRIVILEGE (VAN ZANT ET AL V CITY OF HOMER 3HO-20-00251 CI)

Pursuant to Council's Operating Manual – "Any Councilmember, the Mayor or City Manager may place consideration of an executive session on the agenda…"

Mayor Castner has requested an Executive Session regarding "Van Zant et al vs. City of Homer". This has been publicly and internally noticed since that time.

City Manager Dumochel, City Attorney Gatti and Attorney Bowman, and Jim Wilkins from AMLJIA will participate.

RECOMMENDATION

Approve the request for Executive Session and conduct immediately.