



CC-25-021

MEMORANDUM

Committee of the Whole Spit Erosion Update

Item Type: Informational Memorandum
Prepared For: Mayor Lord and Homer City Council
Date: January 7, 2025
From: Melissa Jacobsen, City Manager

At the January 13, 2025 Committee of the Whole Council will hear a Spit Erosion Update from Jacob Gondek, AKDOT Construction Manager and Jason Baxley, AKDOT Project Manager.

Included in the packet is a memorandum from Special Projects and Communications Coordinator Carroll that provides a brief overview of recent storm surge events on the spit, the roles of the City and our Partners, and options for next steps with pro's and con's for each.

Also included is a draft ordinance and a draft resolution related to funding requests for a Spit Erosion General Investigation as a possible next step. Please review these documents and consider if this is a feasible option for the City.



MEMORANDUM

City Council Committee of the Whole: Spit Road Erosion Next Steps

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Prepared For: Mayor and City Council
Date: January 7, 2025
From: Special Projects & Communications Coordinator Carroll
Through: Melissa Jacobsen, City Manager

The local and state emergency declarations after the November 16, 2024 storm surge event highlighted what the city has known and been advocating for years with the Alaska Department of Transportation (ADOT) and the US Army Corps of Engineers (USACE): the need for coordinated, long-term sustainability planning for the west side of the Homer Spit.

The State Declaration of Disaster Emergency by Governor Dunleavy waived certain State permitting requirements for ADOT to respond and perform emergency repairs. It also allowed ADOT to apply to the Federal Highway Administration for emergency funding for the State-executed temporary repairs necessary to restore the road to two lanes and prevent immediate further loss.

In Phase 1 ADOT repaired the area of revetment breached by the storm surge, and restored Spit Road to two lanes. Phase 2 extended the revetment (using ADOT's 2014 design) 1,100 feet to protect vulnerable section of Spit Road. The City pointed out additional areas of storm surge vulnerability past the end of the revetment extension and worked with ADOT Commissioner Anderson and Deputy Commissioner Keith to have that added to the State's temporary repairs. To date, we have not received confirmation if the State plans to extend the revetment to tie it in with shore hardening on the Glacier D property.

These are not permanent repairs; high tide storm surge events continue to and will continue to erode city and private property, beaches and State right-of-way.

This storm surge event has put a momentary spotlight on the need for Homer Spit erosion mitigation planning and implementation and opened communications with ADOT. The City is presently preparing State capital funding requests and Federal appropriations requests, all due in mid-February. The question for City Council is what appetite does the body have for action? What kind of role do you want the City to take?

In the scenario of unmitigated erosion, a combination of local, private, State and Federal assets on the Homer Spit are vulnerable to damage and loss.

City of Homer Role

To date, the City's role has been one of advocate:

- A Homer Spit Resiliency Plan and Erosion Mitigation project has been in the Legislative Priority section of the Capital Improvement Plan for many years. We have informed legislators about the issue, requested forming a multi-agency working group for comprehensive planning and, depending on the year and the State's actions, we have requested funds for:
 - ADOT and USACE to enter into Federal Cost Share Agreement to conduct a General Investigation with the City participating as a no-cost share partner in the planning aspect; or
 - ADOT create a Resilience Plan for the Homer Spit with the City as a no-cost share partner in the planning aspect.

Partners

ADOT mission is to maintain highway access to the ferry terminal on the Homer Spit. This interest has and will focus ADOT mitigation actions to preserving the Homer Spit Road. Preservation efforts have included five emergency revetment and road repairs, completing a General Investigation (GI) with the USACE in 1989 (which led to the USACE-built revetment), with little attention to preserving unpaved right-of-way.

ADOT told the City they recognize that the 2014 design for the State section of the revetment wall is inadequate and that their intention is to continue to pursue funds to develop a long-term mitigation plan, potentially with Federal PROTECT funds. ADOT has limited resources and staff to carry out a coastal resiliency study, and asked whether the City would have the capacity to execute the planning grant if funds came available.

