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

City of Homer
Agenda

City Council Worksession
Monday, September 23, 2019 at 4:00 PM
City Hall Cowles Council Chambers

CALL TO ORDER, 4:00 P.M.

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

DISCUSSION TOPIC(S)

Seawall Maintenance and Planning

COMMENTS OF THE AUDIENCE (3 minutes)

ADJOURNMENT NO LATER THAN 4:50 P.M.
Next Regular Meeting is Monday, October 14, 2019 at 6:00 p.m., Worksession at 4:00 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.

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Memorandum

TO: Mayor Castner and Homer City Council

FROM: Katie Koester, City Manager

DATE: September 18, 2019

SUBJECT: Seawall maintenance and planning worksession

The purpose of this worksession is to bring City Council up to speed on possible long term solutions to the maintenance of the seawall, a now 16 year old piece of infrastructure with increasing annual repair costs that could soon outpace the account balance. Earlier this year City Council passed Ordinance 19-13 funding an analysis of the seawall by a coastal engineer to provide guidance on next steps to protect the wall.

Staff has held two neighborhood meetings to discuss maintenance and planning for long term preservation of the wall, one before the authorization of the engineer funds and a second one to go over the results. At the last meeting, participants agreed the next step was to discuss the findings of the study and any potential for funding a major maintenance project with City Council. All members of the Ocean Drive Loop Special Service District (OLDSA) that pay the additional 9.962541 mil rate have been invited to the neighborhood meetings and to this worksession.

A couple of questions that emerged during the neighborhood meetings include:

1) Can the City insure the wall? Previously it was insured through AMLJIA, however due to the fact that the City does not own the wall and the accumulation of substantial claims, AMLJIA will not insure the infrastructure. The City has consistently encouraged the neighborhood to form a homeowners association to pursue independent coverage.

2) What responsibly does the City have to maintain the wall in perpetuity? The City of Homer holds the permit with the Army Corps of Engineers to maintain the wall. In 2012 the City applied to the Corps to transfer the permit to individual property owners. The Corps denied that request based on the fact that the City had a mechanism to collect funds from the property owners to fund maintenance of the seawall, through a differential property tax zone called a special service district. Page 10 of the attached Permit Evaluation and Decision Document Addendum states:

> *"If the City was not capable of collecting funds (tax) from the property owners that benefit from the seawall, we would believe the needs and welfare of the public overall, would best be served by granting the city's request to cease to maintain portions of the seawall not located of City property ('abandon and leave as is'). However, the City is capable of this and has enacted an applicate ordinance that effectively mitigates the concern on the larger population within the City."*

In addition to getting the City Council up to speed on the history and anticipated future needs of the seawall, a goal of this worksession is to get Council feedback on next steps for protecting the seawall. At

neighborhood meeting there was general consensus that a major maintenance project, for example installing some amount of rip rap along the toe of the wall, was a logical next step. The different potential cost scenarios are outlined in the engineering analysis. Though the property owners are significant stakeholders in this process, the decisions regarding whether to borrow, how much to borrow, and repayment are up to City Council. Goals for this worksession include getting Council feedback on the follow questions:

1) Is Council willing to take on debt to fund a major improvement?
2) What project budget would Council be comfortable with?
3) Is property tax revenue an appropriate mechanism to guarantee a bond?
4) How much risk does Council want to assume in the payback mechanism (ie. how much existing revenue could be transferred to debt service given the anticipated decrease in repair costs with a major maintenance project)?
5) Next steps.

I will bring some potential bonding scenarios from the Alaska Municipal Bond Bank, and an analysis of what the debt service and corresponding mil rate would be, to the worksession on Monday.

Enc:

Annual account summary letter and Neighborhood meeting materials from Feb. 28, 2019 meeting and August 20, 2019 meeting, including minutes
August 7th, 2019 Cover letter Homer Seawall Alternative Analysis from HDR
Permit Evaluation and Decision Document Addendum from Army Corps of Engineers

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January 23rd, 2019

Dear Ocean Drive Loop Service Area (ODLSA) Property Owners,

The past two years have been tough on the Seawall.

Some major repairs in 2017 included using truckloads of cobble to fill in eroded areas, replacing broken off (or completely missing) horizontal and vertical face timber and steel, and adding reinforcement to the wall's exposed "toe."

2018 shares a similar story. The toe of the wall was excavated so additional timber could be added as reinforcement, boulders were arranged to protect vulnerable areas, cracks were reinforced with timber, exposed fiberglass sheet piling at the toe was covered, and fill material was replaced.

Seawall maintenance expenses for 2017 and 2018 combined totaled $147,510, leaving only $95,409 remaining in the fund used to repair the seawall. The revenue for this fund has been collected from ODLSA property owners and the City. If any powerful storms cause damage like we've seen these last two years, this fund could easily be depleted. Once depleted, it is very likely emergency repairs could not happen.

The trend has been to spend money when seawall maintenance is already needed or when there is an emergency. The wall is showing its age (16 years old), which is increasing the amount of needed repairs. I am concerned the fund used to pay for Seawall maintenance is at an unsustainable level.

I would like to host a neighborhood meeting with ODLSA property owners on Thursday, February 28th at 5:30 P.M. in Council Chambers at City Hall. At this meeting, I will discuss options including preventative Seawall maintenance and reinforcing the Seawall's toe. A written summary of the meeting will be mailed out to all property owners in case you are unable to attend. In the meantime, I have attached a table listing all revenue and expenditures incurred since the fund was formed.

Please confirm with my Executive Assistant Rachel Friedlander if you can or cannot attend. Rachel's direct line is (907) 435-3102 and her email is RFriedlander@ci.homer.ak.us.

I look forward to seeing you Thursday, February 28th at 5:30 PM.

Best,

Katie Koester
City Manager

Seawall Maintenance Expenditures

	2012	2013	2014	2015	2016	2017	2018*	Total
Seawall Maintenance Expenditures	$38,292	$0	$0	$3,126	$30,328	$102,916	$44,594	$219,256

Seawall Revenue ("Seawall Maintenance Fund")

156-0369	2012	2013	2014	2015	2016	2017	2018*	Total
Seawall Reserve Account (**City**)	$70,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$130,000

808-0375	2012	2013	2014	2015	2016	2017	2018*	Total
Mil rate deposits (**ODLSA private property owners**)	$19,167	$22,078	$35,176	$24,802	$24,759	$30,140	$28,543	$184,665

Remaining Balance for Future Seawall Maintenance

	2012	2013	2014	2015	2016	2017	2018*	Total
Combined Seawall Revenue	$89,167	$32,078	$45,176	$34,802	$34,759	$40,140	$38,543	$314,665
Seawall Maintenance Expenditures	$38,292	$0	$0	$3,126	$30,328	$102,916	$44,594	$219,256

Remaining Balance: $95,409

Please note: The above 2018 figures will be finalized once the City audit is completed by September 2019.

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March 14th, 2019

Dear Ocean Drive Loop Service Area (ODLSA) Property Owners,

On February 28th, I hosted a community Seawall meeting with Public Works Director Carey Meyer. I have included a summary of the meeting to inform all residents of what was discussed and to encourage your participation in the proposed outcome of funding an engineer's analysis of the Seawall.

At the March 26th City Council meeting, I will introduce an ordinance to spend between $8,000 to $11,000 dollars from the two "Seawall Maintenance Funds" (City Seawall Reserve Account and Mill Rate Deposits) to hire a coastal engineering firm. The ordinance will be heard again and voted on at the April 8th City Council meeting. Public testimony is welcome at both meetings. For more information regarding City Council meetings, please visit the City Clerk's website at https://www.cityofhomer-ak.gov/cityclerk or contact the Clerk's Office directly at (907) 235-3130.

Through the recommendation of Public Works Director Meyer and general consensus from ODLSA residents who attended the February 28th meeting, I believe the engineer's analysis will provide the much needed expertise and direction to help us determine what maintenance work would best protect the Seawall. The engineering firm will provide us with recommendations that takes into account what was discussed at the February 28th meeting and will evaluate potential improvements that would significantly extend the life of the Seawall and reduce maintenance needs and costs.

I encourage you all to participate in this process and look forward to working with ODLSA property owners to extend the life of the Seawall.

Thank you,

Katie Koester

Katie Koester
City Manager

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February 28, 2019 Community Seawall Meeting Summary

City Manager Katie Koester and Public Works Director Carey Meyer were joined by Councilmembers Smith and Aderhold in hosting the February 28th neighborhood Seawall meeting. The main goal of the meeting was to do some collective problem-solving and brainstorm solutions for how to extend the life of the Seawall. Prior to the meeting, City Manager Koester met with Director Meyer and homeowners John and Janet Szajkowski who all gave her reason to believe the Seawall would benefit from preventative maintenance and a proactive approach.

The recent big storm years have caused the increasing need to repair the Seawall, and City Manager Koester is concerned that if there were to be a catastrophic failure, the funds available in the Seawall maintenance account would not be enough to cover the necessary repair work. It is important to remember that the City of Homer does not own the Seawall but is tasked with maintaining it on behalf of all homeowners residing in the Ocean Drive Loop Service Area (ODLSA). The City each year contributes $10,000 for the 18% of Seawall that borders City property while homeowners on average collectively contribute $30,000 for the 82% of the Seawall that borders their properties.

City Manager Koester shared she would bring an ordinance before Council on March 26th requesting funds from the Seawall maintenance account to hire an engineering firm that specializes in coastal engineering. The firm would take into consideration suggestions made at the meeting, ground truth potential preventative maintenance solutions, and provide their expertise on what actions could help extend the life of the Seawall. The engineer would not design "the" solution for the Seawall but instead will propose options/solutions and what they will cost in a rough order of magnitude, etc. and provide a conceptual analysis.

Director Meyer suggested the toe of the Seawall be reinforced, that there could be a sloping 45 degree angle of rip rap to help prevent water from going behind the wall. Mr. Szajkowski suggested backfilling the wall. Ms. Heather Renner, the resident who owns the last house on the wall that is not included in the service area, had an engineer look at her portion of the wall, and they suggested using armor rock/"rip rap." Ms. Renner said that although she does not currently contribute to the Seawall maintenance fund, she would be interested in future joint-preventive maintenance.

Mr. Szajkowski shared most of the problems are at the toe of the wall, and was curious if different sized pieces of timber could be installed deep into the beach. Mr. Szajkowski was also curious if there was a maintenance record detailing what repairs have been done most frequently on the wall and where.

Director Meyer shared that extending timbers deeper into the beach has been happening more often now than compared to earlier on. The beach at the toe of the wall is being eroded away and is exposing the sheet piling that is not being protected by the wood face. The City has been replacing vertical six by sixes with longer six by sixes. Right now, the City is able to install longer, vertical members to bring the wall down

to where it needs to be, but there will eventually be a point where we won't be able to find long enough members to protect the Seawall. Director Meyer has been taking pictures of the entire wall each time he has visited the wall. He shared that earlier on, more damage was done on the eastern part of the wall, but now, most damage has actually been occurring happening at the middle of the wall where it comes out to a point.

Ms. Kathleen Irwin asked if there had been any engineering review done of the Seawall in the past. City Manager shared current expertise has been provided by Director Meyer but that she would like to have a coastal engineer evaluate the wall.

One attendee did not think a coastal engineer's opinion was needed and suggested that the funds used to hire the engineer could be used to buy and place rip rap on the City's property to help keep the gravel in place. He also suggested the City apply for an emergency development permit from the Army Corps of Engineers.

Director Meyer said the coastal engineer would help determine which size rip rap the City should buy, and if there are proposed designs already in the neighborhood's possession, this would make starting any project improvements much easier.

City Manager Koester shared that while the coastal engineer analysis could cost somewhere in the range of $8-10k, the cost to source and place the rip-rap at the Seawall alone would be hundreds of thousands of dollars. She shared that a potential payment method could be securing a bond that's paid for by an increased property tax or a special assessment district based on a property's structure or its linear footage along the Seawall. By using property tax, if an ODLSA resident has any exemptions, they would not be paying the full value of their property (senior and residential exemptions apply). Property owners and the City need to come up with a new funding mechanism since Seawall expenses are only increasing while the money contributed to cover costs remains the same.

Mr. Norman Schumacher shared that steel sheet pilings don't have to go in trench and that they could just be pounded in to protect the toe of the wall. He has received a quote for this work of $50 a foot so a hundred foot wall would run $50k

There were general questions and discussion on the beach's hardpan, on source rock, use of 6 inch steel pilings, using a "groin" (peninsula of rip rap), long term preservation of the wall with cost falling on property owners, how the bond would be paid off, and if additional Army Corps of Engineers review would be needed. There was also a suggestion to add public amenities like a public coastal trail along the Seawall and a bench to the City property where Lake street and Ocean Drive Loop residents watch the surf; it was suggested this area needs bank stabilization so the road doesn't wash away, along with the idea of adding some stairs to go down to the beach from the City lot to make this area more of a recreation site, however there is no place for people to park.

The topic of catastrophic insurance came up at the meeting. Since the City doesn't own the wall, the City can't insure it. The Corps doesn't say the City owns the wall, but that the City is responsible for making sure it's maintained. City Manager Koester said the City has encouraged a home owners association in the past, which an attendee said wasn't the case years ago. City Manager Koester said if a home owners association formed, the City could have a more active partnership with the neighborhood while knowing the decision brought forth was representing the entire association versus the small group of homeowners attending tonight's meeting. Having an association would also give the neighborhood more agency in making

decisions regarding the wall. City Manager Koester asked for any information that could be sent that showed what perspective the City had in the past in regards to a home owners association forming for the seawall property owners. Another attendee shared that the neighborhood was not interested in a home owners association because they did not want to have the responsibility of insuring and maintaining the wall. City Manager Koester shared it's up to the property owners to form a neighborhood association.

In summary, the group was in general consensus of hiring an engineering as a good start. City Manager Koester said she would submit suggestions covered at the meeting to one of the City's contract engineers and develop a scope of work with Director Meyer that would ask the engineer to trouble shoot ideas like using steel pilings, a perpendicular groin, rip rap, and examine the historical analysis of the wall's damage. An ordinance would be brought before the March 26 City Council meeting so property owners could comment on the spending of around $10k for the engineer's analysis, which would give the group an engineer's report detailing a cost estimate of solutions, analysis of preventative maintenance, and rough order of magnitude for cost vs. benefit. When the engineer's report is complete, the City would bring the neighborhood together again to talk about preventive maintenance, the short term approach to the Seawall, and the long term approach to the Seawall.

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September 9th, 2019

Dear Ocean Drive Loop Service Area (ODLSA) Property Owners,

Thank you for your participation thus far in proactively addressing the Seawall's maintenance and funding needs. We had a fruitful discussion with Coastal Engineer McPherson and Public Works Director Meyer at the August 20th neighborhood meeting; attached please find the transcription.

At the August 20th neighborhood meeting, it was collectively decided that the next step was to educate the City Council on the status of the Seawall, potential major maintenance projects, and funding mechanisms. This topic will be brought before City Council during their September 23rd, 2019 worksession held from 4:00pm to 4:50pm in Council Chambers.

I invite you all to attend this meeting as we continue to make progress on this important topic. There will be an opportunity for public testimony at the end of the worksession.

Best,

Katie Koester

Katie Koester
City Manager

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August 20, 2019 Community Seawall Meeting Summary

Introduction
City Manager Katie Koester and Public Works Director Carey Meyer were joined by Councilmember Aderhold and Coastal Engineer Ronny McPherson of HDR, Inc. in hosting the August 20th neighborhood Seawall meeting.The main goal of the meeting was to determine next steps that would preserve the Seawall in the most economically responsible manner and bring City Council into the discussion. The format of the meeting included Engineer McPherson going over his analysis and answering questions, discussion regarding the pros and cons of the analysis from the homeowners' perspective, and discussion on how to bring this topic before City Council.

Engineer's Analysis
Page by page, Engineer McPherson reviewed the June 27th, 2019 "Homer Seawall Alternatives Analysis" with attendees. Below were comments made by Engineer McPherson in general or on each concept that were not already detailed in the analysis:

General Comments
Homer is extremely bi-modal, which means winds come from two different directions depending on the season. This is important to note for sediment transport as it influences whether sediment runs either along the shore or cross shore.

The cost estimates for each concept are "top-down conservative;" there may be additional ways to reduce costs on the project (like securing a local source of rock or having an abundance of fill).

The first recommendation also includes preliminary design. Using a design/build method, there needs to be a set amount of money identified for the project. Using a construction manager/general contractor delivery project (CM/GC), also known as Construction Manager At Risk, allows the City to hire a designer and contractor each under their own contracts at the same time. This method allows for cross-communication and collaboration of ideas/methods and overall means cost assurance and schedule/time assurance. City Manager Koester shared there are local sources of rock across the Bay that could assist in making the project design more localized and affordable under a CM/GC structure.

Concept 1 – Armor Stone Scour Protection
Scour refers to placing some sort of materials at the base of the Seawall as opposed to something segmented off. Under "Variations of Concept 1," the first three materials were dismissed for use on the Seawall since they are typically put in place for low wave environments.

Concept 2- Geotextile Container Scour Protection

If aesthetics are a concern, geotextile containers are very ugly. It is also possible to make a geotextile tube fifty to hundred feet in length, however if the tube gets punctured, the entire tube has been compromised since sediment will escape. This is why bags are advantageous because you can more easily replace them. Geotextile containers are a "temporary Band-Aid" and have at most a 10 year lifespan.

Concept 3- Groin Field

Groin is a structure that runs perpendicular to the shore and disrupts sediment transport. If using this method, the engineer would need to take into consideration "down-drift impact" to ensure erosion would not occur downstream from the groin. This concept would take a lot of Engineer modeling to ensure effectiveness.

Concept 4- New Steel Sheet Pile Wall

This concept would encapsulate the existing Seawall. This would be a great design/build project.

Concept 5- New Solider Pile and Concrete Lag Wall

Solider Piles would become the strongest part of the wall.

Engineer McPherson then answered questions posed by attendees. Below is a summary of the answers to those questions:

The Rough Order Magnitude Costs are for the entire length of the wall.

If there is a shortage in funding, the most threatened part of the wall could be addressed first with the remaining parts of the wall being phased. If you are creating a design package, you would first finalize the design for the entire length of the wall and then initiate a "base bid" for the most critical sections of the wall. Then you could tack on "additive bids" for the sections of wall that are less critical. This allows the project to remain within the available budget, with future work commencing once more funds are generated. You could also do a project that combines two concepts proposed in the analysis; for instance you could design a project that applies armor stone to the most critical parts of the wall and geotextile containers to the less critical sections so the entire wall is shored up. That way in the future when more funding becomes available, the geotextile containers can be replaced with armor stone.

There is more damage to the east side of the wall than the west. During the first half of the life of the wall, most of the damage occurred to the eastern third portion. More recently, there's been more damage in the center third of the wall. The western third of the wall has needed much less. It's theorized the forces of the sea reflect and move towards the east at a more concentrated rate.

According to an attendee, historically most of the concepts proposed in the analysis have been attempted on the Spit to no avail with the only real solution being large armor rock.

The Engineer did not evaluate the risk or damage associated with seawater going over the top of the wall however glacial rebound may counteract sea-level rise. Right now, the biggest concern is undermining the toe.

Sloping armor rock toe could reduce the forces imposed on or over the wall, but this would require Engineer's analysis and a wave model.

Armor stone placed on the eastern part of the wall could create a groin field to trap more sediment, however it's uncertain what level of damage could occur to any part of the wall that does not have scour protection.

If one section of the wall goes, the entire wall will go which is why it's important to ensure the most critical sections are addressed but that everyone "be in this together."

There was a request for more photos and information from communities that have a Seawall in a climate/situation that is more comparable to Homer than what the engineer's analysis presented. As follow up to this request, Coastal Engineer McPherson provided the below photograph:

Financial discussion

Right now, the City has about $30,000 in property tax contributions and $10,000 from the City general fund to address the Seawall's maintenance costs.

Director Meyer tried to predict how much money would be spent for the next twenty years if current maintenance practices continued to show that perhaps that same amount of money could be allocated towards a preventative maintenance project, which would be more beneficial than the "status quo" approach. Already the reactive trend exists to spend great amounts of money on maintaining the Seawall. Director Meyer was thinking there could be a "breakeven point" where the ODLSA would contribute enough money for a project that would greatly reduce maintenance costs, therefore being proactive while using the same amount of funds, however he encourages spending more to prolong the life of the wall. In order to fund this work, the ODLSA would first need to go before Council to ask if City Council was comfortable even borrowing for this project and if they were, then the ODLSA would either bond or borrow with the guarantee being the annual mil rate and City contributions.

There are properties that are still paying annual assessments and are delinquent. The liability associated with the assessment falls on the City, and the City has not retired this debt. The outstanding assessment amount will not be applied towards future construction or maintenance of the Seawall. Assessments are typically payed off when the property owner sells the parcel. The assessment district that paid for the construction of the wall is separate from the annual maintenance work property owners are currently contributing to through the mil rate.

There is currently about $70,000 remaining in the account used for Seawall repairs. What happens if this upcoming winter, damage costs exceed this amount? The Seawall account would have a negative fund balance, which would prompt Council to consider raising the mil rate. City Manager Koester wants the group to think about proactive measures to take before getting to this point.

Discussion on insuring the Seawall was raised, and although AMLJIA refused to continue coverage of the Seawall since it is not owned by the City, City Manager Koester will follow up and ask if they would reconsider. A Homeowners Association however could form and insure the Seawall and the City would be a member.

There was discussion surrounding re-incorporating the single property that was originally in the District back into the ODLSA. City Manager Koester said logistically this would have to be investigated (ie. determining if this would be a Council action). That homeowner is welcome to contact City Manager Koester and discuss this. There was also discussion on more than just the residents that live along the Seawall being incorporated into the District since they are benefiting from the Seawall.

Getting to a more ground truth-ed cost estimate could be accomplished with Engineer McPherson's recommendation of the CM/GC structure where the 10% design of the contract would be bid out through a Request for Proposals, then the 35%/preliminary design could be completed. City Manager Koester said she would like to see the group determine the scope of the RFP before that work went out. Director Meyer said he would like to see the group determine the budget for this project.

There was discussion surrounding the current mil rate and how that would change as a result of a new capital project, however that would be a City Council decision. City Manager Koester does see the mil rate as the mechanism to fund the improvements versus an assessment district. She would like to see what a 20 year bond with $60,000 in mil rate contributions would look like. Using the mil rate would be a flexible mechanism to generate revenue, meaning the mil rate may decrease or increase on an annual basis in order to meet the annual contribution goal set to pay off the bond.

There was discussion on the City upping its $10,000 contribution. City Manager Koester said that would mean general tax payers are subsidizing this improvement. Right now, the City pays for 25% of the Seawall's maintenance but does not have 25% of the property bordering the Seawall. However, the ODLSA residents could make the argument that the City's contribution should be more since there are City improvements at stake (like water and sewer).

City Manager believes a next step could be scheduling a worksession with City Council to discuss if there was an RFP, and what would it look like. Property owners and Councilmembers would want to look at the tradeoff between the amount of funding needed and whether or not to construct an improvement to withstand a certain amount of years. The argument goes towards armor rock if you want the improvement to last a long time.

The City cannot develop better cost estimates without spending additional funds on an engineer's analysis.

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August 7th, 2019

Dear Ocean Drive Loop Service Area (ODLSA) Property Owners,

At the February 2019 neighborhood meeting, there was general consensus that hiring a coastal engineering firm to conduct an analysis of the seawall; provide maintenance work recommendations; and evaluate potential improvements that would significantly extend the life of the seawall and reduce maintenance needs and costs in the long-term would be in the ODLSA's best interests.

Attached please find Coastal Engineer McPherson's "Homer Seawall Alternatives Analysis" as well as a cash flow analysis developed by Public Works Director Meyer based on Mr. McPherson's findings.

The cash flow analysis flushes out the two most affordable concepts proposed for the Seawall: Armor Stone Scour Protection and Geotextile Container Scour Protection. It is clear that additional revenue is needed to fund maintaining the Seawall "as is" (which is not recommended) or by taking a proactive approach and initiating a capital improvement project to reinforce the wall. I encourage you to read more about these two concepts in Mr. McPherson's report as there are pros and cons to each concept.

I would like to have another neighborhood meeting with ODLSA residents on Tuesday, August 20th at 5:30PM in the upstairs conference room of City Hall. At this meeting, Mr. McPherson will be available over the phone to answer questions regarding his report. My hope is for the neighborhood to collectively determine next steps for protecting the Seawall. As mentioned before, the Seawall is showing its age (16 years old), which is increasing the amount of needed repairs as the trend shows. I am concerned the funds used to pay for Seawall maintenance are at an unsustainable level and prompt action is needed.

Please confirm with my Executive Assistant Rachel Friedlander if you can or cannot attend. Rachel's direct line is (907) 435-3102 and her email is RFriedlander@ci.homer.ak.us. Please note there is a way to call in to the meeting if you cannot attend in person.

Thank you in advance for your response. I look forward to seeing you August 20th at 5:30PM.

Best,

Katie Koester

Katie Koester
City Manager

Memo

Date:	Thursday, June 27, 2019
Project:	Homer Seawall Study
To:	Carey Meyer, PE Homer City Engineer
From:	Ronny McPherson, PE HDR
Subject:	Homer Seawall Alternatives Analysis

The purpose of this technical memorandum is to review the condition of the Homer seawall (herein referred to as the "seawall") and provide concepts for improving the structure that would reduce maintenance cost and extend the functional life of the structure.

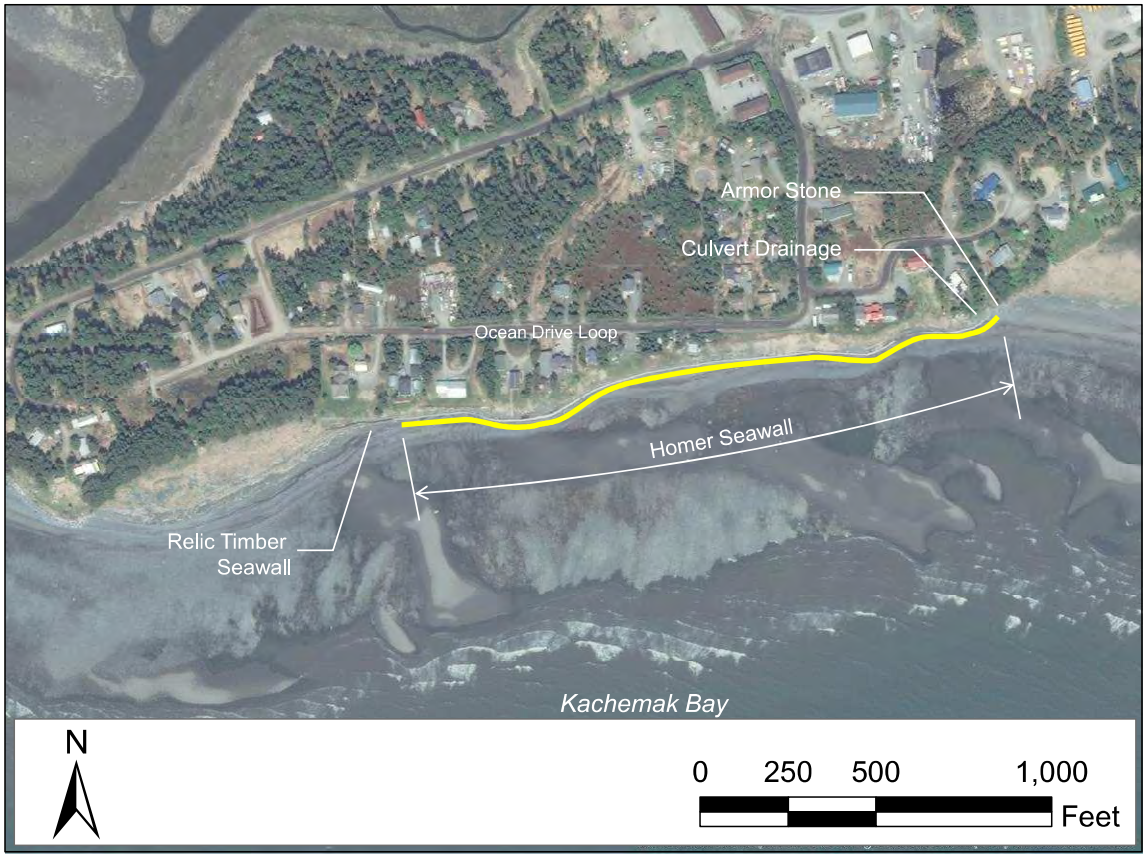


Figure 1. Homer seawall location map.

The seawall was constructed in 2002 using fiberglass sheet pile. Based on information provided by the City of Homer, the structure experienced immediate challenges primarily due to several major storm events occurring during construction and has since required continued maintenance to maintain functionality. One issue that was observed early in the project, was the

degradation of the sheet pile material due to abrasion from the beach sediments. Timber paneling was subsequently installed to mitigate the abrasion. A steel whaler (horizontal structural member) was also installed to provide additional structural support for the wall (Figure 2 and Figure 3). Over time, it has been observed that the elevation of the seafloor at the toe of the wall is lowering, noting that the elevation of the toe varies greatly throughout the year (i.e. seasonal variations). Continued lowering of the toe elevation will eventually undermine the seawall and allow retained uplands to slough.

Existing Homer Seawall Observations

A site visit was conducted on April 25, 2019 with the City of Homer City Engineer to observe the condition of the seawall. During the visit, several sink holes at the top of the seawall were observed. These were generally correlated with local failures of the timber facing at the toe of seawall (Figure 4). Within these local failures, the degrading effects of the prior abrasion were observed. Seawall height, as measured from the beach to the top of the sheet pile, was measured near the culvert drainage located on the east side of the seawall (Figure 1) and was found to be approximately 15 feet. A schematic showing the approximate conditions of the existing seawall is shown in Figure 2. Armor stone was observed on the eastern terminal of the seawall and is shown in Figure 5. Many of the armor stone were observed to have rounded edges indicating recurring movement over time which is assumed to be due to wave action. Based on rough measurements and an assumed density of 160 pounds per cubic foot, stones were found to range from 1,500 lbs. to 7,500 lbs. in weight with most stones weighing less than 2,000 lbs.

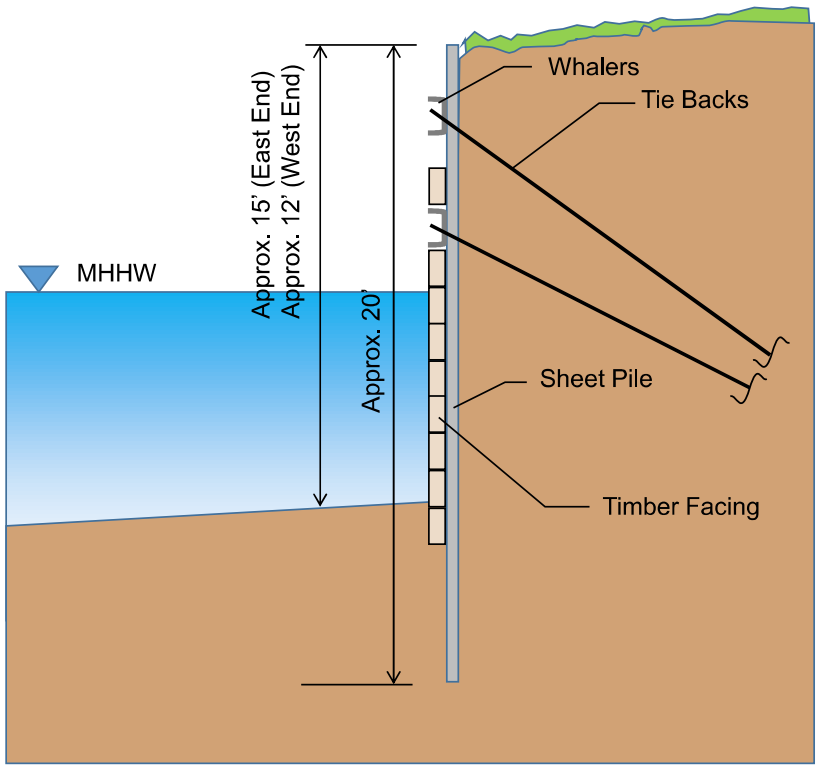


Figure 2. Existing seawall schematic.

Figure 3. Seawall existing condition.

Figure 4. Example of observed local failure – correlates to sink hole at top of the seawall. Inset shows previous assumed abrasion damage.

Figure 5. Observed armor stone at east terminal of the seawall.

Metocean Conditions and Sediment Transport

The following provides a brief description of the meteorological and oceanographic (metocean) conditions as well as sediment transport trends near the seawall.

Tide

Tide datums for the area were gathered from the NOAA tide station located at Seldovia, AK and are provided in Table 1. Although this station is located across Kachemak Bay, the tide datums provide a good representation of conditions at the project site. The base of the seawall is estimated to be at an elevation of approximately +12' Mean Lower Low Water (MLLW) based on observed tide levels during the site visit.

Table 1. Tidal Datums at Seldovia NOAA Tide Gauge (NOAA 2019)

	Elevation, FT (MLLW)	Elevation, FT (NAVD88)
Mean Higher High Water	18.1	12.7
Mean High Water	17.2	11.9
Mean Sea Level	9.6	4.3
Mean Low Water	1.7	-3.6
Mean Lower Low Water (MLLW)	0.0	-5.3
North American Datum of 1988 (NAVD88)*	5.3	0.0
**NAVD88 conversion calculated using Alaska Department of Natural Resources – Alaska Tidal Datum Portal (DGGS 2019).*		

Wind

Figure 6 provides a wind rose from data gathered at the Homer airport. The wind rose graphically shows the wind direction, magnitude, and frequency of occurrence. A silhouette of the Homer spit with the seawall location shown as a “star” is also included in the figure in the background. This provides a graphical orientation of the shoreline at the seawall in relation to the wind trends. From the figure, it can be seen that annually wind predominantly blows in two directions: northeast and west southwest.

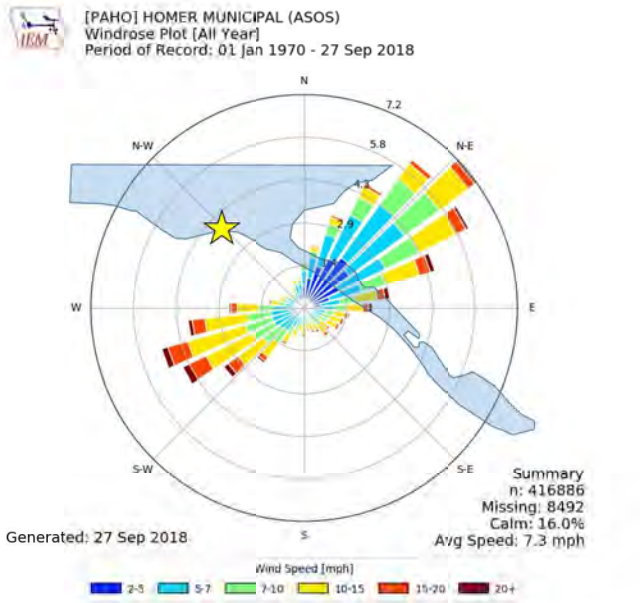


Figure 6. Wind rose showing predominant wind direction, freqency, and magnitude at Homer, AK (ISU 2019).

Waves

Kachekmak Bay is relatively shielded from open ocean swell coming from the Gulf of Alaska. Waves generated at the site are primarily wind-generated waves that have developed within the Kachekmak Bay/Cook Inlet water bodies. Because of this, wave directional trends will closely align with wind directional trends shown in Figure 6. Due to the presencse of the Homer spit and orientation of the project shoreline, waves traveling form the northeast direction will not be able to develop to any significant size prior to impacting the seawall. However, waves traveling from west southwest can reach a significant size due to the large fetch (>80 miles) and deep water across Kachemak Bay and Cook Inlet. Considering these conditions, it is believed that depth limited storm waves impact the seawall on a regular basis. Figure 7 provides an example of storm conditions during a high tide at the seawall. In addition to the large wind-generated waves impacting the seawall, wave reflection off the seawall likely amplifies the waves just seaward of the structure.

Figure 7. Storm waves impacting existing Homer seawall (photo courtesy of City of Homer).

Sediment Transport

For discussion purposes, sediment transport can be simplified as cross-shore transport and long shore transport.

Cross-shore transport is the movement of sediment up and down the beach profile (section view). In typical open-ocean beaches, wave action from winter storms will cause cross-shore sediment transport to the lower part of the beach profile creating a skinner beach or lower beach elevations. During calmer summer periods, cross-shore transport will move this sediment back up into the higher portions of the beach profile creating a seasonally wider beach. This trend or some variation is likely occurring as seasonal variations of the Homer beach elevations are typical.

Long shore sediment transport is the movement of sediment parallel to the shoreline. Sediment will move along the shoreline as waves approach a shoreline from an oblique angle. The more oblique the angle and more wave energy, the more sediment is transported. Based on the wave directional trends and orientation at the Homer seawall, the beach experiences waves impacting the shoreline from a consistent oblique angle, thus a net sediment transport from west to east can be assumed with minimal to no seasonal transport from east to west. In addition, the overall presence and orientation of the neighboring Homer spit also indicates that the net sediment transport is from west to east at the seawall.

Seawall Improvement Concepts

Several concepts for improving the longevity of the existing seawall were reviewed.

1) Armor Stone Scour Protection
2) Geotextile Container Scour Protection
3) Groin Field
4) New Steel Sheet Pile Wall
5) New Soldier Pile and Concrete Lag Wall

Concept 1: Armor Stone Scour Protection

Armor stone scour protection involves constructing a revetment type structure at the base of the existing seawall. The structure would utilize at least two stone material classes: a filter stone and a primary armor stone. A non-woven geotextile fabric would be placed as a barrier between the filter stone and the seawall as well as the beach. Filter stone would then be placed as a wedge between the primary armor stone and the seawall. This rock material and geotextile fabric will act as filter layers to reduce sediment migration through the structure. Sediment loss behind the seawall should thereby be minimized, which would reduce localized failure from "sink holes." The filter stone will also provide protection to the existing seawall from the larger primary armor stone which could damage the seawall during construction or if stones moved during a storm event. This revetment concept would reduce scour (lowering of the beach) at the base of the seawall, which if were to continue, could result in the collapse of the seawall. This concept should also prevent continued damage at the base of the seawall such as the "kicking out" of the seawall at the base as observed during the site visit. However, it should be noted that repairing a localize failure of the seawall would become significantly more challenging with a rock structure in place at the toe. Figure 8 provides a schematic of this concept.

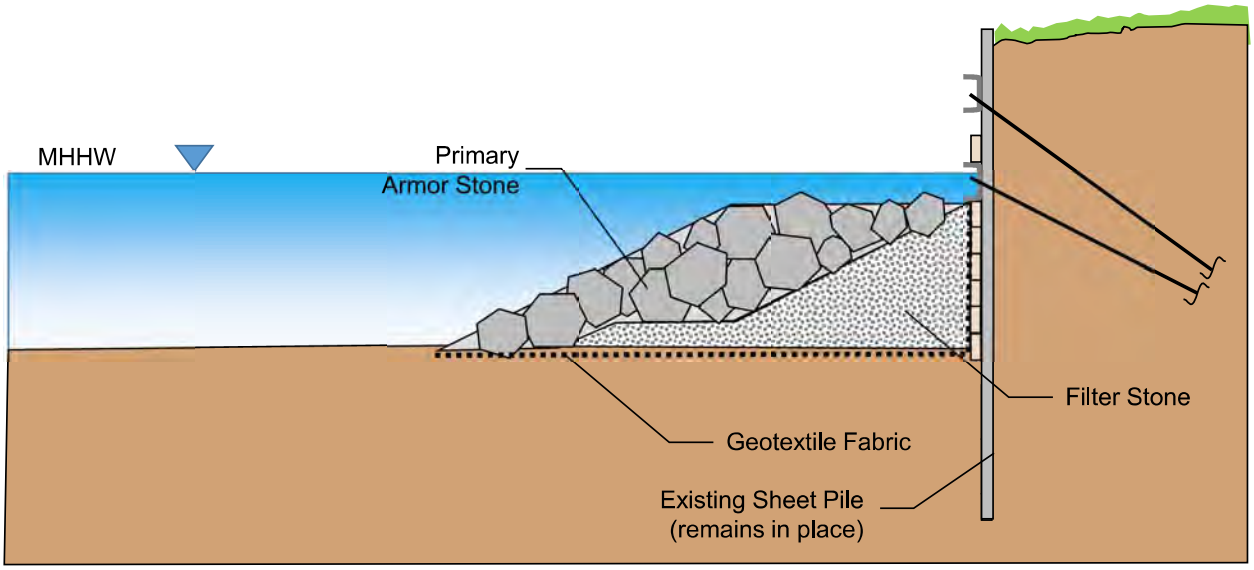


Figure 8. Concept 1 - Armor stone scour protection schematic.

Advantages:

- The seawall toe would be shored up with the armor stone mitigating localized failures of the seawall increasing the longevity of the structure. Continued lowering of the beach elevation in front of the seawall would not be a major concern.
- Armor stone structures can be design to have a long service life.

Disadvantages:

- If a localized failure were to occur due to a seepage of sediment through the seawall, repair of the failure would be more challenging (costly) than the current repair method.
- Armor stone can have a high construction cost.

Variations of Concept 1 – There are several other materials that can be used in lieu of armor rock for revetment type structures. These include gabion mattresses or baskets, geotextile marine mattresses, articulating concrete blocks, and concrete armor units. The following provides a few thoughts on these types of technologies for this application.

- Gabions – Gabions are wire baskets or mattresses that contain stone. Their advantage is that through the containment of smaller stones, their ability to withstand waves and currents is much greater than if the same size stones were uncontained. However, gabions will become ineffective and may fail if the wave environment is too great – which may be the case along the seawall. Since gabions are made of steel, they have a tendency to degrade quickly in a saltwater environment. To combat corrosion, gabions are manufactured with galvanized steel, stainless steel, and PVC coatings.
- Marine Mattress – Marine mattresses are similar to gabions in that they contain smaller stone, however, marine mattress use a flexible geosynthetic material. These structures are generally able to withstand the saltwater environment better. Similar to the gabion concept, marine mattresses are not effective and subject to failure if the wave environment becomes too extreme which may be the case along the seawall.
- Articulating Block Mats (ABMs) – ABMs come in a variety of shapes, sizes, and configurations. Often, ABMs interlock/connect with a puzzle type shape and/or rope or cable. ABMs offer good mitigation against erosion but are often damaged due to undermining of the structure and do not have the ability to self-adjust like an armor stone revetment. In addition, ABMs are typically used in lower energy wave environments.
- Concrete Armor Units (CAUs) – CAUs come in a variety forms but often resemble large concrete “jacks.” These type of structures can be very advantageous in high wave energy environments because they can be constructed larger than easily quarried armor stone. CAUs would breakdown wave energy approach the seawall but are not preferred over traditional armor stone in this situation because they would not easily mitigate localized scour and local failure of the existing seawall (i.e. they would not prevent sediment migration through the existing seawall).

Concept 2: Geotextile Container Scour Protection

Geotextile container scour protection would be very similar to the shape and functionality of the armor stone scour protection (Concept 1), however, the primary building material would be a sand-filled geotextile fabric container. The container would be made using a two-layer geotextile fabric system. The inner-fabric of the container would be made of non-woven geotextile material to prevent sediment migration through the container. The outer-fabric would be made of a strong woven geotextile fabric to support the weight of the container which can be upwards of 2,000 lbs. Containers would be fabricated with three sides pre-fabricated (sewn) similar to a pillow case. The container would also have pre-fabricated straps sewn in to allow a spreader bar to place the container in the desirable location. The containers would then be filled with locally sourced sand using a hopper and the remaining side sewn in the field. Ideally containers would be sized to be the maximum weight the construction equipment could handle and maneuver. The containers would be placed along the toe of the seawall to prevent scour. Figure 9 provides a schematic showing the section and plan of this concept. Figure 10 provides an example of a geotextile container revetment, however, note the containers are placed differently (pyramid-layout) than shown in Figure 9 and are not placed directly against the seawall.

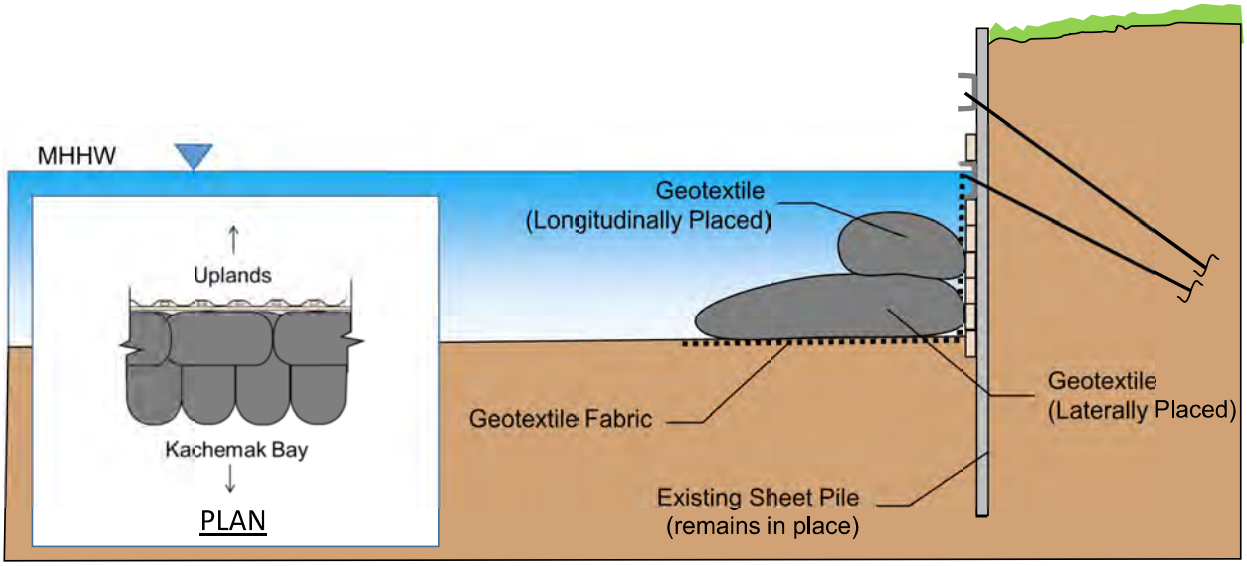


Figure 9. Concept 2 - Geotextile container scour protection section schematic.

Figure 10. Example of geotextile container revetment (pyramid layout). In the Homer seawall case, the containers would be placed against the seawall.

Advantages:

- The seawall toe would be shored up with the geotextile container mitigating localized failures of the seawall increasing the longevity of the structure. Continued lower of the beach elevation in front of the seawall would not be a major concern.
- Geotextile container fabrication is significantly less costly than armor stone. Sand used to fill the containers is assumed to be readily available in the Homer area.
- If a localized failure were to occur due to a seepage of sediment through the seawall, repair of the failure would be not be as challenging as an armor stone revetment since only a few containers would need to be removed and replaced.
- The structure would be fairly inexpensive to repair if some containers were damaged. At the time of initial construction, additional containers could be fabricated and stored until needed.

Disadvantages:

- More easily damaged by larger wave forces and has higher potential for rupturing due to debris.
- Geotextile containers do not have as long of a design life as other materials such as armor stone or steel sheet pile. The fabric breaks down overtime due to sunlight and weathering.
- Geotextile containers are easily vandalized (e.g. cut with a knife) and rendered ineffective.

Concept 3: Groin Field

A groin is a coastal structure that is orientated perpendicular to the shoreline with the intent of disrupting the long shore sediment transport. A groin field is a series of groins placed relatively uniformly along a shoreline that create pocket beaches between structures. Groins can be constructed with a variety of materials but are most often constructed with armor stone. As sediment travels along the shoreline due to wave action and currents, a groin will disrupt the flow of sediment and accrete sediment along the up-drift side of the groin (called a filet). Since wave action and/or currents will continue to move sediment, the down-drift side of the groin will lose sediment/erode. In the situation of a groin field, sediment between groins is relatively stable. The most down-drift groin, however, is still subject to this potential erosional effect. Since there is a significant net long shore sediment transport along the seawall, a groin field would be very effective at retaining sediment in front of the seawall. However, erosion effects at the down-drift side of the seawall could be very significant with minimal opportunities for wave action to replenish the down-drift side with sediment. A potential solution to offset the significance of the down-drift erosion is to create a groin structure that is quasi-porous allowing a portion of the sediment to transport through the groin structure. An example of this would be a series of timber piles driven close to each other or armor rock structure with a low crest elevation. Making the groin structure quasi-porous also limits the effectiveness of the groin. Figure 11 provides a plan-view schematic of this concept.

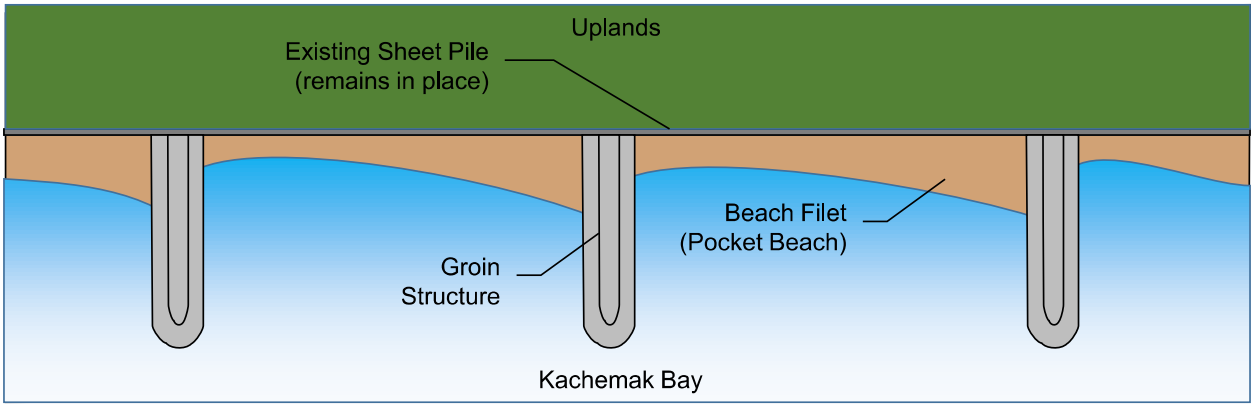


Figure 11. Concept 3 - Groin field plan schematic.

Advantages:

- The seawall toe would be shored up with additional natural sediment. Continued lower of the beach elevation would be halted or slowed greatly.
- Localized failures of the seawall would not be any more challenging than they are today.
- Depending on the amount of sediment accumulation in front of the seawall, localized failures would likely be reduced.

Disadvantages:

- Groins to do not limit cross-shore sediment transport. A large storm could erode sediment at the base of the seawall.
- Multiple groin structures, especially made of armor stone or sheet pile, would be very costly.
- Groin structures made of timber would have a limited life span compared to armor stone.
- Potential for down-drift erosional impacts are great.

Concept 4: New Steel Sheet Pile Wall

A new steel sheet pile wall, similar to the wall used to repair the seawall on the eastern side could be installed just seaward of the existing wall. The wall could be design to be cantilevered (i.e. requiring no tie backs). Fill would be placed between the new steel sheet pile wall and the existing sheet pile wall effectively encapsulating the structure. The design life of the existing structure would then be negated as the design life would solely rely on the new steel sheet pile wall. This concept would be similar to the current seawall, but with a more robust structure. Figure 12 provides a schematic of this concept.

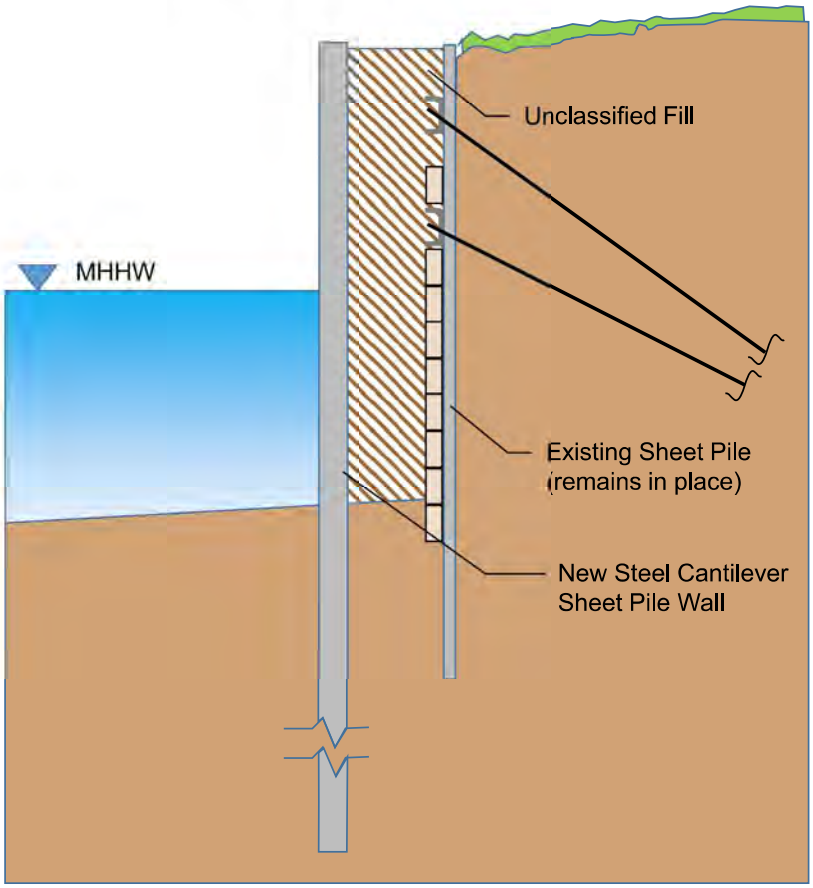


Figure 12. Concept 4 - New steel sheet pile wall schematic.

Advantages:

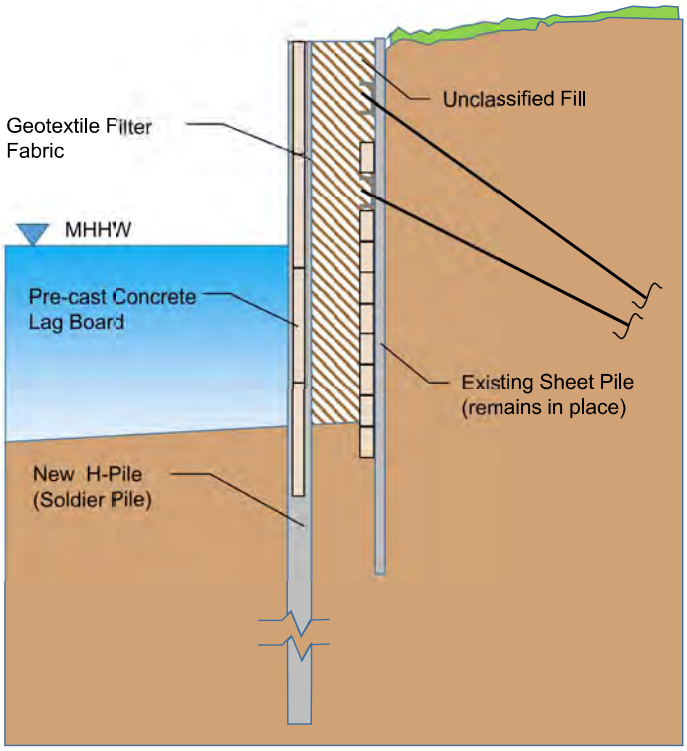
- Condition of the existing seawall (e.g. localized failures) would not be a factor in the longevity of the retaining structure.
- Lowering of the beach elevation could be factored into the design.
- Steel sheet pile walls can be design to have a long service life.

Disadvantages:

- Installation of steel sheet pile can very expensive and is often more expensive than armor stone structures.

Concept 5: New Soldier Pile and Concrete Lag Wall

A solider pile and concrete lag wall would be an innovative approach to shoring up the existing seawall. A soldier pile is a single pile that is designed to be stout and handle significant loading. A concrete lag is a pre-cast concrete block. This concept would entail driving steel H-piles and then sliding concrete lags between H-piles to create a wall. The overall wall would be designed to be cantilevered (i.e. does not require tie-backs). This wall would be installed just seaward of the existing seawall and fill would be placed between the new seawall and the existing seawall. A unique feature of this concept is that as the beach elevation lowers over time, the concrete lags can be lowered to meet the new beach grade (and might lower due to their own weight). Then additional lags can be placed on top of the existing lags to continue expanding the height of the wall. Note, placing additional lags would require mobilizing construction equipment. A geotextile filter fabric would need to be installed on the landward side of the wall to prevent sediment from piping through the concrete lags. If existing lags are moved deeper and additional lags are placed, careful maintenance of the geotextile filter fabric will be required to mitigation sediment from migrating through the wall. Figure 13 and Figure 14 provide schematics of Concept 5. An example of this concept is shown in Figure 15



CONCEPT 5 – NEW SOLDIER PILE AND CONCRETE LAG WALL (SECTION)

Figure 13. Concept 5 - New soldier pile and concrete lag wall section schematic.

CONCEPT 5 – NEW SOLDIER PILE AND CONCRETE LAG WALL (OBLIQUE)

CONCEPT 5 – NEW SOLDIER PILE AND CONCRETE LAG WALL (PLAN)

Figure 14. Concept 5 - New soldier pile wall and concrete lag wall section oblique and plan schematic.

Figure 15. Example of a concrete lag wall (source: easternvault.net).

Advantages:

- Condition of the existing seawall (e.g. localized failures) would not be a factor in the longevity of the retaining structure.
- Lower of the beach elevation can be addressed by lowering concrete lags as necessary and adding additional lags on top of existing lags.
- Steel pile and concrete can be design for an extremely long design life.

Disadvantages:

- Installation of piles and lags can be very expensive and is likely more expansive than armor stone structures.
- Concrete lags require geotextile fabric to prevent sediment migration (piping) through the structure.

Rough Order Magnitude Costs

A rough order of magnitude (ROM) cost for each concept was developed. Quantities were determined through conceptual design and assumed rough unit rates were applied to develop the ROM costs. Note, no design has been performed to determine quantities, and comparable project costs were not reviewed. ROM costs should be used as a general "order of magnitude" and not used for financial planning purposes. Costs associated with design and permitting of the concepts is include in the ROM cost values.

Table 2. Rough Order Magnitude Costs for Reviewed Concepts

	Rough Order Magnitude Cost
Concept 1 – Armor Stone Scour Protection	$1.5M to $2.1M
Concept 2 – Geotextile Container Scour Protection	$0.6M to $0.9M
Concept 3 – Groin Field (assumes 4 groins)	$3.0M to $4.3M
Concept 4 – New Steel Sheet Pile Wall	$2.9M to $4.0M
Concept 5 – New Soldier Pile and Concrete Lag Wall	$3.2M to $4.4M

Recommendations

The following provides some recommendations for advancing improvements to the Homer Seawall.

- Consider performing a more detailed alternatives analysis that focuses on 2 or 3 preferred concepts from this effort to advance the designs to a preliminary level and obtain more informed potential costs.
- Only consider the geotextile container option if funds are limited and the opportunity to receive additional funds is not likely in the foreseeable future.
- If the City of Homer procurement rules allow, consider advancing the seawall options as a design/build delivery project. These designs are not complicated and the cost can be highly influenced by the contractor's availability, equipment spread and location, and on-hand materials.
- For concepts using armor stone, recommend advancing the project through a traditional design/bid/build or construction manager/general contractor (CM/GC) delivery project.
- For the groin field concept, recommend performing an extensive modeling and performance analyses to inform potential for down-drift erosion impacts.

References

DGGS, 2019. Alaska Department of Natural Resources, Division of Geological & Geophysical Surveys, Alaska Tidal Datum Port. Webpage, http://dggs.alaska.gov/sections/engineering/ak-tidal-datum-portal/calculator.php

ISU, 2019. Iowa State University, Iowa Environmental Mesonet. Webpage, http://mesonet.agron.iastate.edu/sites/locate.php

NOAA, 2019. Center for Operational Oceanographic Products and Services (CO-OPS), webpage, http://tidesandcurrents.noaa.gov/

Homer Seawall Cash Flow Analysis Based on Two Alternatives
Produced by Public Works Director Carey Meyer, P.E.

Introduction
The analysis prepared by Coastal Engineer Ronald McPherson of HDR, Inc. details five preventative maintenance measures that would minimize the Seawall's future repair costs. The purpose of the following discussion is to entertain the two most affordable options and demonstrate how investment in either of these preventative capital projects would produce a positive benefit/cost ratio compared to the current "reactive" process.

Current "Reactive Process"
Yearly maintenance/repair costs are trending up for the Seawall. Exhibit A charts the Seawall's maintenance/repair costs for 2006-2018 and projects future costs out 20 years assuming a "status quo" approach.

Projecting the current trend into the future, the total cost to complete maintenance/repair over the next 20 years "as is" will accumulate to approximately $996,000 (or $49,800/year; see Exhibit B).

Preventative Capital Projects: Concept 1 & Concept 2
The average of the costs to complete *Concept 1- Armor Stone Scour Protection* is $1,800,000 (the engineer estimates the cost ranges from $1,500,000 to $2,100,000). Borrowing this amount at 5% interest means annual payments over a twenty year period would total $144,432 for this preventative project expense.

The average of the cost to complete *Concept 2-Geotextile Container Scour Protection* is $750,000 (the engineer estimates the cost ranges from $600,000 to $900,000). Borrowing this amount at 5% interest means annual payments over a twenty year period would total $60,180 for this preventative project expense.

Please note that this analysis does not take into consideration many important factors (i.e. – inflation, expected life of existing seawall or relative effectiveness of alternative improvements, ability to secure environmental permits, etc). As noted by the Engineer, Concept 2 is more easily damaged, has a higher potential for rupturing, and does not have as long of a design life as other materials like armor stone, which means these materials may need to be replaced again within the 20 year timeframe. Following Engineer McPherson's first recommendation is therefore highly recommended: *"Consider performing a more detailed alternative analysis that focuses on 2 or 3 preferred concepts from this effort to advance the designs to a preliminary level and obtain more informed potential costs."*

Summary

The intent of either preventative capital project is to save the Seawall, reduce the "reactive" annual maintenance costs of the Seawall, and save money over the long run for ODLSA property owners.

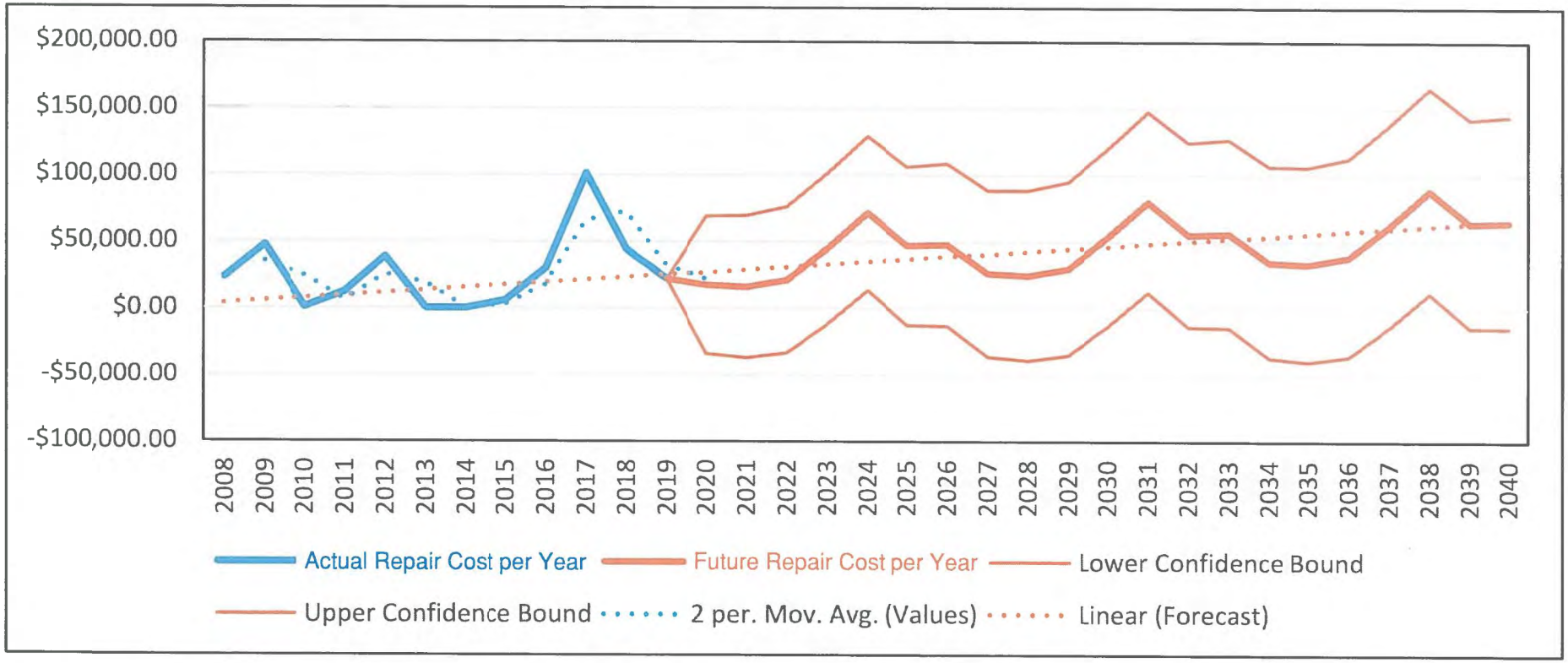
An optimistic assumption would be that by protecting the toe of the seawall with these preventative capital projects, maintenance/repair costs could be reduced by up to 80%. This could reduce the current "status quo" maintenance costs over the next 20 years from $996,000 to $199,200 – an overall savings of $796,800 (or $39,840/year), making either preventative measure a worthwhile, fiscally prudent next step. In theory, this could take what is currently spent on maintenance alone ($49,800) and reduce it to $9,960 a year.

The below table summarizes what this reduction in annual maintenance costs would look like along with annual expenses and revenue estimates.

Approach	Annual Preventative Capital Project Cost	Annual Maintenance Cost	Total Cost over 20 Years (Preventative Project + Maintenance)	Annual Cost Per Lot (16 Lots)	Average Annual Revenue based on 2012-2018 (ODLSA Mil Rate currently 9.962541)	Total Revenue for 20 Years (Based on 2012-2019 Average)	Outstanding Expenses
Status Quo		$ 49,800	$ 996,000	$ 3,113	$ 44,952	$ 899,043	$ (96,957)
Concept 1	$ 144,432	$ 9,960	$ 3,087,840	$ 9,650	$ 44,952	$ 899,043	$ (2,188,797)
Concept 2	$ 60,180	$ 9,960	$ 1,402,800	$ 4,384	$ 44,952	$ 899,043	$ (503,757)

As the “Outdating Expenses” column in the above table shows however, ODLSA residents will need to finance either status quo or preventative capital project options above what is currently being collected. The two accounts that fund Seawall maintenance/repair (Mil Rate Deposits and the City’s Seawall Reserve Account) do not have enough funds to cover these expenses outright.

Exihbit A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$100,000.00
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Actual Repair Cost per Year
Future Repair Cost per Year
Lower Confidence Bound
Upper Confidence Bound
2 per. Mov. Avg. (Values)
Linear (Forecast)

Exhibit B

Timeline	Values	Forecast	Lower Confidence Bound	Upper Confidence Bound
2008	$23,000.00			
2009	$47,318.30			
2010	$715.17			
2011	$11,971.10			
2012	$38,292.31			
2013	$0.00			
2014	$0.00			
2015	$5,616.96			
2016	$29,720.25			
2017	$101,126.83			
2018	$43,597.51			
2019	$21,809.00	$21,809.00	$21,809.00	$21,809.00
2020		$17,420.09	-$34,155.87	$68,996.05
2021		$15,904.44	-$37,283.96	$69,092.83
2022		$21,107.29	-$33,658.34	$75,872.92
2023		$44,796.63	-$11,514.04	$101,107.31
2024		$71,309.01	$13,482.86	$129,135.16
2025		$46,734.86	-$12,579.51	$106,049.23
2026		$47,553.59	-$13,223.79	$108,330.97
2027		$26,020.83	-$36,207.23	$88,248.89
2028		$24,505.18	-$39,140.49	$88,150.86
2029		$29,708.03	-$35,334.98	$94,751.04
2030		$53,397.37	-$13,024.01	$119,818.76
2031		$79,909.76	$12,127.76	$147,691.75
2032		$55,335.61	-$13,790.32	$124,461.53
2033		$56,154.33	-$14,299.84	$126,608.51
2034		$34,621.57	-$37,155.91	$106,399.06
2035		$33,105.92	-$39,970.91	$106,182.76
2036		$38,308.77	-$36,054.25	$112,671.79
2037		$61,998.12	-$13,638.62	$137,634.86
2038		$88,510.50	$11,611.85	$165,409.15
2039		$63,936.35	-$14,213.01	$142,085.71
2040		$64,755.08	-$14,634.35	$144,144.50

SUM	**$996,902.33**
AVG	**$86,687.16**

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
P.O. BOX 6898
JBER, ALASKA 99506-0898

REPLY TO
ATTENTION OF:

DEC 19 2017

District Commander

City of Homer
Attention: Mr. Walt Wrede
491 East Pioneer Avenue
Homer, Alaska 99603

Dear Mr. Wrede:

This regards your Department of the Army (DA) permit modification to abandon portions of the 2000 linear foot Ocean Drive Loop Seawall that are not located on City owned property. The proposed project is located within Sections 20, 21, 28, and 29, T. 6 S., R. 13 W., Seward Meridian; Latitude 59.6346° N., Longitude 151.5203° W.; in Kachemak Bay, along Ocean Drive Loop, in Homer, Alaska.

We have thoroughly reviewed your comments, and those received from other interested parties. Several individuals objected to your proposed permit modification.

The evaluation by this office considered relevant factors including economics, shore erosion and accretion, considerations of property ownership and, in general, the needs and welfare of the people.

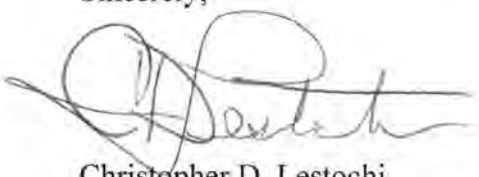
After evaluation of all comments received from individuals, I have determined that issuance of this particular permit would not be in the public interest. Accordingly, I am denying your DA permit modification request. The enclosed Decision Document outlines in detail the reason for my denial of a permit for your proposed work.

Additionally, you are aware that I have received a request to transfer a portion of the seawall from the City of Homer to one of the interested private property owners. I will not allow a transfer of the DA permit to individual property owners absent a good faith transfer agreed to by all of the parties involved. However, I will give favorable consideration to a permit transfer request from a home owners association or similar entity that can conduct the necessary maintenance on the seawall.

Enclosed is a Notification of Administrative Appeal Options and Process and Request for Appeal form regarding this Department of the Army Permit action (see section labeled "Permit Denial").

If you have further questions, please contact me directly, or Ms. Karen Kochenbach, of my staff via email at Karen.A.Kochenbach@usace.army.mil, by mail at the address above, by phone at (907) 753-2782, or toll free from within Alaska at (800) 478-2712. You may also provide comments about our service at the web address www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,



Christopher D. Lestochi
Colonel, U.S. Army Corps of Engineers
District Commander

Enclosures

U.S. Army Corps
of Engineers
Alaska District

Department of the Army

Permit Evaluation and Decision Document

Addendum

APPLICANT: City of Homer

APPLICATION NO.: POA-2002-100

WATERWAY: Kachemak Bay

This document constitutes my Statement of Findings for the proposed modification. Since there is no discharge of fill material associated with this proposal to modify an existing DA permit, an Environmental Assessment, Section 404(b)(1) Guidelines Review and Compliance Determination were not prepared for the proposal. However, an alternatives analysis has been conducted along with a limited Public Interest Review determination was conducted on specific, relevant public interest review factors (see Section 3.0).

Background

In 2002 the City of Homer (City) initiated a permit application to assist a group of property owners whose 16 ocean front parcels along Kachemak Bay were eroding. A Department of the Army (DA) permit was issued July 5, 2002, to the City to construct a 2000 foot long sheet pile seawall by discharging 7,030 cubic yards of dredged material into 0.46 acre below the high tide line of Kachemak Bay. The project was constructed soon after permit issuance.

General Condition 2 of the DA permit states: "You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4[1] below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area."

1.0 Summary of Decision

I have decided, in light of the overall public interest, to deny the City of Homer's request to modify DA permit POA-2002-100, Kachemak Bay. The denial prevents the City of Homer from abandoning the portions of the seawall constructed on private property.

Lastly, I would more likely give favorable consideration to a permit transfer request from a home owners association or similar entity that can conduct the necessary maintenance on the seawall.

2.0 Proposed Project

2.1 Project Description: On January 4, 2012, in accordance with General Condition 2, the City requested a permit modification to abandon portions of the seawall that are not located on City owned property.

In their permit modification request, the City stated that maintenance would still occur on sections of the seawall which protect City owned property, which includes lots 43 and 44 of Oscar Munson Subdivision. The portions of the seawall proposed for abandonment include lots 34-42 of Oscar Munson Subdivision,

[1] General Condition 4 states, "If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization."

lots 45A and 45B of Oscar Munson Subdivision No. 18, 1103 Krueth Way, lot 1 of Tamian Subdivision, and lot 5 of Seabreeze Subdivision.

If the modification request were approved, the DA would only enforce the terms and conditions of the permit as it pertains to lot 43 and 44 Oscar Munson Subdivision, and any other City owned property.

The City stated that the modification [to abandon the seawall] is justified given the unique circumstances surrounding the permit, which they state includes:

- Except for lots 43 and 44, the seawall is on private property and is owned by the property owners
- The City does not have maintenance easements on the privately held parcels and cannot maintain the seawall (or restore the land to its former condition)
- The City cannot obtain insurance for the seawall
- The history of the project and the understanding and agreements that led the City to finance the project and act as an agent for the property owners for permitting purposes

2.1.1 Changes since the Public Notice: Through comments in response to the Public Notice, the City has acknowledged that the right-of-way between lots 37 and 38 (30') and Lake Street (60') are City owned property. The City has agreed that these properties, and any additional parcels purchased, or received through foreclosure, by the City would be similarly maintained.

2.2 Location: The proposed project is located within Sections 20, 21, 28 and 29, T. 6 S., R. 13 W., Seward; Latitude 59.6346° N., Longitude 151.5203° W.; in Kachemak Bay, along Ocean Drive Loop, in Homer, Alaska.

2.3 Scope of Analysis: DA control and responsibility will focus on the seawall, where impacts to waters of the U.S. were authorized July 5, 2002, for construction of the seawall.

2.4 Purpose and need: To abandon (cease maintenance of) the portions of the Ocean Drive Loop seawall (seawall) that are not located on City owned property.

3.0 Environmental and Public Interest Factors Considered: The original environmental assessment prepared for this project (file number POA-2002-100, Kachemak Bay) adequately addressed the environmental and public interest factors as they applied to the construction of the seawall. The current review will focus on the following public interest review factors: economics, shore erosion and accretion, considerations of property ownership and needs and welfare of the people. See Section 6.0 for the analysis of the public interest review factors.

4.0 Alternatives Considered [33 CFR 320.4(a)(2)(ii)]: The current request would not result in a discharge of dredged or fill material, therefore a 404(b)(1) analysis is not required and mitigation will not be discussed.

4.1 No action: This would result in denial of the City's request and the City would remain the permittee with the responsibility to maintain the seawall and/or seek a good faith transfer as General Condition 2 states.

4.2 Other alternatives:

4.2.1 Abandon and restore: This alternative entails removal of the seawall and backfill material, resulting in a restoration of the site to pre-project contours and condition. This alternative may result in the near-term and long-term loss of housing, sewer/septic systems, public utilities, and a public road as there would be no protection against erosion. None of the landowners, or the City, were in favor of this alternative with the potential for loss of property, public infrastructure and human life. Additionally, landowners have a 'general right to protect property from erosion' 33 CFR 320.4(g)(2). This alternative does not meet the applicants stated purpose, or the needs by all parties involved to protect private property, and the public infrastructure located landward of the seawall.

4.2.2 Abandon and transfer portions of the DA permit to individual landowners: This alternative would allow the City to abandon the project, and allow individual landowners to accept the terms and

conditions of the original permit for their portion of the seawall. There are 16 parcels located behind the existing seawall, and there are, at this time, 13 separate landowners (including the City). The likelihood of each of the remaining 12 landowners willingly accepting a transfer of the permit is highly unlikely, as only one landowner has requested such action. This would only be a reasonable alternative if the permit were to be transferred to a homeowners association (HOA) with the authority to act on the behalf of the collective property owners. To date, an HOA has not been formed.

4.3 Other alternatives suggested in response to Public Notice:

4.3.1 Place armor rock in front of the existing seawall: This alternative would result in an armor rock revetment placed in advance of the existing seawall. Three landowners suggested this alternative, however, armor rock placement would require DA authorization, as it would be located at or below the high tide line of Kachemak Bay. Initial discussions regarding changes to the seawall design/armor rock occurred in the summer of 2010, however, it is unknown if any engineering or hydraulic studies have been completed, or begun, to inform the landowners of the reasonability of various modifications. This alternative does not meet the applicants stated purpose and is not a reasonable alternative for the current review.

4.3.2 Maintain seawall through eminent domain or outright purchase of all parcels: An adjacent landowner suggested that the City could acquire the seawall, and necessary maintenance easements, through eminent domain. As the seawall is not a public building or utility line, acquisition through eminent domain may not be feasible. Additionally, the City could purchase all of the parcels located landward of the seawall and maintain the parcels as public property. However, aside from the parcels not being for sale, the City has not indicated an interest in purchasing all of the seawall properties. Also, the costs to the City, and thereby, the City residents, in purchasing waterfront parcels could be extensive. Maintaining the seawall through eminent domain and parcel buyouts do not appear to be reasonable alternatives.

5.0 Coordination: We received a complete application on March 7, 2012. A Public Notice describing the project was issued and posted on our website on April 6, 2012. The comment period expired on May 7, 2012.

5.1 Comments received:

5.1.1 Federal Agencies:

5.1.1.1 U.S. Environmental Protection Agency (EPA): No comments were received.

5.1.1.2 U.S. Fish and Wildlife Service (USFWS): No comments were received.

5.1.1.3 National Marine Fisheries Service (NMFS): No comments were received.

5.1.1.4 U.S. Coast Guard (USCG): No comments were received.

5.1.2 State Agencies:

5.1.2.1 Alaska Department of Fish and Game – Division of Habitat (ADF&G): No comments were received.

5.1.2.2 Alaska Department of Environmental Conservation (ADEC): No comments were received.

5.1.2.3 ADNR, Office of History and Archaeology (OHA): received a stamped notification on April 16, 2012, from the Alaska State Historic Preservation Officer (SHPO) stating that there are "No Historic Properties Affected."

5.1.3 Federally Recognized Tribes: No comments were received.

5.1.4 Local Agencies: No comments were received.

5.1.5 Organizations: No comments were received.

5.1.6 Individuals: Letters were received from the following ten individuals: Mr. Norman Schumacher dated April 19, 2012, Mr. Robert and Mrs. Jenny Dewees dated April 19, 2012, Mr. Pat and Mrs. Kathy Sarns Irwin dated April 28, 2012, Mr. Don McNamara and Ms. Donna Rae Faulkner dated May 1, 2012 (with a subsequent comment submitted May 3, 2012), Mr. John and Mrs. Janet Szajkowski dated May 2, 2012 (with a subsequent comment submitted May 7, 2012), Mr. Doug and Mrs. Sue Alaniva dated May 3, 2012 (with a subsequent comment submitted May 4, 2012), Mr. Larry Goode dated May 3, 2012, Mr. Paul and Mrs. Marilyn Hueper dated May 3, 2012 (with a subsequent comment submitted May 7, 2012), Mr. John D. and Mrs. Charlene A. Jump dated May 3, 2012, and Mr. Chris and Mrs. Angie Newby dated May 6, 2012. Each of the comment letters are summarized below:

Mr. Schumacher stated that right now, the City must maintain, but not necessarily pay for, repairs to the seawall, and he's ok with that. His concerns include two issues if the City is no longer involved. First, that not all homeowner's repair, or contribute to repairs, when a breach occurs. He stated that he can afford a special tax levied each year for repairs, but can't afford to pay for a major loss on his property. Second, recent damage that has occurred was not addressed, and a minor loss turned into a major expense. He feels the solution to the problem is to add armor rock, or something equivalent, to the existing seawall, and since there may be no grant money available right now, the homeowners may have to pay. At that point (if armor rock is installed), he stated that they really don't need the City's assistance and their request for abandonment of private properties should be granted.

Mr. and Ms. Dewees stated that they support denying the City's request. They stated that the seawall would fail over time if individual property owners were to affect repairs. Such failure would allow erosion of bluff property, city and government property and eventually create a situation where the peninsula protected by the seawall would be eroded, eliminating access to the spit and airport. The City has maintained the seawall previously, and allowing its failure is not in the public interest. They stated that the City has a remedy to the current situation which includes acquiring the seawall and all required access by eminent domain and increased taxes.

Mr. and Mrs. Irwin stated that they support 'no action', and that they want the City of Homer to remain the permittee. However, if the City chooses to pursue a long-term solution by adding armor rock to the seawall, or at least adding armor rock to its Priority List, then the issue can be re-visited.

Mr. McNamara and Ms. Faulkner requested a good faith transfer of their 100 linear feet of seawall so that they can continue to repair their own property. They support the City's request to abandon and leave the seawall as-is. There has never been a collective maintenance agreement and/or property owner's association and they never agreed to give easements to any entity to do maintenance/repairs on their private property. They stated that they paid their original Local Improvement District (LID) for the construction of the seawall in 2008 and the City gave everyone maintenance guidelines to follow, which they believe they have diligently carried out. They opined that their work is far superior to the work performed by the City on other sections of the seawall. In response to the four alternatives in the PN, they don't agree that the City can abandon and restore the seawall, as the City can't legally come onto private property without easements and remove what individuals paid for in the LID. They consider the second alternative (abandon and leave as is) as the best choice, as they believe property owners will take care of their sections of the seawall on their private property if the City isn't going to pay for, or have liability, for it. As far as 'abandon and transfer portions of the DA permit to individual landowners' – They indicated this is acceptable, but are uncertain if other landowners would agree to the transfers. They also believe the 'no action' alternative would be alright only if the Corps and City agree to a good faith transfer of their portion of the seawall. They stated that repairs on private property were not part of the LID agreement ten years ago, nor is that in alignment with the State court decision[2]. They believe the City would likely try to impose a special service district (SSD) to collect taxes for repairs, to which the landowner has stated that they have not, and would not, grant easements to the City for repairs. They believe the SSD would have inequities requiring a disproportionate amount of money to fund work on the

[2] Alaniva, et al. v. City of Homer, Case No. 3AN-03-14466CI

property of others, resulting in their being forced to either litigate and/or sell the property. They wish to continue to care for their private property and the associated seawall, with its' assets and liabilities.

Mr. Szajkowski commented on the City's stated 'unique set of circumstances' and each of the alternatives noted in the PN. He stated that the seawall is on private property and the City never once asked permission to work on private property nor made any effort to plan an alternative to constructing it on private property. The City has performed maintenance with no questions about access or permission having ever been asked. He stated that it is not true that the City doesn't have maintenance easements, since the seawall was built and at least ten repairs have been made. Additionally, the City has easy access to the entire length of the seawall directly from the beach itself. He was unsure about the ability to obtain insurance, but opined that if something is important enough, you can find someone to insure it. He stated a SSD collects money from property owners to cover insurance, maintenance and repairs, so he didn't understand what the City was using that money for. In response to the City's financing of the project and intention to act as an agent for the property owners, he stated that the property owners knew nothing of the details of the permit, especially that the City was responsible for maintenance and repair for over six years. He stated that the 'abandon and restore' alternative would be counterproductive and would no longer protect private and public property, utilities and roadways, in addition to leading to legal action andit doesn't make economic sense. He didn't agree with the alternative to 'abandon and leave as is' as he doesn't want to incur the costs of maintaining and repairing the seawall. He feels that the City poorly planned, managed and constructed the seawall and private individuals shouldn't be forced to pay for the consequences of the City's mistakes. Additionally, the City has property other than lots 43 and 44, which include 60 linear feet of Lake Street and 30 linear feet of the right-of-way (ROW) between lots 37 an 38. He also thinks the City will receive lot 41 and 42 through foreclosure, giving the City's approximately 500 linear feet of seawall ownership. He stated that the City has not done a conscientious job of maintaining their own property. He also disagreed with the alternative to 'abandon and transfer portions of the DA permit to individual landowners', as releasing one permit holder (the City) from responsibility for the entire seawall, there is no longer oversight of the entire project by one permittee. By design, the seawall connects all of the properties involved in the project. There is no guarantee that all property owners would maintain their portion of the seawall. This would jeopardize the overall integrity of the seawall. He requested that the City's request be denied ('no action'). He also proposed an additional alternative, which includes an armor rock revetment. He stated that the details of the armor rock revetment have not been explored because the City hasn't talked about it with the property owners, but he feels it is the only alternative to the existing situation.

Mr. Alaniva wants the City's request to abandon the seawall or transfer the permit to individual property owners denied. He stated that recent repairs made by the City to a breach in his segment of the seawall were only temporary repairs. In a separate email, he stated that he agrees with Mr. Paul Hueper's comments (to follow).

Mr. Goode stated that the City had a mechanism in place to collect money from the property owners so that repairs could be done, however, that mechanism was eliminated. He also stated that since the seawall is one unit, it must be maintained as one unit. Another problem arises when small breaches occur and are not fixed quickly (i.e. as happens when someone is away for several weeks). The seawall can't be removed and the bluff built back to its original state because the City didn't require easements from the neighbors. He feels that the City shouldn't be 'let off the hook' because they made the mistake of not getting easement rights before the project was constructed.

Mr. Hueper is against modifying the permit. He stated that the seawall has always been on private property, and that the City has been maintaining the seawall even though there are no easements in place (and were none when the original permit was approved). Homeowners have allowed them to make repairs and have not legally blocked the City from repairing the seawall. He believes the City can maintain the seawall, and has been maintaining it. In regards to insurance, he stated that the City has been paying insurance all along, and forced landowners to pay for some of it. Then, last year, the City dropped the insurance. Lastly, Mr. Hueper stated that the City was never an agent for the property owners, and that his understanding was that the seawall was a LID in both a legal sense and by name, acting like any other utility that the City was responsible to maintain. In an additional email, Mr. Hueper stated that if the City had acted as their agent, they would have had to voluntarily accepted the item that was built for them. However, they never accepted ownership of the seawall and the City has no proof of

such ownership. Additionally, there was never a transfer of ownership to the property owners. He request that the City of Homer's request to modify the original permit be denied.

Mr. and Mrs. Jump stated that the City has insurance on the seawall, and they are confused as to why they are being told there is no longer insurance. Mr. and Mrs. Jump wrote that in 2008, the repairs to the seawall were financed by a mil rate (property tax) increase. The City communicated to property owners that funds (from the additional mil rate) would be placed in a seawall maintenance fund for owners to use as they are needed. They stated that the project has been confusing, as they were told that the seawall would be nearly 'maintenance free', which has not been the case. The City agreed to be the project manager, and paid in full for the project while there were still problems with the construction, disregarding the disapproval from property owners. They state that the contractor then put a wood face on the seawall using untreated lumber which they would not use in the Homer Harbor, and this hasn't withstood damage from salt water and freshwater exposure. They also commented that the seawall placement had changed in some areas which has impacted some property owners worse than others. The City created an SSD to collect money for maintenance, repair, insurance and other costs, which was abolished, with a new SSD established in January 2012. Finally, they stated that they are in favor of denying the City's request to abandon the seawall.

Mr. and Mrs. Newby requested that the City's request be denied and that the City remain the permittee. They stated that removing the seawall ('abandon and restore') would result in the loss of protection for millions of dollars of both private and public improvements, in addition to a lack of agreement with where the original bluff contours exist which would likely result in future litigation. They stated that the City built the seawall to be paid for by the property owners through a LID which implies that the City would maintain the structure. Early cost estimates contemplated City maintenance. The City has adopted, withdrawn and readopted various methods to share costs with the private property owners. The City has ignored the fact that they control two existing ROWs and two lots with outstanding assessments which should have resulted in the City taking ownership, thus increasing their ownership of the seawall by 200 linear feet. The project is too complex and expensive for any one, or a small group, to undertake, which is the reason local government steps in to build and maintain such projects. They opined the efforts of one property owner could have disastrous effects upon their neighbors, therefore, a comprehensive approach should be taken to maintain the seawall. In regards to the justifications made by the City, the City controls outright lots 45a and 45b, as well as 90 feet of ROW (in addition to two lots the City would control due to delinquent assessments). Also, the City has never asked for maintenance easements which may be granted under a reasonable agreement. The ROW between lots 37 and 38 has an access road that could be used for maintenance activities. And lastly, the City has budgeted for insurance up until last year, with at least one claim paid by insurance from a project failure. The City should continue to carry insurance as it has in the past. They stated that they, and other property owners, entered into a LID process where the City built, insured and maintain the seawall, and abandoning the seawall would jeopardize private and public structures and impact more than the specific properties in question. They strongly oppose abandonment of the seawall by the City and request denial.

The comments were forwarded to the applicant May 11, 2012, and a response was received from the City June 14, 2012. The City stated that many of the comments don't appear to be directly relevant or substantive, and some of the relative comments were addressed in the documentation submitted by the City with the modification request. However, they did want to address: 1) easements; 2) insurance; 3) special service district (SSD); and 4) special circumstances.

1) The City stated that the fact that the City did not obtain construction or maintenance easements is evidence that the City never intended to maintain the seawall, and that the City was not aware that the Corps expected the City to be responsible for maintenance after construction. The City would not have proceeded with this project without easements if this was to be a City maintained project. Continuing to go on private land to construct and make repairs is not an option for a variety of reasons, with an example being one property owner whom has stated that he will sue the City for trespass if it taxes him to help raise funds for maintenance and repair.
2) The City has provided insurance for the seawall in the past, however, the City's insurance carrier was reluctant to insure a piece of infrastructure the City did not own located on private land. The carrier was willing to do so as long as the City had a maintenance agreement with a legal entity representing the property owners (i.e. homeowner's association), however, the legal entity never

got off the ground and a formal maintenance agreement was not possible. Therefore, the City's insurance carrier dropped coverage for the seawall.

3) The SSD was abolished because the property owners were unable or unwilling to follow the requirements contained in the ordinance creating the SSD. Also, the SSD was abolished when the property owners couldn't agree on HOA bylaws and the annual maintenance and repair budget. The City rebated property tax revenues collected to individual property owners.
4) In regards to special circumstances, the City still contends that they intended to act as an agent for the property owners. Additionally, the documentation shows that property owners knew and acknowledged that they would be responsible for maintenance and repair of the seawall.

The City does not intend to walk away from the seawall entirely nor does it wish to see the seawall fail. Too much time and money has been invested to let it fail, and the project has been a success. The City is a property owner protected by the seawall and is willing to provide a proportionate share of the funding necessary for maintenance and repair. There may be viable long term solutions to seawall maintenance, which would require cooperation among the property owners, and between the property owners and the City. The City would be willing to work with the property owners on long term solutions after the permit is modified and the property owners commit to maintaining and repairing the sections of seawall located on their properties. The City strongly believes that they should only be responsible to maintain and repair sections of the seawall that protect publically owned property (to include the ROW frontage noted by commenters). The City supports either 'abandon and leave as is' or 'abandon and transfer portions of the DA permit to individual landowners'.

5.2 Evaluation and Consideration of Comments:
I have reviewed and evaluated, in light of the overall public interest, the documents and factors concerning this permit application as well as the stated views of the concerned public. In doing so, I have considered the possible consequences of this proposed work in accordance with regulations published in 33 CFR Part 320 to 332. The following paragraphs include my evaluation of comments received and how the project complies with the above-cited regulations:

The City has requested to modify the permit to cease maintenance of the portions of the seawall that are not located on City owned property. Eight of the ten commenters stated that the City's request should be denied based on a number of reasons. The City's request to abandon the seawall is based on four elements that are explained Section 2.1 above and addressed below:

"*Except for lots 43 and 44, the seawall is on private property and is owned by the property owners.*"

As multiple commenters and the City, have stated, the seawall is located on private property and the City does not have maintenance easements across these private properties. The Corps regulations concerning the consideration of property ownership is found at 33 CFR 320.4(g). The DA permit issued to the city also contains information, reflecting the regulations in 33 CFR 320.4(g)(6), in the 'Further Information' section specifically, parts 2.b and 2.c. The Regulation states that a DA permit does not convey any property rights, either in real estate or material, or any exclusive privileges and a DA permit does not authorize "any injury to property or invasion of rights", and concludes with "The applicant's signature on an application is affirmation that the applicant possesses or will possess the requisite property interest to undertake the activity proposed in the application. The district engineer will not enter into disputes but will remind the applicant of the above. The dispute over property ownership will not be a factor in the Corps public interest decision."

The fact that the seawall is mostly in private ownership is not in dispute and the city would need to "obtain the requisite property interest" to conduct any necessary repairs. Since 2010, when we learned of damage to the seawall, the City has managed to conduct maintenance with or without the approval of the property owner(s). In any event, it would be inappropriate for the Corps to take any permit compliance action based on the City not having the permission of a private property owner because real estate law is a matter left to the States to adjudicate. Based on the cooperation that has existed between the City and the property owners that have experienced damage since 2010 in the sense of the property owners granting the City permission to conduct repairs, we do not believe it is appropriate to grant the City's request to modify the permit based on this element.

"The City does not have maintenance easements on the privately held parcels and cannot maintain the seawall (or restore the land to its former condition)."

Similar to the reasoning above, part of the City's responsibility under the permit is to possess or seek to possess the permission of property owners. The DA permit does not specify a type of permission that shall be obtained (i.e. a maintenance easement). It is the Corps understanding that since 2010, the City hasn't received a maintenance easement but has found alternative methods that have granted the City permission from the relevant landowners to work on the privately held parcels. Since the City has demonstrated repairs can be made without a formal maintenance easement, the Corps does not support modifying the permit in the manner the City proposes.

As an additional item, at least one property owner has recently refused the City access to their property to conduct seawall repairs. As such, the City has limited options for continuing repairs on private property. The Corps cannot require the City to trespass and therefore if such a situation arises, the Corps will exercise our discretion under 33 CFR 326.4 and not inspect the activity nor taken any enforcement action against the City. Additionally, a property owner is not restricted from conducting repairs so long as any necessary DA permit is obtained prior to commencing the repair.

"The City cannot obtain insurance for the seawall."

Several commenters stated that insurance once covered the structure and the City has confirmed this in their application. The City explained insurance coverage was dropped when the formation of the HOA fell through and believes that the private property owners could secure insurance.

During this review, the Corps requested the City provide a letter from the insurance carrier that could explain why insurance coverage ceased. On August 20, 2012, the City provided a letter dated August 16, 2012, from Alaska Municipal League's Joint Insurance Association, Inc. (JIA). In the letter, JIA explains that they once insured the seawall based on their belief that "the City had a maintenance agreement with a legal entity in the form of the property owners' association and there was a local improvement district or some other mechanism in place to raise money for the regular maintenance and repairs." Additionally, JIA stated that the City had no "insurable interest"' for the seawall, likening purchasing insurance "to buying insurance on your neighbor's house."

We also conducted a brief inquiry to local commercial insurance companies about the insurability of the seawall for a typical homeowner's insurance policy and learned this may be difficult coverage to obtain. However, internet research yielded that Homeowner's Association insurance may be an option, if the property owner's were to proceed with forming an HOA. One insurance agent suggested that the appropriate entity to contact may be the National Flood Insurance Program, however, that coverage appears to be capped at $500,000 in coverage.

It appears it may be equally difficult for any party (City, property owner, or HOA) to obtain insurance. None-the-less, we do not believe that the City's inability to insure the seawall is a suitable reason to grant their request to abandon the non-public portions of the seawall. The long term responsibility of holding a DA permit was interpreted as being understood when the City signed the DA permit. The City and landowners have not been prevented from developing contingency plans at any time (since the permit was first issued or after the insurance coverage ceased) for managing various degrees of damage or failure of the seawall.

"The history of the project and the understanding and agreements that led the City to finance the project and act as an agent for the property owners for permitting purposes."

The City's January 4, 2012, letter to modify the DA permit included a request to modify the permit to reflect that the City of Homer is the agent of the Ocean Loop Drive seawall property owners, and not the permittee (or applicant). We responded to the City on January 27, 2012, and informed them that after reviewing the file thoroughly, the City's signing the permit application, as well as the permit, committed the City as the permittee. The City was also afforded to opportunity to request an appeal of the DA permit (in accordance with 33 CFR 331), but declined to do so by signing it.

The City's response to our January 27th decision was to fold part of this issue into the circumstances that the City believes warrants abandoning the authorized work on the non-public parcels. Based on the circumstance stated above regarding the City's role in the DA permitting process, we do not agree.

As to the City's explanation of the understanding and agreements that led the City to finance the project, the Corps has received information (from the City) pertaining to the *Alaniva* decision as well as Exhibit J to that lawsuit which includes excerpts from several City of Homer City Council meetings. It is clear the City was not expecting to maintain the seawall and at least some of the property owners were aware of this. It also appears the maintenance and repair of the seawall was intended to be handled by the collective homeowners through an HOA (or similar structure) but this did not materialize.

Over the past few years, the major conflict with the seawall has been financing the repairs. Several comments were received regarding an inability to pay for major repairs as a sole individual, and that the seawall is one unit, and should be maintained as such. There were comments regarding the LID/SSD set up to collect maintenance funds (some commenters stated some individuals were unwilling to pay, others wondered why the SSD was dissolved). While one commenter stated that they would finance and repair their segment of the seawall, the remainder of comments consisted of individuals that could contribute to an SSD, but could not affect repairs individually. As stated by the City, the original SSD was set up to pass funds through an HOA. It does not appear that the SSD was ever intended to cover all repairs without input from the homeowners.

The seawall acts as a single unit and an appropriate method to ensure the seawall is properly maintained is to have a single permittee for the entire structure. Therefore we do not believe that the City's last element is an appropriate justification to modify the permit and allow the proposed abandonment of non-public parcels. An individual property owner stated they have the ability to repair damages to the seawall. The Corps does not have a concern with this so long as the repairs meet compliance with Section 404 of the Clean Water Act and any appropriate permits are received prior to commencing the repair.

Other issues raised by the public:

Over the course of our review of the City's permit modification proposal, we received a request from one property owner to transfer the portion of the permit that applies to their land. The City has indicated their willingness to facilitate this permit transfer. Normally, the Corps will transfer a DA permit when the permittee and the prospective transferee are in agreement. However, in this case we will not transfer the permit to individual property owners. This decision is being made because not all of the landowners have requested a permit transfer. I would more likely give favorable consideration to a permit transfer request from a HOA or similar entity that can conduct the necessary maintenance on the seawall.

Two commenters questioned the amount of property that the City owns along the seawall, in addition to lots 43 and 44, which would include Lake Street and a ROW between lots 37 and 38. Additionally, it was stated that two parcels may be subject to foreclosure and may revert to City ownership. The response to comments letter received from the City included a statement that the ROW's would be maintained, as well. During a field site visit to the seawall on August 16, 2012, the City was asked if all additional properties (obtained through foreclosure) would be maintained similarly. The City agreed that such maintenance would occur on all City owned property.

Three commenters supported working with the City for a more permanent solution, which would include utilizing armor rock in advance of the existing seawall. As discussed in Section 4.3.1, additional discharge of fill material seaward of the seawall would require DA authorization. The City has stated that they would be in a position to discuss alternative long term solutions with the property owners after resolution of the current proposal.

6.0 Analysis of Public Interest Review Factors. [33 CFR 320.4(a), 33 CFR 320.4(g) and 33 CFR 320.4(q)]

6.1 Factors.

6.1.1 Shore erosion and accretion: If the seawall were abandoned, the time taken to repair damage caused by storm events would likely take longer as the repairs would be left to private landowners. Occasionally, damage to one section of seawall has caused the loss of the backfill material on another private parcel which could complicate the repairs as multiple property owners would need to be involved. Delayed maintenance would likely result in additional winter storms causing greater amounts of damage to the seawall and require more complex and expensive solutions. If a section of the seawall were to fail, the coastal bluff would be exposed to the erosive forces of Kachemak Bay and could result in the loss of land, and possibly structures and infrastructure.

6.1.2 Economics (employment, tax revenues, community cohesion, community services, property values):

Employment: This is not a factor in this review, as the seawall is already constructed.

Tax revenues: The City's proposal should not affect the tax revenues immediately. However, tax revenues may decrease if the seawall is damaged and not repaired before there is a loss of land and/or damage to structures that currently are protected by the seawall. The potential loss of tax revenues across a small amount of parcels would not have a large detrimental effect on tax revenues for the City or the Kenai Peninsula Borough.

Community cohesion: There is not a unified group of homeowners along Ocean Drive Loop. Most of the homeowners petitioned the City to construct the seawall, however, maintenance and other issues have been viewed by various property owners in different ways – from asking to maintain their own portion of the seawall and threatening lawsuits for trespass, to owners that want the City to maintain the seawall without compensating for repairs. Regardless of the outcome of the current review, modifying the permit as requested by the City would cause a high level of dissension among the property owners who requested the wall for reasons stated in Section 5.1.6.

Community services: The seawall is a private structure located on private property, protecting private residences, and utilities to said residences. However, if the seawall were not present, and the existing parcels were allowed to erode naturally, Ocean Drive Loop and the public utilities located within/adjacent to the road, may be negatively impacted through increased erosion (undercutting) initially, leading to direct loss.

Property values: Similar to Tax Revenues above, the City's proposal should not affect property values immediately. However, property values would decrease if the seawall is damaged and not repaired before there is a loss of land and/or damage to structures that currently are protected by the seawall. A direct loss in property value would be a substantial negative impact to the affected property owner(s).

6.1.3 Considerations of property ownership: As stated in Section 5.2, the seawall is a privately owned structure (paid for by the property owners) located on private property.

6.1.4 Needs and welfare of the people: The needs and welfare of the people include the community overall. As members of the community, the seawall property owners have the right to protect their property from erosion to the extent possible. As such, the City aided the property owners in their request to construct a bank stabilization project. Documentation provided by the City demonstrates that though the City applied for and constructed the seawall there was an understanding by the City Council, prior to approval of the City's assistance to the property owners that the property owners intended to maintain the seawall.

As a small community of 5,003 individuals (according to the 2010 Census), the City and community members may not be equipped to absorb the cost of perpetual maintenance for a seawall protecting 13 property owners. The 13 property landowners will be in less certain conditions to afford the cost of maintenance.There are inherent risks with residing in certain environments and a coastal property has risk associated with it.

If the City was not capable of collecting funds (tax) from the property owners that benefit from the seawall, we would believe the needs and welfare of the public overall, would best be served by granting the City's

request to cease to maintain portions of the seawall not located on City property ('abandon and leave as is'). However, the City is capable of this and has enacted an applicable ordinance that effectively mitigates the concern on the larger population within the City.

7.0 Statement of Findings

7.1 Public Interest Determination: I find that issuance of a Department of the Army permit modification, as prescribed by regulations published in 33 CFR 320 to 332:

☐ Is not contrary to the public interest. ☒ Is contrary to the public interest.

7.2 Request for public hearing: No requests for a public hearing were received.

7.3 Finding of No Significant Impact (FONSI) (40 CFR 1508.13): Having reviewed the information provided by the applicant, all interested parties and the assessment of environmental impacts contained in the original environmental assessment dated June 21, 2002, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

7.4 Taking Implication Determination: In compliance with the requirements of EO 12630, I have reviewed and considered the Takings Implication Assessment prepared for this permit application and have concluded that the denial of this permit does not indicate a takings implication.

Approved by: _____ 18 DEC 12

Christopher D. Lestochi
Colonel, Corps of Engineers
District Commander

Date

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: **City of Homer**	File Number: **POA-2002-100**	Date: **December 26, 2012**
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
X	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

THIS REQUEST FOR APPEAL FORM MUST BE RECEIVED BY: February 25, 2013

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer. Your objections must be received by the District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or, (c) not modify the permit, having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer. This form must be received by the Division Engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer. This form must be received by the Division Engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION (JD): You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer. This form must be received by the Division Engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the Preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

In order for a Request For Appeal to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the Notice of Appeal Process. It is not necessary to submit a Request For Appeal form to the Division office if you do not object to the decision.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Jen Martin, Regulatory Specialist Alaska District Corps of Engineers Kenai Regulatory Field Office (CEPOA-RD-S-K) 805 Frontage Road, Suite 200C Kenai, Alaska 99611-7755 (907) 283-3519	Commander USAED, Pacific Ocean Division ATTN: CEPOD-PDC/Thom Litche Building 525 Fort Shafter, HI 96858-5440 **To submit this form, mail to the address above**

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		