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

City of Homer
Agenda

Public Works Campus Task Force Regular Meeting
Wednesday, July 14, 2021 at 4:30 PM
City Hall Cowles Council Chambers via Zoom Webinar
Webinar ID: 990 6794 3833 Passcode: 716429
Dial: 346-248-7799 or 669-900-6833; (Toll Free) 888-788-0099 or 877-853-5247

CALL TO ORDER, 4:30 P.M.

AGENDA APPROVAL

PUBLIC COMMENTS UPON MATTERS ALREADY ON THE AGENDA

APPROVAL OF MINUTES

A. Regular Meeting Minutes for June 23, 2021

VISITORS/PRESENTATIONS

REPORTS

PENDING BUSINESS

A. Memorandum from Public Works Director re: Costs Related to Incremental Approach

B. Draft Memorandum and Report to City Council on Tsunami Risk for the Public Works Campus

NEW BUSINESS

A. Memorandum from Public Works Director re: Inefficiencies of the Existing Public Works Campus

B. Next Steps

INFORMATIONAL MATERIALS

A. Public Works Campus Risks - Evaluations and Mitigations

B. Tsunami Inundation Map for the Public Works Campus

C. Resolution 20-125, Creating a Public Works Campus Task Force and Establishing Scope of Work

D. Meeting Schedule for the Public Works Campus Task Force

COMMENTS OF THE AUDIENCE

COMMENTS OF CITY STAFF

COMMENTS OF THE TASK FORCE

ADJOURNMENT

Next Regular Meeting is **Wednesday, July 28, 2021 at 4:30 p.m.** All meetings scheduled to be held via Zoom Webinar and in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

Session 21-08, a Regular Meeting of the Public Works Campus Task Force was called to order by Chair Donna Aderhold at 4:44 p.m. on May 26, 2021 via Zoom Webinar from the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska. One seat is vacant due to resignation.

PRESENT: MEMBERS ENGEBRETSEN, SLONE, VENUTI, KEISER, ADERHOLD

ABSENT: MEMBER BARNWELL (EXCUSED)

STAFF: RENEE KRAUSE, DEPUTY CITY CLERK

AGENDA APPROVAL

Chair Aderhold requested a motion to amend the agenda to add discussion of the report to Council under pending business for discussion and review.

ENGEBRETSEN/VENUTI MOVED TO AMEND THE AGENDA TO ADD THE DRAFT REPORT TO CITY COUNCIL UNDER PENDING BUSINESS.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

There was no further discussion on the motion as amended.

VOTE.NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

PUBLIC COMMENTS UPON MATTERS ALREADY ON THE AGENDA

APPROVAL OF MINUTES

A. Regular Meeting Minutes for May 26, 2021

Chair Aderhold requested a motion to approve the minutes of May 26, 2021.

SLONE/VENUT- SO MOVED.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

VISITORS/PRESENTATIONS

Mike Parrish, Senior Mechanic, Public Works Department, spoke to the Task Force on the inadequacies of the Mechanic's Shop for Public Works. He provided a brief history with the City of Homer and briefly outlined the required needs for the maintenance and repairs for most of the City owned equipment.

Mr. Parrish facilitated questions on the following topics:

- Upcoming or pending purchases of equipment that will be too large for the shop
- Safety issues and lack of work space necessary to conduct the repairs
- Capability of the existing shop area to be expanded is not viable due to the existing layout being constrained by the vehicle access required to reach the animal shelter and Water Treatment

REPORTS

PENDING BUSINESS

A. Memorandum from Public Works Director re: Criteria for Evaluating Strategies
    a. Criteria Scoresheet

Chair Aderhold introduced the item by reading of the title and invited Public Works Director Keiser to speak to her memorandum.

Ms. Keiser reported that she reviewed the Task Force comments from the last meeting and using those comments as a guideline added criteria to address public perception, redefined criteria related to timeliness, provided clarification on the criteria. She further noted that she reevaluated the ranking scale to apply a higher number to allow more distinction between the different categories.

Discussion on the following ensued:

- Under the Cost Benefit Analysis how is the cost actually weighted versus the benefit
    - Using the Risks and Mitigation spreadsheet as a guideline for understanding the benefits of a particular mitigation strategy
    - A traditional cost benefit analysis was not done using scientific means but more of an intuitive approach using the risk hazard analysis that the Task Force compiled
    - The data is not available to perform an actual cost benefit ratio analysis
    - It could be delineated as a probable costs would be worth the probable benefits
- Under Timeliness how is a high score taking action important
    - Similar to the Cost Benefit, seeking ambiguity since there is a risk
    - Not enough available data to compute said risk
    - Some constraints but there are windows of opportunity that could be taken advantage of
    - Importance is reflective on the worth of the benefit
        - Example of purchasing land now since it may not be available if time elapses
- Additional narrative is required

- Including a separate paragraph to address the facility has been outgrown and that the city does not do a regular analysis on needs and if the current facilities will meet the needs going into the future
- Additional paragraph to include the information that addresses the inefficient and aging infrastructure while reviewing the tsunami risk.
- Criteria two redefined and applied to the strategies
- Chart needs to be revised for clarification and ease of understanding by the public and Council
- Timing because importance when a decision is made by Council on the probability
- Preference of having Council weigh in on the obsolescence over tsunami inclusion in their report
- Requested in the Scope of Work mitigation strategies were to have a cost applied to them
    - Doing noting still has a cost applicable
    - Lock, Stock & Barrel costs are provided in CIP page and costs could be provided for the other two strategies
- Ranking Scale includes the Community as a beneficiary
    - Strategy may benefit the department but not the Community
    - Efficiency in serving the public and department safety
- Scale numerator
    - Using only three numbers
    - Applying a range of numbers
        - This might allow for more nuance
    - Remove numbers altogether since it may be construed as arbitrary
        - Low, medium and high
        - Range of numbers and words
        - Explaining the range of numbers if asked by the public and using words how to determine the total score
- Scoring
    - Mitigation solely based on Tsunami risk versus obsolescence
    - Timing is effected when you cannot determine when a tsunami event may occur versus obsolescence
    - Revised the language in criteria two
        - Recommend creating another criteria to address obsolescence versus tsunami risk to be transparent
        - Criteria 2A and Criteria 2B

ENGEBRETSEN/VENUTI MOVED TO AMEND THE CRITERIA FOR EVALUATION STRATEGIES TABLE TO INCOUDE PART A AND PART B WITH PART A REFERRING TO TSUNAMI RISK AND PART B REFERRING TO OBSOLESCENCE.

There was no further discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

Chair Aderhold wanted to emphasis that a narrative would be included in the report on how the scoring was determined for each of the strategies presented. She noted that they have had or included in the discussion but it needs to be reflected in the report for the benefit of others.

Member Slone commented that it would also present justification for Part A and Part B and provided as an example the Limp along Plan.

B. Draft Report to City Council for Review and Discussion

Chair Aderhold introduced the item by reading of the title and requested Deputy City Clerk Krause to provide some input on the document.

Deputy City Clerk Krause reported that she reviewed the minutes from the meetings, the information from the resolution and memorandum submitted to Council. She included the information that was reviewed by the Task Force. She strongly noted that this was a draft and will include information in the memorandums from tonight.

Ms. Krause addressed the photo that was used in on the report reflected Seward after the 1964 earthquake. She then recounted watching a show recently which depicted a tsunami hitting Santa Monica and made her realize that there was more to a tsunami impacting the city as a whole other than the Public Works Facility. She noted something that was not discussed was the water leaving causing additional destruction to the Public Works Facility.