A Resilience Study could produce similar products as a GI (develop baseline data, an array of site-specific mitigation alternatives, evaluate the alternatives and identify a preferred alternative). This is planning only; to implement any portion of the plan, the State and/or City would need to secure capital funds and budget for long-term maintenance.

US Army Corps of Engineers. Federal involvement in the project would come through a GI, as it relates to the USACE missions for National Security, Economic Vitality and Disaster Risk Reduction.

The USACE can potentially re-open the 1989 GI for Homer Spit Revetment, AK. In fact, the AK District has been requesting Federal funds for that in their annual budgets, but it has not been funded) or a new start General Investigation. The GI would follow the same process as the HHE General Investigation: 3+ years requiring a \$1.5M+ local sponsor match. In City's experience, having local sponsor match helps get Federal GI funding.

The advantage of working with the USACE is leveraging Federal funds (90% Federal/10% Local Sponsor) for the Project Engineering Design and the Construction phases, as well as potentially long-term maintenance.

A Planning Assistance to States pre-feasibility study was considered as a first step, but the USACE said it is not as useful to advocate for a Spit Erosion GI, as erosion does not necessarily need a positive benefit cost ratio; and the PAS program is heavily oversubscribed and difficult to obtain.

Next Steps Staff recommendation: Please discuss options for possible next steps and provide direction to the City Manager so staff will be able to prepare State and Federal requests accordingly by the February 14, 2025 submission deadline.

	Options	Pros	Cons
1	Do nothing	<p>Any project be it State or Corps will require staff support and lobbying efforts for funding. Kicking the can down the road to the next generation would save our budget but at what cost?</p> <p>Immediate budget savings without additional staff time, lobbying, or set-aside funds, but with a large caveat of significant revenue and real property loss in the short and long term.</p> <p>Other:</p>	<p>Costs to business owners of continued annual repair of buildings and Piers, utility hook ups and beach nourishment</p> <p>Continued incremental loss of city land for recreation, camping, lease properties, private land and business assets, right-of-way for parking</p> <p>If properties were condemned for safety reasons, identifying and motivating the responsible parties for timely removal of derelict buildings and piers. Revise City budget to adjust for lost tax revenues.</p> <p>Given that there is no lease land available to relocate these business on the Spit The downside of doing nothing is the total loss of these business and the right of way that fronts their establishments.</p> <p>Other:</p>
2	State PROTECT funds for resiliency planning	<p>Keeps ADOT engaged as a partner in larger Spit resilience effort</p> <p>Static data collected in the study will greatly aid a GI (i.e. wave analytics, bathymetry, geotechnical, sediment transport)</p> <p>Could leverage additional grant funds for implementation</p> <p>City-managed effort so could potentially address more than just road resilience</p> <p>Other:</p>	<p>Does not substitute for a GI to get USACE involved; doubles the effort if there is a GI to leverage Federal involvement.</p> <p>Scope and scale of Spit erosion mitigation more than ADOT or city can afford</p> <p>State interested only in roadway preservation; leaves city and private land at risk</p> <p>Need city commitment of staff time and capacity to carry out the study.</p> <p>Other:</p>
3	Pursue USACE General Investigation as a no-cost planning partner with ADOT	<p>Keeps City in advocacy role only</p> <p>No City funding required</p> <p>Possible plan for beneficial use of dredge materials from harbor expansion if that project comes to pass</p>	<p>Limited ADOT experience, financial and project management capacity to work with USACE to initiate a GI</p> <p>GI objective could only addresses road revetment and may not address other assets at risk.</p>

		Other:	City advocacy less effective Other:
	Options	Pros	Cons
4	Pursue USACE General Investigation as a partial sponsor	City advocacy more effective; acknowledges city and community assets also at risk. GI objective could address more at-risk assets than road Possible plan for beneficial use of dredge materials from harbor expansion if that project comes to pass Other:	Limited city financial resources Need city commitment of staff time and capacity to work with USACE on the study. Other:
5	Other (You fill in the blank!)		