Chair Aderhold stated that if the photo is used to have a title and give credit to the photographer.

Member Slone commented that the lines 84 through 87, he believed this was the most crucial paragraph in the document. Assuming Council approves there is a risk, which would then bring them to their recommendations. He recommended expanding a bit more in that section to bring those two points together.

Chair Aderhold agreed that the sentence should be included in the cover memo with the recommendations.

Ms. Keiser acknowledged that she was supposed to draft up the next steps but then asked how comments on the document should be presented to Ms. Krause.

Ms. Krause recommended the following in regards to submitting corrections and additions to the draft report:

- Mark up the document with changes or additions and return to her
- Submit changes via email noting the line numbers on each change
- Deadline for submitting changes is no later than the 8th so it can be included in the packet
- She has a process in mind on how each of the members recommendations will be shown/presented in the report
- If a section of the report should be included in the cover memo that should also be submitted as well for the next meeting so a draft of the memorandum can be included for the next meeting.

Member Slone stated that it would be appropriate to include a general statement to introduce the other argument of obsolescence into the memo then include more in the report to Council.

Member Keiser will include Member Slone's points in the revision to her memo.

NEW BUSINESS

A. Memo from Public Works Director Re: Functional Inefficiencies of Existing PW Campus

Chair Aderhold introduced the item by reading of the title and invited Ms. Keiser to review the memorandum.

Member Keiser provided a recap of the information provided by Mr. Parrish and summary of the information included in the memorandum.

Member Engebretsen requested an explanation of what a Vactor truck actually was then asked for clarification on the personnel who worked in the water and sewer department would stay at the existing facility.

Member Keiser explained that they would keep a supply of essential supplies since most of their rolling stock is vehicles which could be moved relatively easy. They do not have an intensive investment in tools that the mechanics have. Same issue with Parks Department as their supplies are not as critical. There are beneficial uses for the existing facility.

Member Engebretsen noted that that information would be relevant to include in the report to Council.

Member Keiser provided additional detail information in regards to tools and supplies for those departments that would be working out of the existing facility in other safe locations. She then addressed the funding for the Fuel Depot that has been allocated and that it is not included in the cost estimate for a new Public Works Facility. She will verify that for the next meeting.

Member Keiser stated that during inspection of the fuel tanks it was determined that there was corrosion and it would not pass inspection when the next inspection is due. She then address the question that the new fuel depot is not expected to cost more than $300,000 and it will be above ground.

Chair Aderhold commented on pointing out that there are two buildings that are in use at the HERC facility and that the section regarding the fuel tanks should be re-worded to address the corrosion with regards to cathodic protection and the tanks.

There was a brief discussion on inclusion of DEC and clarification of the inspection report on the fuel tank condition.

INFORMATIONAL MATERIALS

A. Resolution 20-125 Establishing the Task Force and Outlining Scope of Work

B. PWCTF Meeting Schedule

C. Draft Risks, Evaluation, & Mitigation Spreadsheet

D. 2021-2026 Capital Improvement Project Sheet - New Public Works Facility

Chair Aderhold reviewed the informational items.

COMMENTS OF THE AUDIENCE

COMMENTS OF THE CITY STAFF

Deputy City Clerk Krause commented on it being a good meeting and looking forward receiving the comments and recommendations for the draft report.

COMMENTS OF THE TASK FORCE

Member Keiser thanked everyone and noted she had her work cut out for her for the next meeting.

Member Slone thanked Deputy City Clerk Krause and Member Keiser for all their ongoing efforts to help resolve these issues.

Member Venuti expressed her appreciation for all the information brought to them by Deputy City Clerk Krause and Member Keiser.

ADJOURNMENT

There being no further business to come before the Task Force the meeting adjourned at 5:54 p.m. The next regular meeting is scheduled for Wednesday, July 14, 2021 at 4:30 p.m. at the City Hall Cowles Council Chambers via Zoom Webinar located at 491 E. Pioneer Avenue, Homer, Alaska.

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RENEE KRAUSE, MMC, DEPUTY CITY CLERK

Approved:_____

	PHASE				
Acquire Property				**$**	**1,200,000**
Create Development Plan					
Survey		$	15,000		
Geotechnical exploration		$	20,000		
Conceptual Design		$	50,000		
Phasing Approach		$	2,500		
Funding Strategy		$	2,500		
	Total - Development Plan			**$**	**90,000**
Develop New Fuel Depot					
Design new Fuel Depot		$	15,000		
Install new Fuel Depot		$	185,000		
	Total - New Fuel Depot			**$**	**200,000**
Relocate Rolling Stock & Support Services to new location					
Design new Mechanics' Shop		$	375,000		
Construct new Mechanics' Shop		$	3,750,000		
Design new Equipment Barns		$	75,000		
Construct new Equipment Barns		$	750,000		
	Total - Mechanics' Shop & Rolling Stock			**$**	**4,950,000**
Develop offices at new location					
Design new admin & engineering space		$	135,000		
Construct new admin & engineering space		$	1,350,000		
	Total - Develop new office space			**$**	**1,485,000**
TOTAL - NEW CAMPUS				**$**	**7,925,000**
Move out of HERC					
Relocate Building Maintenance & Parks to old PW Campus		$	50,000		
Expand W/S Maintenance in old PW Campus		$	50,000		
	Total Move out of HERC			**$**	**100,000**
	Total PW Campus			$	8,025,000

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MEMORANDUM

TO: MAYOR CASTNER AND HOMER CITY COUNCIL

FROM: PUBLIC WORKS CAMPUS TASK FORCE

THRU: RENEE KRAUSE, MMC, DEPUTY CITY CLERK II

DATE: JULY 14, 2021

SUBJECT: FINAL REPORT AND RECOMMENDATIONS ON TSUNAMI RISK FOR THE PUBLIC WORKS CAMPUS FACILITY

INTRODUCTION & BACKGROUND

The Alaska Division of Geological and Geophysical Surveys (ADGGS) published updated tsunami and inundation maps for communities in Kachemak Bay, including Homer in 2019. Based on modeling a wide variety of earthquake generating tsunami scenarios, ADGGS concluded that a worst case scenario for Homer would be a tsunami of 50 feet elevation. In the event of the worst case scenario, the Homer Public Works Campus, along with the Homer Spit and other low lying areas of the city, would be inundated.

In response to the ADGGS inundation maps, the Homer City Council included a new Public Works Facility on its Capital Improvement Plan as a high priority with a preliminary estimated cost of approximately $12 million. However, the new facility was added without a risk assessment to the existing Public Works Campus from a worst-case scenario tsunami. To remedy this the City Manager and Public Works Director sponsored Resolution 20-125 requesting Homer City Council form a Public Works Campus Task Force to evaluate the risk and provide recommendations back to the City Council. The resolution passed unanimously on November 23, 2020 and the task force was formed and members were approved by City Council on January 11, 2021.

TASK FORCE EVALUATION & RECOMMENDATIONS

Goal 1

The first goal of the Task Force was to evaluate the risks of personal injury, property damage and loss of life in the event of a tsunami impacting the Public Works Campus. The Task Force reviewed the ADGGS tsunami inundation maps and methodology report, interviewed authors of the maps and report, and discussed the potential risks of a tsunami to the environment, workers, City operations, and City equipment (please see the attached *Risks - Evaluation and Mitigation* spreadsheet).

Based on the ADGGS maps (please see the attached *Inundation Maps*), report and author interviews, the Task Force determined that, while the risk cannot be quantified because of limitations in available data for Alaska, the current location of the Public Works Campus is vulnerable to a tsunami. Based on the assessment evaluation and possible mitigation options, the Task Force determined that the greatest risk of a tsunami inundating the Public Works Campus would be the damage and loss of buildings, equipment, and materials, particularly equipment and materials that would be needed to help the city recover following the earthquake/tsunami event.

The Task Force discussed possible solutions to protect buildings, equipment and materials from tsunami inundation. The solutions and their potential pros and cons are summarized as follows:

- Create tsunami resistant seawalls or mounds on the perimeter of the Campus
    - This solution was tried in Japan and failed during the 2011 Sendai-Tohoku earthquake and tsunami because the structures were designed for a smaller event than occurred. Because the structures were too small, the damage in some instances was greater than may have occurred without the structures in place.
    - Seawalls or mounds placed around the current location of the Public Works Campus would likely not be practicable because of the size of the infrastructure that would be needed and because the underlying fill material is not designed to resist the type of inundation that could occur and could fail.
- Construct tsunami resistant buildings and infrastructure in the same location
    - This type of solution is typically used for port facilities and roads and bridges that cannot be moved outside of a tsunami zone.
    - The option does not take into account the potential damage to equipment and materials unless tsunami resistant buildings were constructed to house all of it.
- Relocate the Campus
    - Important resources such as the city fueling station, rolling stock, piping, culverts, sand and gravel, motor pool shop and equipment, and other equipment and materials would no longer be vulnerable to loss or damage during a tsunami.
    - Relocating essential portions of the Campus outside the tsunami zone, while expensive, would allow Public Works Staff to focus on supporting earthquake/tsunami response and recovery efforts rather than focusing on lost and damage equipment and materials needed in the response.

Goal 1 Recommendation: The Public Works Campus and the critical nature of the equipment stored there should be relocated to the extent practicable (the sewer treatment plant cannot be relocated).

Goals 2 and 3

The second goal of the Task Force was to develop strategies of mitigating the identified risks. Based on the goal 1 recommendation to move the Public Works Campus outside the tsunami zone, the Task Force focused on strategies to address that recommendation. The third goal of the Task Force entailed developing a system for evaluating the strategies. Because these goals were interdependent the Task Force is presenting them together.

I. The Mitigation Strategies

Strategy #1 – Limp Along. This is the "do nothing" strategy. We continue to operate how we've been operating; evacuating the equipment when a tsunami warning sounds and hope for the best.

Strategy #2 – Lock, Stock & Barrel. With this strategy, plan are put into motion to relocate the PW Campus as a priority.

Strategy #3 – Long Term Incremental. With this strategy, the risk to the PW Campus is acknowledged and a long term plan is put in place to relocate the campus incrementally; that is, property is purchased, a campus layout is designed, and the City seeks funding for the project costs, possibly, building features of the facility a step at a time.

II. Recommended Criteria: Criteria should be (a) measurable and (b) easy to define.

Criterion #1: Cost/Benefit Analysis. It's not enough to compute the expected costs of a particular strategy. We must also quantify the expected benefits. It may be the costs are high but the benefits are higher.

Criterion #2: Public Works' Mission. The extent to which the strategy (a) preserves the ability of the Public Works Department to perform its essential mission(s) in emergencies; (b) supports the Department's ability to support the City's maintenance needs over the long term and (c) enables the Department to continue to serve as an integrated system; that is, the various functional units are housed on a single campus. A high score means the strategy allows the Department to efficiently and cost effectively fulfill its mission over the long term.

Criterion #3: Funding. The extent to which funding strategies are available to support a particular mitigation strategy. A high score means a reasonable source of funding is probably available.

Criterion #4: Phasing. This criterion relates to the extent to which the implementation of the mitigation strategy can be phased over time. A high score means the strategy can be phased in a feasible and affordable manner.

Criterion #5: Timeliness. This criterion relates to the extent to which taking action sooner rather than later would add value by generating benefits or avoid lost opportunity. A high score means taking action in a timely manner is important.

Criterion #6: Public perception. This criterion involves the strategy's ability to generate favorable public perception and support. A high score means the strategy can probably be designed to generate public support.

III. Ranking Scale

The criterion have been ranked according to the degree to which the mitigation strategy adds value to the Public Works Department and the Community. As an absurd illustration, adding a hot tub to the PW campus may add value to the Department's employees, but it does nothing to add value to the Community. Likewise, initiating a 7-12 working schedule, with no lunch break may add value to the Community, but it would create a hardship on employees.

Low **–**The mitigation strategy scores low for the criterion, meaning the strategy adds little value to the Department or the Community. This yields 0 points

Medium – The mitigation strategy scores in the middle of the range for the criterion, meaning while strategy may value to either the Department or the Community, it does not add value to both. This yields 50 points

High – The mitigation strategy scores high in the criterion, meaning the strategy adds high value to the Department and the Community. This yields 100 points.

ADDITIONAL CONSIDERATIONS

During the development of mitigation strategies and evaluation criteria, the Task Force identified functional inefficiencies of the existing Public Works Campus that we discussed and considered in the evaluation and development of final recommendations to the City Council. The functional inefficiencies are identified as follows:

1. The existing bays in the Mechanics' Shop are too small to accommodate the larger pieces of the City's rolling stock and will not accommodate newer equipment in the future.
2. There are not enough working bays in the Shop to allow for efficient working space. Industry standard is 1.5 bays per mechanic.
3. There is not enough room for dry, temperate equipment storage in the winter.
4. The existing Public Works facility houses the Water/Sewer crew's shop.
5. Several Public Works functions are currently housed in both of the HERC buildings because there is no room for them at the Public Works Campus.
6. The existing fueling depot serves all of the City's rolling stock with gasoline and diesel fuel.

FINAL RECOMMENDATIONS

To Be Developed …

Homer Spit March 1964 Photo credit

Hazards to the City of Homer Public Works Campus Report

RISKS, MITIGATION STRATEGIES AND RECOMMENDATIONS

Public Works Campus Task Force | Resolution 20-125 | July 2021

Recommendations from the Task Force submitted for the July 14, 2021 Meeting annotated in bold underline with initials of Member making changes/recommendations

~~PURPOSE & SCOPE~~ INTRODUCTION & BACKGROUND

INTRODUCTION & BACKGROUND

The Alaska Division of Geological and Geophysical Surveys (ADGGS) published updated tsunami and inundation maps for communities in Kachemak Bay, including Homer in 2019. Based on modeling a wide variety of earthquake generating tsunami scenarios, ADGGS concluded that a worst case scenario for Homer would be a tsunami of 50 feet elevation. In the event of the worst case scenario, the Homer Public Works Campus, along with the Homer Spit and other low lying areas of the city, would be inundated.

Because a tsunami that inundates the Public Works Campus would preclude Public Works staff from accessing the Campus until tsunami waters recede and equipment and materials needed to respond to tsunami and earthquake damage would likely be damaged or destroyed by tsunami waves, Public Works staff immediately begin evacuating major pieces of heavy machinery and other mobile equipment from its campus to higher ground. Materials, equipment, and supplies that are not easy to move are left behind during these evacuations, resulting in vulnerability to responding to an earthquake that generates a tsunami.

In response to the ADGGS inundation maps, the Homer City Council included a new Public Works Facility on its Capital Improvement Plan as a high priority with a preliminary estimated cost of approximately $12 million. However, the new facility was added without a risk assessment to the existing Public Works Campus from a worst-case scenario tsunami. To remedy this the City Manager and Public Works Director sponsored Resolution 20-125 requesting Homer City Council form a Public Works Campus Task Force to evaluate the risk and provide recommendations back to the City Council. The resolution passed unanimously on November 23, 2020 and the task force was formed and members were approved by City Council on January 11, 2021.[1]

PURPOSE & SCOPE

City Council created the Public Works Campus Task Force through Resolution 20-125 for the following:

1. Evaluat~~ing~~ **e**[2] the risks of personal injury, property damage and loss of life in the event of a tsunami impacting the Public Works Campus.
2. Develop System for Evaluating and Cataloguing Risks
3. Develop Strategies for Mitigating Identified Risks
4. Estimat~~ing~~**e**[3] Short and Long Term Costs for Mitigation of Risks
5. Submit Report on Recommendations to include Summary of Evaluation Process and Preferred Options

[1] DA
[2] CV
[3] CV

CONTRIBUTING MEMBERS

Donna Aderhold, City Council Member, Chair
Caroline Venuti, City Council Member, Task Force Member
Janette Keiser, PE, Director of Public Works, Task Force Member
Julie Engebretsen, Deputy City Planner, Task Force Member
Jacob Argueta, City Resident, Task Force Member
Larry Slone, City Resident, Task Force Member
Charles Barnwell, City Resident, Task Force Member
Renee Krause, Deputy City Clerk, Task Force Staff Support[4]

RESOURCES

Report of Investigation 2018 -5 v.2 Updated Tsunami Inundation Maps for Homer and Seldovia, Alaska
Maps created using the LiDAR information provided in the report by Charles Barnwell, GIS Manager, Kinney Engineering, LLC
~~Hosted a~~ **A** presentation and discussion roundtable with two of the authors of the 2018 report, Drs. Elena N. Suleimani and J. Barrett Salisbury-**was hosted[5].**
Studied the City of Homer 2018 All Hazards Mitigation Plan – CV – Not sure this is a resource.
Community Tsunami Preparedness 2011 by the COMET Program - http://kejian1.cmatc.cn/vod/comet/emgmt/community/navmenu.php.htm

RISK ANALYSIS

Risk is made up of two parts: the probability of something going wrong and the negative consequences if it does. Risks can be hard to spot let alone prepare for and manage. If ~~you are~~ **Homer is[6]** hit by a consequence that has not been planned for, costs and time, not to mention possibly lives, could be ~~on the line~~ **compromised[7]**.
Similarly overestimating or overreacting to risk can create panic and do more harm than good. By approaching risks in a logical manner ~~you~~ **the City of Homer [8]**can identify what can and cannot be controlled, tackling potential problems with measured and appropriate action.
Assessing tsunami threats at a specific location **in Alaska** is difficult ~~because of~~ **some of the uncertainties include the following[9]** :

- Incomplete knowledge about past tsunamis, including their sources, characteristics, and frequencies

[4] DA
[5] CV
[6] CV
[7] CV
[8] CV and CB recommended the word "one" in place of "you"
[9] DA

- Poorly understood details about near-field and far-field hazards that affect coastal communities[10]
- **Among the factors affecting tsunamis are**[11] The geology/geography of the area such as bathymetry, topography, potential for earthquakes and/or landslides and submarine slumps~~, the presence of rivers or estuaries that tsunamis can travel up~~[12]
- Uncertainty about future tsunami events
- ~~The time of day, whether it is high tide or low tide~~[13] [14]

~~Because~~ ~~w~~ **W**e cannot **exactly**[15]predict earthquakes or landslides, ~~there is no way to~~ **in the same way we cannot**[16] **it is difficult** [17]predict a tsunami. Once an earthquake occurs, our ability to detect and monitor tsunamis is still somewhat limited due to the scarcity of deep ocean sensors and tide gauges. Additionally, how high the waves will be once **the tsunami hits** ~~at~~ [18]the shore and what effects they will have are complicated questions influenced by a number of factors. We can confidently state that while the probability may appear low, the consequences and ramifications would be catastrophic should a tsunami event occur~~.~~ **in Homer.[19] For example, the entire Spit and elevations up to 35 feet along the City shoreline could be flooded in certain tsunami scenarios.[20]**

PRIMARY **TSUNAMI** [21]IMPACTS

A main ~~source~~ **concern regarding** ~~of~~[22] tsunami impact is damage to structures and infrastructure from wave force, flooding and floating debris. Anything in the path of a tsunami such as docks, structures, vehicles, utility poles ~~have~~ **has** the potential to become a battering ram as the water repeatedly surges and retreats. The damage potential increases if the tsunami arrives during conditions that are already producing high water such as a high tide.

Even small tsunamis can induce strong currents in harbors and bays, alter channel depths or cause water to be more turbulent, which can compound an already dangerous situation. The landscape and **fresh (potable)** water supplies can be degraded due to salt water intrusion.

~~If a tsunami is caused by a local earthquake there may be two events or more due to the possible fires, chemical spills and/or the possibility of subsidence across the bay from the Spit which could cause damage beyond the Public Works Campus, making recovery and response even more difficult.~~[23]

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[10] CB – relates to local or distant tsunamis
[11] CB
[12] CB – recommends deleting
[13] CV - recommended deleting
[14] CB – recommended inserting the words "of such an event" before the word "whether"
[15] CB
[16]CV
[17] CB – recommends this language
[18] CB
[19] CV
[20] CB
[21] DA
[22] CV
[23] CV - recommended deleting

SECONDARY **TSUNAMI**[24] IMPACTS

Secondary impacts of tsunamis ~~can~~ **may**[25] include:

- Hazardous spills
- Fires
- Large amounts of debris, which in addition to blocking access and being expensive to clean up can cause injuries during response and recovery
- Disease outbreaks
- Post-traumatic stress disorder (both short-term and long-term)
- Damage to the local economy (e.g. tourism, agriculture, fishing)
- Loss of equipment and supplies
- **Shortage of Personnel**
- **Destruction of critical infrastructure**[26]

The Task Force considered the impact of a tsunami to the Public Works Campus by considering the resiliency of that existing infrastructure, how the loss of use of equipment and supplies would influence the ability to effect recovery and determined the following risk and mitigations strategies. Please refer to attached *Risks Evaluation and Mitigation Spreadsheet.*

Member Aderhold recommended deleting the sections Protecting Buildings and Infrastructure and Recommendations and replacing them with the following:

PROTECTING BUILDINGS AND INFRASTRUCTURE

The first obstacle is the anticipated level of destruction ~~of~~ **to**[27] buildings and infrastructure within the Public Works Campus. The solutions considered to protecting them included:

- Creating tsunami resistant seawalls or mounds:

  This solution was tried in **Sendai-Tohoku**[28]**,** Japan, and it works provided that the wall is designed for the earthquake/tsunami that actually occurs. The failure of these structures in the 2011 Tohoku earthquake and tsunami was primarily due to ~~their~~ **the walls** [29] having been designed for a smaller **earthquake** [30] event. **Larger earthquakes were not expected in this area.**[31]

- Constructing tsunami resistant buildings and infrastructure in the same location:

  This type of solution is typically used for port facilities, roads and bridges. It is very expensive and would be done in critical cases where other **less expensive**[32] options do not exist.

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[24] DA
[25] CV
[26] CB
[27] CV
[28] CB – recommends specific identification and pronunciation
[29] CB
[30] CB
[31] CB
[32] CV

• Relocation:

Relocating essential buildings and functions **critical infrastructure** [33] outside of the tsunami zone, while inherently costly, is the best mitigation strategy.

RECOMMENDATIONS

Strategy #1 – The Limp Along Plan

- The City ~~continues as it has always done and~~ [34] takes no action regarding the Public Works Campus.

Strategy #2 – Lock, Stock & Barrel

- Make the decision to relocate the Public Works Facility as a priority

Strategy #3 – Long Term Incremental

- Recognize that there is ~~an issue~~ **a real threat** [35] and phase the project **as follows:** [36]
  - Site Acquisition CV 2
  - Design CV 3
  - Funding CV 1
  - Construction in Phases - CV 4

TASK FORCE EVALUATION & RECOMMENDATIONS

Goal 1

The first goal of the Task Force was to evaluate the risks of personal injury, property damage and loss of life in the event of a tsunami impacting the Public Works Campus. The Task Force reviewed the ADGGS tsunami inundation maps and methodology report, interviewed authors of the maps and report, and discussed the potential risks of a tsunami to the environment, workers, City operations, and City equipment (please see the attached *Risks, Evaluation and Mitigation* spreadsheet).

Based on the ADGGS maps (please see the attached *Inundation Maps*), report and author interviews, the Task Force determined that, while the risk cannot be quantified because of limitations in available data for Alaska, the current location of the Public Works Campus is vulnerable to a tsunami. Based on the assessment evaluation and possible mitigation options, the Task Force determined that the greatest risk of a tsunami inundating the Public Works Campus would be the damage and loss of buildings, equipment, and materials, particularly equipment and materials that would be needed to help the city recover following the earthquake/tsunami event.

The Task Force discussed possible solutions to protect buildings, equipment and materials from tsunami inundation. The solutions and their potential pros and cons are summarized as follows:

- Create tsunami resistant seawalls or mounds on the perimeter of the Campus
  - This solution was tried in Japan and failed during the 2011 Tohoku earthquake and tsunami because the structures were designed for a smaller event than occurred. Because the structures were too small, the damage in some instances was greater than may have occurred without the structures in place.

[33] CB
[34] CB
[35] CB
[36] CB

    - Seawalls or mounds placed around the current location of the Public Works Campus would likely not be practicable because of the size of the infrastructure that would be needed and because the underlying fill material is not designed to resist the type of inundation that could occur and could fail.
- Construct tsunami resistant buildings and infrastructure in the same location
    - This type of solution is typically used for port facilities and roads and bridges that cannot be moved outside of a tsunami zone.
    - The option does not take into account the potential damage to equipment and materials unless tsunami resistant buildings were constructed to house all of it.
- Relocate the Campus
    - Important resources such as the city fueling station, rolling stock, piping, culverts, sand and gravel, motor pool shop and equipment, and other equipment and materials would no longer be vulnerable to loss or damage during a tsunami.
    - Relocating essential portions of the Campus outside the tsunami zone, while expensive, would allow Public Works Staff to focus on supporting earthquake/tsunami response and recovery efforts rather than focusing on lost and damage equipment and materials needed in the response.

Goal 1 Recommendation: The Public Works Campus and the critical nature of the equipment stored there should be relocated to the extent practicable (the sewer treatment plant cannot be relocated).

Goals 2 and 3

The second goal of the Task Force was to develop strategies of mitigating the identified risks. Based on the goal 1 recommendation to move the Public Works Campus outside the tsunami zone, the Task Force focused on strategies to address that recommendation. The third goal of the Task Force entailed developing a system for evaluating the strategies. Because these goals were interdependent the Task Force is presenting them together.

Incorporate Jan's memo and narrative here.

I. Issue: The Task Force's mission includes identifying risks related to tsunami inundation, identifying mitigation strategies and identifying criteria by which to evaluate those strategies. The purpose of this memo is to recommend relevant criteria.

II. Recommended Criteria:
Criteria should be (a) measurable and (b) easy to define.

Criterion #1: Cost/Benefit Analysis. It's not enough to compute the expected costs of a particular strategy. We must also quantify the expected benefits. It may be the costs are high but the benefits are higher.

Criterion #2: Public Works' Mission. The extent to which the strategy (a) preserves the ability of the Public Works Department to perform its essential mission(s) in emergencies; (b) supports the Department's ability to support the City's maintenance needs over the long term and (c) enables the

Department to continue to serve as an integrated system; that is, the various functional units are housed on a single campus. A high score means the strategy allows the Department to efficiently and cost effectively fulfill its mission over the long term.

Criterion #3: Funding. The extent to which funding strategies are available to support a particular mitigation strategy. A high score means a reasonable source of funding is probably available.

Criterion #4: Phasing. This criterion relates to the extent to which the implementation of the mitigation strategy can be phased over time. A high score means the strategy can be phased in a feasible and affordable manner.

Criterion #5: Timeliness. This criterion relates to the extent to which taking action sooner rather than later would add value by generating benefits or avoid lost opportunity. A high score means taking action in a timely manner is important.

Criterion #6: Public perception. This criterion involves the strategy's ability to generate favorable public perception and support. A high score means the strategy can probably be designed to generate public support.

III. The Mitigation Strategies

Strategy #1 – Limp Along. This is the "do nothing" strategy. We continue to operate how we've been operating; evacuating the equipment when a tsunami warning sounds and hope for the best.

Strategy #2 – Lock, Stock & Barrel. With this strategy, plan are put into motion to relocate the PW Campus as a priority.

Strategy #3 – Long Term Incremental. With this strategy, the risk to the PW Campus is acknowledged and a long term plan is put in place to relocate the campus incrementally; that is, property is purchased, a campus layout is designed, and the City seeks funding for the project costs, possibly, building features of the facility a step at a time.

IV. Ranking Scale

The criterion have been ranked according to the degree to which the mitigation strategy adds value to the Public Works Department and the Community. As an absurd illustration, adding a hot tub to the PW campus may add value to the Department's employees, but it does nothing to add value to the Community. Likewise, initiating a 7-12 working schedule, with no lunch break may add value to the Community, but it would create a hardship on employees.

Low –The mitigation strategy scores low for the criterion, meaning the strategy adds little value to the Department or the Community. This yields 0 points

Medium – The mitigation strategy scores in the middle of the range for the criterion, meaning while strategy may value to either the Department or the Community, it does not add value to both. This yields 50 points

High – The mitigation strategy scores high in the criterion, meaning the strategy adds high value to the Department and the Community. This yields 100 points.

ADDITIONAL CONSIDERATIONS

During the development of mitigation strategies and evaluation criteria, the Task Force identified functional inefficiencies of the existing Public Works Campus that we discussed and considered in the evaluation and development of final recommendations to the City Council. The functional inefficiencies are identified as follows:

The purpose of this Memorandum is to identify other issues related to the functionality of the existing Public Works Campus, besides the fact the facility is located in the Tsunami Inundation Zone. For context, consider the City's infrastructure has increase – every new subdivision adds roads, ditches, water/sewer lines, hydrants, manholes and other appurtenances, all of which need testing, preventive maintenance, and repair. In 2020, the City had the following infrastructure:

- 59 miles of water line, increase of 12 miles since 2016
- 63.5 miles of sewer line, increase of 7.5 miles since 2016
- 435 fire hydrants, increase of 66 hydrants since 2016
- 30 pressure reducing stations, increase of 6 stations since 2016
- 829 manholes
- 17.62 miles of gravel roads
- 29.02 miles of paved roads

Further, there have been over 100 new water/sewer connection permits as well as over 100 new driveway permits issued in the past two years. All of these new services require resources to support – staff time and supplies

1. The existing bays in the Mechanics' Shop are too small to accommodate the larger pieces of the City's rolling stock that we already own. For example, you cannot fit one of the Homer Volunteer Fire Department fire trucks in the Shop and close the door. Further, there is barely enough headroom for this vehicle. Fire trucks are getting bigger and as they do, working on them in the existing Shop becomes problematic. Also, while the Public Works Department's Vactor Truck[37] fits in the Shop, there is not enough room to walk around the vehicle to efficiently work on it. When two of the City's larger vehicles are in the Shop, the working space around

[37] A Vactor Truck is like a wet-dry vacuum cleaner on wheels and steroids. It has a large on-board water reservoir and a pump, which allows it to either flush out sediments in a storm drain manhole or suck out waste water from a sewage lift station. It is the workhorse of the Department's Fleet, heavily used by the road crew and the water/sewer crew.

them is so limited the working environmental is inefficient and cumbersome, which can create safety hazards.

This problem will be exacerbated as we retire obsolete equipment and acquire replacements. This is because the modern equipment is simply larger than the older models. For example, we will be purchasing a new grader in 2021. The smallest new grader available on the market is larger than the biggest grader we already have. If we acquire a new grader model that is comparable in power and capability to the one we are retiring, which is what we need to do, the new model will not fit in the shop.

2. There are not enough working bays in the Shop. The industry standard is to have 1 ½ bays for every mechanic for safe, efficient working space. We have three mechanics, which, by this standard, means we should have 4½ bays. We have two. A typical day sees both bays occupied by equipment under repair. A complete repair could easily take multiple shifts, while the mechanics wait for parts or a diagnosis. This means the damaged vehicle is stuck in the shop taking up space, which adversely impacts efficiency. An extra bay would allow the mechanics to start working on other equipment, while they are waiting to finish the repairs on the one stuck in the shop.

3. There is not enough room for dry, temperate storage in the winter. Some of the equipment, which is crucial for winter road and utility maintenance, needs to be stored where it doesn't freeze – such as the sand trucks and the Vactor Truck. If these units are left in the open, the sand on the sand trucks and the water in the Vactor truck freezes, making the equipment useless. The existing motor bay is too small to hold all of the equipment, which needs warm storage. So, the Mechanic's Shop is often used for this purpose, which means a piece of equipment needing repair must be hauled out of the Shops so a sanding truck can be stored there overnight. This is extremely inefficient and creates safety hazards.

4. The existing Public Works facility houses the Water/Sewer crew's shop. The W/S Technicians repair pumps, valves and other appurtenances in this space. This ability to make in-house repairs is critical to maintaining fully functioning systems. This space contains spare parts, work tables and tools. The City's water/sewer system has grown with new main extensions and new services, which has increased the need for inventory and work space. This is particularly true because much of Homer's water/sewer infrastructure has aged and needs regular maintenance/repair to keep it functional.

   If the mechanic shops and rolling stock were relocated to a higher elevation, we could expand the water/sewer shop space at the existing campus. We would keep

an inventory of spare parts and critical materials at the higher elevation so we would have something to work with in the event of an emergency, but leave the lower value or more portable stuff at the existing campus. This would mitigate the risk of loss to our utility system, while still making beneficial use of our existing space.

5. Several Public Works functions are currently housed in both of the HERC buildings because there is no room for them at the Public Works Campus. Both Building Maintenance and Parks use space at the HERC buildings for office, workshop and storage space. At some point, the HERC buildings will be demolished and replaced with a Community Recreation Center. We don't know where we will transfer these functions to when the HERC site is no longer available.

   One option is to shift them to the existing Public Works campus, once the mechanic shops and rolling stock are relocated. We could use the existing space to store wood for picnic table repairs, landscaping materials, janitorial supplies, and the other stuff Building Maintenance and Parks need to do their work. While this stuff costs money, it does not have the same degree of high-value criticality as the tools and equipment in the mechanics' shops and is more portable.

6. The existing fueling depot serves all of the City's rolling stock with gasoline and diesel fuel. The depot consists of underground fuel storage tanks, which are equipped with cathodic protection; that is, anodes to slow down the rate of corrosion on the tanks.[38] The facility is regulated by the AK Department of Environmental Conservation (ADEC) and one of the permit conditions is that the anodes must be inspected every three years by a 3rd party inspector. The inspector conducts a test to determine if the anodes are still working.[39] If we do not pass the test, the ADEC will void our permit.

   The test was last performed June 24, 2021 and our anodes barely passed. The inspector did not recommend replacing the anodes because he believes the tanks are probably already corroded. He opined the fueling system needed to be replaced. Not only is corrosion probably present, the software system is no longer supported by any vendor. When it goes down, the system will not dispense fuel. We are being increasingly challenged to keep it operating. When it does dispense fuel, we aren't always sure whose account it's being charged to.

[38] The anodes are "sacrificial lambs". The idea is that the acidic soil corrodes the metal in the anodes instead of the tanks.

[39] The effectiveness of the anodes can be assessed by measuring the conductivity in the surrounding soil. Low conductivity readings mean the anodes have been corroded, meaning the metal in the tanks is vulnerable and have probably experienced corrosion.

Funds, in the amount of $185,000, have been appropriated to design/construct a replacement fueling depot. The Fuel Island Replacement Project would involve above-ground fuel storage tanks, which would eliminate the potential for corrosion and soils contamination as well as enable the system to be relocated, in the event the Public Works campus was relocated outside the Tsunami Inundation Zone. Because the cost of the replacement fueling depot would be funded separately, the estimated cost of the new Public Works Facility does not include the cost of the fuel depot.

FINAL RECOMMENDATIONS

To Be Developed …

EXHIBITS

Memorandum to City Council dated April 22, 2021 re: Risk Catalogue and Evaluation
Risk, Evaluation and Mitigation Spreadsheet
Inundation Maps One & Two dated May 26, 2021
Capital Improvement Plan Project Page 2021-2026 (Updated)

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(p) 907- 235-3170
(f) 907-235-3145

Memorandum

TO: Public Works Campus Task Force

FROM: Janette Keiser, PE, Public Works Director/ City Engineer

DATE: June 24, 2021

SUBJECT: Public Works Campus

The purpose of this Memorandum is to identify other issues related to the functionality of the existing Public Works Campus, besides the fact the facility is located in the Tsunami Inundation Zone. For context, consider the City's infrastructure has increase – every new subdivision adds roads, ditches, water/sewer lines, hydrants, manholes and other appurtenances, all of which need testing, preventive maintenance, and repair. In 2020, the City had the following infrastructure:

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WS draft PWTF

Risks, Evaluation and Mitigation

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
2	**Environment**	Calcium Chloride (CC) storage	Flooding would have localized impact for 1 week to one month. CC causes acute toxicity but would be quickly dispersed by a Tsunami	Store at a higher elevation (easy to replenish in a new location over time). Alternately, accept the loss of sand pile and lose the ability to provide sanding services.
3		Fueling depot for all city vehicles	Could cause a fuel spill	Move fuel depot
4		Toxicity to people and the environment from chemicals stored at PW, and potential impact on salmon, shorebirds and nearby area	Some oil and hydraulic fluids are stored at PW, but in relatively low quantities (its not a tank farm). Could have short term affect but not expected to cause long term damage. Tsunami would dissipate quickly.	None needed
5		RV holding tank storage	Loss of service	Create a new higher elevation RV dump location
6		Sewer treatment plant flooding and raw sewage escapement	Sewage spills, but cleanup of facility is possible	Facility can not be reasonably moved.
7				
8	**Workers**	All PW administration and mechanics are located on site	All administrative support and operations for PW would immediately need a new location, along with work stations, phones and IT capabilities	Remote work, or re-home administrative functions in other city facilities. Disruptive to PW and citywide operations.
9		Potential loss of life	Early Warning System provides warning, would take time for water to reach PW, and reach a flood elevation.	PW emergency operations protocol could better track who is on site or do a final sweep at evac. Threat is from the evacuation process, injury or accident during evacuation

WS draft PWTF

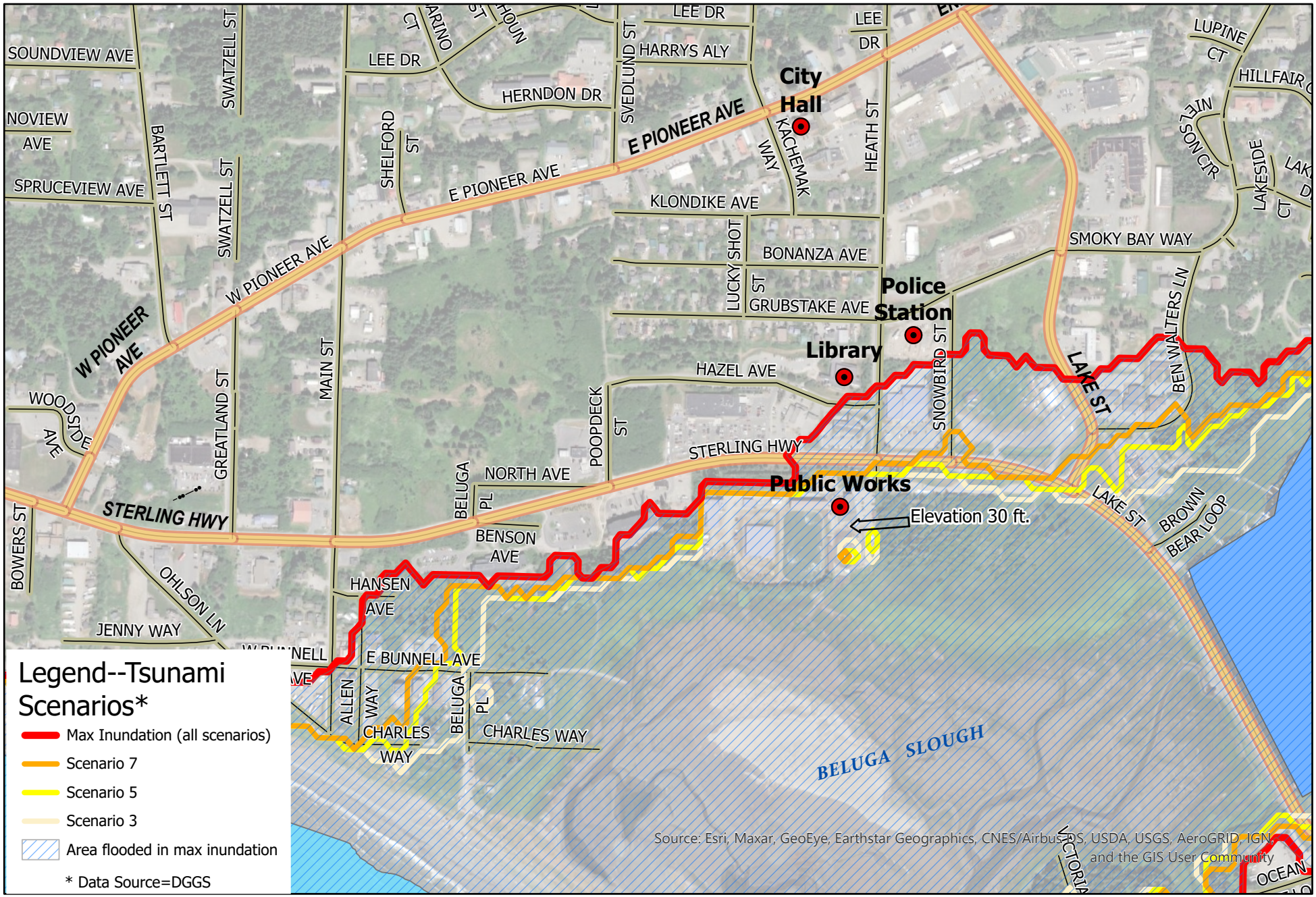
Risks, Evaluation and Mitigation

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
10	**Workers**	All employees and rolling stock is evacuated during every Tsunami event warning. Takes about 45 minutes.	Staff could be helping with the effort to evacuate the public, freeing up other emergency responders.	In an emergency, injuries are likely and would pull emergency responders away from traffic control and evacuation efforts.
11		Traffic risk for workers and the public as all the rolling stock is evacuated	PW is able to provide its own flagger and traffic control if needed. This is not a pinch point for evacuation operations for staff or the public.	Evacuation goes pretty well because we do it fairly often. Can provide a flagger if needed. Equipment evacuation is smooth; it's the pipes valves tools that cant be evacuated, along with frozen in equipment such as summer parks items. Have started some stashes of water valves etc. but don't have pipe storage, etc.
12		Opportunity Cost. How could PW staff be helping if they were not moving equipment? How could they be helping with response?	Could be providing traffic control! Monitoring water/sewer infrastructure, could be helping dispatch and other emergency responders. Could help evacuate low lying areas, or spit equipment. Could revise emergency management plan so PW is a resource, and better plan for utilities	
13				
14	**City operations**	Loss of fueling depot	Immediate need to switch to local service stations. Likely to have fuel shortages for our rolling stock, including ambulances and fire trucks.	Backup fuel storage in another location, move fuel island. Needed for all disasters and in case of supply chain disruptions

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
15	**City operations**	Loss of PW mechanic services due to loss of personal and city tools, parts, materials and shop space	There is substantial investment in the mechanic shop that would be difficult to replace on short notice	Hire out repair services (light vehicles only). Services may not be available or have the expertise needed for emergency vehicles. Short term solution only? No solution?
16		Disruption to sewer treatment operations	Cleanup would be required, but the facility could be repaired	Not looking to relocate because the alternatives are not feasible. The deep shafts would remain... may need repair/electric etc. but the concrete shafts are stable.
17		Loss of all PW administrative offices	Loss of historical files, including all city projects, paper plans are not replaceable… decades of projects…..	Scan plan sheets and institute electronic records management.
18		Radio and communication systems would be impacted	PRV stations/water system impacted. Reduction in city phone service redundancy which could affect non-emergency phone calls to dispatch	Losing electronics for PRV and lift stations means losing the ability to identify leaks, water breaks, and pump water and pump sewers. Would require people on the ground to do it manually.
19		Ability to supply bulk water at Public Works would be reduced	There are currently two private bulk water providers who could supply water trucks if the water system was functional.	If needed, water can be provided via fire hydrants or at the Water Treatment Plant, depending on the nature of the service disruption.

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
20		Loss of rolling stock	Higher value stock rolls first during an evacuation. Lower value stock does not moved - stuff on a trailer, or harder to move like the asphalt machine. Easy to move stuff goes, equipment that does not move does not get evacuated.	Quantify what is not rolling: 20-25% of equipment might not be moveable (repairs, etc.) A few supplies would be frozen in although most are under sheds
21		Parks equipment doesn't move in an evacuation. Loss of lawnmowers, brush cutters, snow blowers, bobcat, traffic signs etc.	We have learned from doing the vaccine events that having enough traffic control people and cones, signs etc. is critical to safe large scale operations.	Mobilize the cone and sign trailer as part of an evacuation. Consider storing some supplies off site.
22	**Equipment**	Loss of sand pile	Would not be able to sand roads. Use stockpile for road and water and sewer repairs, especially in winter. Would hinder repair capability.	Store sand pile in a different location
23		Loss of other equipment and materials	Loss of culverts and other materials used for repairs	Consider storing some items (say in a connex) on higher ground.
24		Loss of motor pool equipment shop	Elimination of capacity to fix police and fire vehicles, could lose whatever apparatus is currently under repair such as an ambulance	

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
25		Leaving equipment in an unsecured area after evacuation leaves it vulnerable to vandalism	Currently there are people at PW most of the time, but the site is unsecured. Pipes etc. are more secured (connexes)	Currently the equipment is out of sight, out of mind, so people don't see the equipment. If its moved to Hazel, its much more visible to people. Emergencies bring out the best and worst in people.
26		After initial phase, could equipment go someplace else (mitigation) can we re-house it around the city? Effect on operations?	Fragmenting affect on operations during the response/recovery timeframe, until a new PW facility could be established.	
27				



Map Date: 04/30/21
Data Sources: KPB, COH, DGGS (GIS data, elevation), Esri satellite imagery 2020.
Map by: C.E.Barnwell

Legend
Major Roads
Streets

N

0 300 600 1,200 Feet
0 65 130 260 Meters

35

City of Homer
PUBLIC WORKS CAMPUS TASK FORCE
MAP 1--TSUNAMI ZONES
& EXISTING PUBLIC WORKS

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

RESOLUTION 20-125

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA, CREATING A PUBLIC WORKS CAMPUS TASK FORCE AND ESTABLISHING THE SCOPE OF WORK AND PARAMETERS UNDER WHICH THE TASK FORCE WILL CONDUCT ITS WORK.

WHEREAS, In 2019, the Alaska Division of Geological and Geophysical Surveys published updated Tsunami Inundation Maps for Homer; and

WHEREAS, The information for these maps was derived by numerically modeling worst-case scenarios of inundation from tsunami waves generated by earthquakes and submarine landslides, including local underwater slope failure scenarios for Kachemak Bay; and

WHEREAS, The maximum landslide-generated tsunami, as modeled, shows the existing Heath Street campus of the City's Public Works Department could be flooded by as much as 16.4 – 32.8 feet; and

WHEREAS, Under some scenarios, the first wave could appear within one hour after the earthquake and further, landslide-generated waves could hit low-lying areas while the ground was still shaking from an earthquake; and

WHEREAS, Currently, when a Tsunami Warning is issued, Public Works personnel immediately begin evacuating major pieces of heavy machinery and other mobile equipment from its campus to higher ground and the evacuation process takes at least forty-five minutes; and

WHEREAS, The Department does not currently evacuate materials and supplies, which would be needed in the event an earthquake or tsunami causes damage to the City's water, sewer or road infrastructure; and

WHEREAS, The estimated costs to properly prepare for such recovery, by creating stockpiles of necessary materials, supplies and equipment, would be substantial; and

WHEREAS, For these reasons, risks of personal injury, property damage and even loss of life could be high, either during the tsunami event itself or during recovery.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Homer, Alaska, hereby creates the Public Works Campus Task Force for the following purposes:

1. Goal #1 – Evaluate the risks of personal injury, property damage and loss of life in the event a tsunami floods the Public Works Campus.
    a. Scope of Work –
        i. Review the findings of the 2019 Updated Maximum Estimated Tsunami Inundation report published by the Alaska Division of Geological & Geophysical Surveys
        ii. Develop system for evaluating risks
        iii. Catalog and evaluate risks
    b. Deliverables – Report of Findings of probable risks
    c. Timeframe – Report to be submitted by January 31, 2021
2. Goal #2 – Develop strategies for mitigating identified risks
    a. Scope of Work –
        i. For each risk identified under Goal #1, identify strategies for mitigation, including estimated short term and long term costs
    b. Deliverables – Report summarizing strategies and cost estimates
    c. Timeframe – Report to be submitted by February 28, 2021
3. Goal #3 – Make recommendations.
    a. Scope of Work –
        i. Develop system for evaluating strategies
        ii. Evaluate strategies
    b. Deliverables – Report summarizing evaluation process and identifying preferred options
    c. Timeframe – Report to be submitted by March 31, 2021

BE IT FURTHER RESOLVED the Public Works Campus Task Force will be made up of 7 members, with 3 City Residents, 2 Councilmembers, and 2 City Staff.

BE IT FURTHER RESOLVED, The Mayor will nominate appointees to the Task Force from a list of applicants; nominees must be approved by City Council. All appointees shall serve at the pleasure of the Council and may be removed from their position by a majority of the Council at any time without cause.

PASSED AND ADOPTED by the Homer City Council on this 23rd day of November, 2020.

CITY OF HOMER

KEN CASTNER, MAYOR

ATTEST:

MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal Note: Staff time and advertising.

City of Homer
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Memorandum

TO: PUBLIC WORKS CAMPUS TASK FORCE

FROM: RENEE KRAUSE, MMC, DEPUTY CITY CLERK

DATE: APRIL 15, 2021

SUBJECT: APPROVED MEETING SCHEDULE WITH REVISED MEETING TIME

Below is the revised meeting schedule and report timelines as approved by the Task Force.

This schedule reflects the additional worksession as of the April 14, 2021 Meeting date.

Meeting Time	Task	Report Date	Meeting Dates	Status of Meeting
2:30 p.m. ↓	Report of Findings of Probable Risks - Catalog & Evaluate Risks - Develop System for Evaluating Risks - Review Findings - Draft Report	May 10, 2021	2/10/21 Reg Mtg 2/18/21 WS 2/24/21 Reg Mtg 3/10/21 Reg Mtg 3/24/21 Reg Mtg	COMPLETED COMPLETED COMPLETED COMPLETED
2:30 p.m. 4:30 p.m. ↓	Report of Strategies including Cost Estimates - Identifying Strategies for Mitigation of Risks Identified o Short & Long Term Costs for mitigation strategies - Draft Report	May 10, 2021	4/14/21 Reg Mtg 4/21/21 WS 4/28/21 Reg Mtg 5/12/21 Reg Mtg 5/26/21 Reg Mtg	COMPLETED
4:30 p.m. ↓	Report on Evaluation Process and Identifying Preferred Options - Develop system for evaluating strategies - Evaluate strategies - Draft Report	August 9, 2021	6/9/21 Reg Mtg 6/23/21 Reg Mtg 7/14/21 Reg Mtg 7/28/21 Reg Mtg	