CITY OF HOMER
HOMER, ALASKA

ORDINANCE 25-XX

AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA, AMENDING THE FISCAL YEAR 2025 CAPITAL BUDGET BY APPROPRIATING FUNDS IN THE AMOUNT OF \$XXX,000 FROM THE GENERAL FUND FUND BALANCE FOR THE PURPOSE OF CONTRIBUTING TO THE LOCAL SPONSOR MATCH REQUIREMENT FOR CONDUCTING A U.S. ARMY CORPS OF ENGINEERS GENERAL INVESTIGATION STUDY FOR LONG-TERM EROSION MITIGATION ON THE HOMER SPIT.

WHEREAS, The Homer Spit, a 4.5-mile-long glacial spit extending into Kachemak Bay supports critical State, Federal and local infrastructure and is a transportation, commercial and economic hub in the region; and

WHEREAS, The west side of the Homer Spit has been subject to coastal erosion, which initially impacted the State-owned and maintained Homer Spit Road, which is the southern terminus of the Sterling Highway; and

WHEREAS, Previous erosion mitigation efforts included the State of Alaska Department of Transportation and Public Facilities joining with the United States Army Corps of Engineers and the City of Homer to complete a General Investigation which led to the installation of 1,000 feet of rock revetment in 1992 and a subsequent 3,700 foot extension in 1998 to protect the Sterling Highway from erosive forces; and

WHEREAS, Over the past twenty years, changes in storm patterns with stronger, more frequent storm surge events coupled with the absence of periodic beach nourishment (which was recommended by the USACE General Investigation in combination with the rock revetment) is accelerating beach lowering adjacent to and further south of the rock revetment at an alarming rate; and

WHEREAS, annually storm surge events continue to erode significant amounts of State right-of-way, periodically overtop the Sterling Highway and undermine the rock revetment and Sterling Highway road bed, which has required the State of Alaska Department of Transportation to armor the road in three different emergency revetment projects; and

WHEREAS, the most recent event was in November of 2024, when one highway lane collapsed, spurring local and state disaster emergency declarations and Alaska Department of Transportation emergency road repairs and revetment extension at a cost of over \$3M dollars; and

WHEREAS, over the years, the City and commercial business owners have experienced significant local losses due to unmitigated erosive forces, including City and private land used for camping, recreation and parking, utility connections; and commercial properties; and

WHEREAS, left unchecked, the City and private land owners will continue to lose valuable property and incur extraordinary expenses to restore erosion-damaged properties; and

WHEREAS, Given the repetitiveness of expensive emergency revetment and road repairs, valuable resources already lost, the considerable Federal, State and regional infrastructure still at-risk, and the State and regional economic importance of the Homer Spit, a comprehensive, multi-agency mitigation and stabilization plan is needed for long-term Homer Spit resiliency; and

WHEREAS, Federal involvement in erosion mitigation planning, construction and long-term maintenance requires a US Army Corps of Engineers General Investigation at an estimated cost of \$3,000,000 shared 50-50 with a local sponsor; and

WHEREAS, The Alaska District has requested Federal Funds for the Homer Spit Revetment General Investigation in its annual budget for many years, but needs a local sponsor to contribute match funds; and

WHEREAS, In recognition of the benefits to the State of Alaska, the City of Homer has requested State of Alaska Department of Transportation again join the City of Homer in local sponsorship of a General Investigation for Homer Spit erosion mitigation planning; and

WHEREAS, In recognition of the considerable economic, recreational and transportation value of the Homer Spit, as well as its great contribution to Homer's overall quality of life, it is appropriate that the City of Homer participate as a local sponsor of the General Investigation study.

NOW THEREFORE, THE CITY OF HOMER ORDAINS:

Section 1: The FY 2025 Capital budget is hereby amended by appropriating funds in the amount of \$XXX,000.00 from the General Fund Fund Balance for the purpose contributing local sponsor match funds for a General Investigation Study in partnership with the U.S. Army Corps of Engineers and the Alaska Department of Transportation for the Homer Spit erosion mitigation, as follows: