



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, May 26, 2021 at 4:30 PM

Council Chambers via Zoom

Dial: +1 669 900 6833 or +1 253 215 8782 or Toll Free (888) 788 0099 or 877 853 5247

Webinar ID: 990 6794 3833 Passcode: 716429

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 May 12, 2021

VISITORS/PRESENTATIONS

REPORTS

PENDING BUSINESS

NEW BUSINESS

- [a.](#) Memorandum from Public Works Director re: Criteria for Evaluating Strategies
- b. Next Steps
 - 1. Draft Report Outline and Content

INFORMATIONAL MATERIALS

- [a.](#) Resolution 20-125, Creating the Public Works Campus Task Force and establishing the Scope of Work and Parameters under which the Task Force will Conduct its Work.
- [b.](#) Memorandum dated May 12, 2021 from Member Engebretsen re: Site Selection Review
- [c.](#) Memorandum dated April 20, 2021 to City Council re: Risk Catalog and Evaluation
- [d.](#) Memorandum dated April 22, 2021 from Member Engebretsen re: Short & Long Term Mitigation Costs
- [e.](#) 2021-2026 Capital Improvement Project Sheet - New Public Works Facility

COMMENTS OF THE AUDIENCE

COMMENTS OF CITY STAFF

COMMENTS OF THE TASK FORCE

ADJOURNMENT

Next Regular Meeting is WEDNESDAY, JUNE 9, 2021, at 4:30 p.m. All meetings scheduled to be held via Zoom in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

Session 21-07, a Regular Meeting of the Public Works Campus Task Force was called to order by Chair Donna Aderhold at 4:30 p.m. on May 12, 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 ENGBRETSSEN, SLONE, VENUTI, KEISER, ADERHOLD, AND BARNWELL

STAFF: RENEE KRAUSE, DEPUTY CITY CLERK

AGENDA APPROVAL

Chair Aderhold requested a motion to approve the agenda.

ENGBRETSSEN/SLONE MOVED TO APPROVE THE AGENDA

Chair Aderhold inquired if there was any discussion on the motion as presented.

ENGBRETSSEN/SLONE MOVED TO AMEND THE AGENDA TO ADD "COUNCIL REPORT" UNDER REPORTS.

There was a brief clarification on the request.

VOTE. (Amendment) NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

There was no further discussion on the main motion as amended.

VOTE. (Main) NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

PUBLIC COMMENTS UPON MATTERS ALREADY ON THE AGENDA

APPROVAL OF MINUTES

A. Regular Meeting Minutes for April 28, 2021

Chair Aderhold requested a motion to approve the minutes.

ENGBRETSSEN/SLONE MOVED TO APPROVE THE MINUTES OF APRIL 28, 2021.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

VISITORS/PRESENTATIONS

REPORTS

A. Council Report on Memorandum Report for Goal #1 from the Task Force

Member Venuti provided a summary of the report she provided to Council. She noted that there were concerns expressed regarding the two votes in favor of any recommendations from the Task Force; expenditure of funds and going beyond the scope of the assigned work.

Chair Aderhold provided additional information on the concerns expressed by members of the Council regarding the funding of a consultation with an architect; and the direction of the recommendation to relocate the public works facility. She reminded them that the makeup of the Task Force was outlined by a resolution approved in January by the City Council, the relocation and construction of a new public works facility was already in the CIP and the funding was already appropriated and came from public works budget.

A discussion ensued on the inclusion of information in the report on requesting Council to broaden the scope of work of the Task Force to include other reasons to relocate the public works facility and clarification that the report to Council only included the findings for Goal #1 as outlined in Resolution 20-125. It was further clarified that the Task Force should include a bit more background information in reports to Council on the steps performed.

PENDING BUSINESS

NEW BUSINESS

A. Memorandum from Task Force Member Engebretsen re: Site Selection & Draft Site Plan

Chair Aderhold introduced the item by reading of the title and invited Member Engebretsen to review her memorandum.

Member Engebretsen provided information on the process she took to review and eliminate various parcels of land that are available or would be suitable for relocation of the Public Works Campus in the city. She then reported on the properties that were visited with Public Works Director Keiser

- the Waddell property located east of the Police Station is great large enough and basically flat, but is barely above the inundation line
- a parcel north of Grubstake on Lake Street just above the HEA equipment yard would be tight fit, suitable location and accessible
- a parcel off of Greatland which would be great location but is really sloping, there is also a creek through the property and would not be suitable
- the parcel in Town Center off of Main Street & Pioneer Avenue would have heavy equipment egressing onto Pioneer Avenue or Main Street which would not be great, steep slope

Member Keiser reported that she focused on the property on Lake Street and reported finding some previous work that was conducted by the prior Public Works Director. She reported that the review of the other available properties were not conducive or suited to the uses that Public Works needs and in

her opinion would have a higher and better use for the community. She then reported that she engaged the services of a local architect to configure how exactly the components of existing Public Works Services would fit or placed on the parcels of land. She believed that the Lake Street parcels would also fit into the current uses that are surrounding it. The Bad news was that they would require considerable development work and they would require three parcels if not the use of the four parcels which are not all currently being offered for sale. The largest parcel is being offered currently.

Member Keiser and Member Engebretsen responded to questions and commented on topics regarding the following:

- compiling a database on real estate costs, analysis of the different sites that were reviewed
 - o there are strong competing interests to spending funds on a new public works facility over a new community recreation facility
 - o a new updated Fire Department Campus
- providing options to City Council will not override the decisions to expend the amount of funding required to construct a new public works facility
- City Council has changed over time and keeping this on the CIP along with the report to back it up is valuable
- The available funding is a concern but should only be one concern of the Task Force
 - o The Task Force may be outpacing the expectations of City Council
 - o Focus on it is necessary to relocate the Public Works Campus
 - o We can present a good start for Council such as the Lake Street parcel, access, commercial zoning, etc.
- If the Task Force wants to continue the discussion then they should submit a request to Council to broaden the scope of work
- Recommendation could include that City Council purchase the parcel on Lake Street
 - o The City would benefit having that parcel in its portfolio whether it is for a new Public Works Facility of Fire Department
- Prior land sales and current or future development and the shrinking opportunities
- The steps and work Council took to reach consensus with the development of the new Police Station and that this may need the same work and steps to bring to fruition.
- Needing to relate the story to effect understanding by City Council

Member Slone stated that he could not support further discussion unless City Council is willing to broaden the scope of the Task Force to address the issue of obsolescence and the issues of running out of room which will affect the ability of the public works department to function.

SLONE/ENGBRETSSEN MOVED THAT THE PUBLIC WORKS CAMPUS TASK FORCE REQUEST CITY COUNCIL TO EXPAND THE SCOPE OF WORK AS OUTLINED IN RESOLUTION 20-125 TO INCORPORATE OTHER ISSUES OF CONCERN REGARDING THE FUTURE OF THE PUBLIC WORKS CAMPUS INCLUDING THE OBSOLESCENCE AND INADEQUACY OF SPACE.

Discussion ensued on the following topics:

- Primary Goal to address the possible risk to the Campus and losing the ability to be effective
- Perception on focusing on relocation of the facility
- If they ask for the authority to discuss the expanded scope there should be no offense
- There is no question on the risk but on the probabilities there is no way to really quantify those

- Previous decisions made on city facilities is because they addressed all aspects of staying in the current location, renovate or build new
- Recommended looking a little broader but not necessarily spending too much time and using that information to update and facilitate further information for the project on the CIP
- Require City Council permission since the Resolution succinctly defined the scope of work
- Explaining that they are looking into the future and this threat was discovered during the discussion on the risk of a tsunami and is considered a risk just as much as a tsunami
- Using different verbiage other than expand or increase

Deputy City Clerk Krause recommended verbiage of “develop the scope of works to include” and stated that a memorandum can be added to the agenda under new business for approval where a resolution might be perceived as a bit strong since that would be used to amend the previous resolution approved.

Further discussion ensued on the preference of a memorandum over a resolution to request the amendment to the scope of work, and reviewing the resolution under the goals the Task Force can consider this as a part of their recommendations as described under Goal #3 and that the location is just part of the assessment, such as considering the elevations acceptable, zoning, etc. and orders of magnitude.

VOTE. YES. ENGBRETSSEN.

VOTE. NO. SLONE, BARNWELL, VENUTI, ADERHOLD, KEISER

Motion failed.

Chair Aderhold referred to the memorandum in the packet and requested further comment from Member Keiser.

Member Keiser noted that in review of the parcels available on Lake Street it was determined that they could use the existing Public Works facility for storage and personnel, such as maintenance and parks personnel could use the existing Public Works Offices, relocating from the HERC 2 facility as well as storage of low value equipment and materials such as the sand pile which would then free up the space required on the proposed new parcel for higher value equipment and supplies.

Member Engebretsen requested direction on how this information should be reflected in the final report to Council. She then opined that they have this memorandum and information and who will draft the final report and incorporating the information they have into that final report.

Chair Aderhold noted that Angie Newby reached out to the City Manager to remind him that she is contracted by the City and would be happy to attend a meeting as a visitor with regards to the services of a relator. She explained to the City Manager that they were not at a point to require the services of a realtor at this time. She further noted that they would need to determine the criteria that the city requires for a potential site to offer a new public works facility.

Member Keiser commented that she felt Member Engebretsen had the knowledge and expertise needed to vet proposed parcels.

A brief discussion ensued on Member Engebretsen speaking with Ms. Newby to see if there may be some valid points that they might be missing or that a property may be available that they are not aware of; further clarification that Ms. Newby would be representing the city in any land purchase that they city may conduct. Concerns were expressed by the Task Force on presumptions and possible misunderstandings.

B. Next Steps

Chair Aderhold stated that this is where they discuss the items for the next meeting to be on the agenda and those deliverables. She then requested input from the Task Force, listing some ideas such as Goal #2 and Goal #3 and what the final report would look like.

Discussion ensued on developing the final report and how that should be formatted and the content of that report. Included were the following items:

- Two Part report
 - o First part contains the analysis and what was analyzed included could be the risk and mitigation table
 - o Second will contain the recommendations and rationale
- Inclusion of the strategies and cost estimates
 - o Moving the campus is the preferred choice
 - o Additional Strategies are shown on the risk & mitigation table
- Recommendations
 - o Site Selections

Member Keiser was volunteered to write the report by Member Engebretsen.

Deputy City Clerk Krause volunteered to assist Member Keiser with drafting the report.

Chair Aderhold stated that she would like to use the memorandums, tables, and minutes to create a framework of the story they need to tell. She then noted that the process is what brought them to their final recommendations. She then questioned whether they should submit a report for goal two and three.

Member Engebretsen advised that they should be mindful of their time and staff ability as Council did not hire a Consultant to put this together so they need to be respectful of their time.

Discussion ensued on the following points:

- Goal three listed developing a system for evaluating strategies to identify mitigation
 - o Listing individual strategies to mitigate the issues such as storage of supplies at other location
 - o Validating a system of evaluating a strategy to develop conclusion
 - Efficiency of ability to continue service
- Limp Along Plan, Long Range Incremental Plan, Lock Stock & Barrel Plan
- Important to show that they did not go straight to relocation
- Important to show that Public Works is an essential service to reinstate city services including those located on the Spit

- Not to have the report too overwhelming
- Identify criteria for evaluating the strategies then drafting the final report
 - o Continuity of essential services
 - o Cost effectiveness defined

Chair Aderhold requested that the memorandums from Member Engebretsen, the resolution and then the report to City Council in the next packet.

INFORMATIONAL MATERIALS

- a. Inundation Maps
- b. Resolution 20-125 Establishing the Task Force and Outlining Scope of Work
- c. Approved Task Force Meeting Schedule – Revised April 15, 2021

COMMENTS OF THE AUDIENCE

COMMENTS OF THE CITY STAFF

Deputy City Clerk Krause commented it was a good meeting.

COMMENTS OF THE TASK FORCE

Member Venuti commented that it was very thought provoking and that it was the first time that Council had questions on their report but is confident that Council will make the right decision. She further believed that it would be 6-8 years not 15 years or more.

Member Barnwell commented that he liked the 6-8 years and agreed it was a good meeting.

Member Slone apologized for wasting time at the last meeting as he did not realize that Charles had agreed with him in the beginning and he continued on for another ten minutes.

Member Keiser commented in including a line item in her upcoming budget for developing a plan that will hopefully move them forward.

Chair Aderhold expressed her appreciation for a good meeting and called for adjournment.

ADJOURNMENT

There being no further business to come before the Task Force the meeting adjourned at 6:00 p.m. The next regular meeting is scheduled for Wednesday, May 26, 2021 at 4:30 p.m. at the City Hall Cowles Council Chambers via Zoom Webinar located at 491 E. Pioneer Avenue, Homer, Alaska.

RENEE KRAUSE, MMC, DEPUTY CITY CLERK

Approved: _____



Memorandum

TO: Public Works Campus Task Force
FROM: Janette Keiser, PE, Director of Public Works
DATE: May 20, 2021
SUBJECT: Criteria for Evaluating Strategies

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 Memorandum is to recommend relevant criteria.

II. Recommended Criteria:

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

Criterion #1: Cost/Benefit evaluation is favorable. 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: The strategy supports PW's Mission. The extent to which the strategy preserves the ability of the Public Works Department to perform its essential mission(s) in emergency situations.

Criterion #3: Funding Strategies are available. The extent to which funding strategies are available to support a particular mitigation strategy.

Criterion #4: Strategy can be Phased. This criterion relates to the extent to which the implementation of the mitigation strategy can be phased over time.

Criterion #5: Time is of the essence. This criterion relates to the extent to which (a) taking action now, to implement the strategy, would be beneficial or (b) failing to take action could result in a lost opportunity.

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, plans 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. Application of Criteria to Mitigation Strategies

Criterion	Strategy #1		Strategy #2		Strategy #3	
	Limp Along		Lock, Stock & Barrel		Long Term Increm.	
Cost/Benefit Analysis	low	1	medium	2	high	3
Support's Mission	low	1	high	3	medium	3
Funding Available	high	3	low	1	medium	2
Can be Phased	high	3	low	1	high	3
Time is of essence	high	3	high	3	high	3
	11		10		14	

Ranking Scale:

- Low – The mitigation strategy scores low for this criterion; 1 point.
- Medium – The mitigation strategy scores in the middle of the range for this criterion; 2 points.
- High – The mitigation strategy scores high in this criterion; 3 points.

**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.

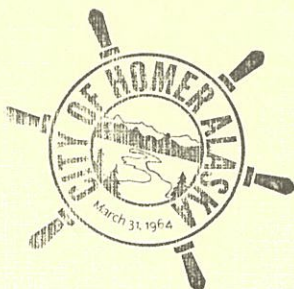
NOW, THEREFORE, BE IT RESOLVED that the City Council of Homer, Alaska, hereby creates the Public Works Campus Task Force for the following purposes:

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.

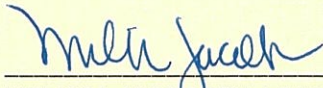


CITY OF HOMER

KEN CASTNER, MAYOR

85 ATTEST:

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89 MELISSA JACOBSEN, MMC, CITY CLERK

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91 Fiscal Note: Staff time and advertising.



MEMORANDUM

To: Public Works Task Force
From: Julie Engebretsen, TF member
RE: Site Selection Review
Date: May 12, 2021

Resolution Task Goal #3: Make Recommendations

- Develop system for evaluating strategies
- Evaluate strategies
- Deliverables: Report summarizing evaluation process and identifying preferred options

RECAP: At the last meeting, the task force moved that Public Works Director Kaiser and myself would provide an outline of what the requirements are for a suitable public works property, to be further supplemented by a GIS report.

Process

I began by researching properties for sale in Homer, and also used my knowledge of Homer properties to identify vacant lots or areas that could be re-developed. I based decisions on lot size, zoning, and if there property was or had been recently for sale. Attached is a map of preliminary potential sites.

Upon further analysis, some were too steep to be reasonably developed for a public works building. For example, there is a lot of vacant land on Greatland Street, but the slope would require a lot of dirt work and expense and the shape of the lots and the presence of a creek doesn't lend itself to easy development for our purposes. I walked parts of the CBD to look at property and determine which merited a field visit with Director Kaiser. I also visited property in the Commercial Park Subdivision, basically south of the Down East/Bayweld area out East End. While there is acreage with full utilities available, the roads are not paved, and it's a long way for equipment to travel to reach 'headquarters.' Seems like a lot of machine and employee time would be wasted if this location was used.

Meanwhile, Jan had an architect make a scale map of the site on Lake Street, and put the existing PW building on it. For reference, the existing PW administration building and mechanics area is about 17,000 square feet, similar to the Homer Public Library. Pole barns and equipment storage will take additional space, but it gave her a rough idea of what property is needed as a starting point for lot analysis. From the architect's analysis, the area of the current building would fit. She is now working on fitting the fuel island and equipment storage on that site.

Field Trip

Jan and I met on Thursday May 6th to conduct a field visit. During that time we determined the following site selection factors:

- Location outside the Tsunami Zone
- Location with good street access and not using Pioneer Ave as a main thoroughfare for all heavy equipment
- Centrally located in Homer/Central Business District zoning.
- Location with adjacent land uses that would not be unreasonably affected by having Public Works as a neighbor.
- Relatively flat land. All sites have some slope, some more than others.

We visited three locations.

1. "Waddell property" at the intersections of Snowbird, Grubstake and Lake Street. Con: The property is right on the edge of the Tsunami Zone... It does not seem reasonable to move the campus for so little elevation gain.

2. "Lake Street Lot". This is the property proposed by Carey Meyer. The pros include most of the land is for sale, and it is big enough for a scaled down PW facility. To the south, the neighboring land use is Homer Electric Association's storage yard.

3. "Town Center North." This lot would have heavy equipment accessing Pioneer Avenue, which is not desirable, and would require purchasing additional land for a Main Street access. Additionally, the property has a fair amount of slope. It would be better suited to a land use that didn't require such a large, flat footprint. Last, this property is zoned Town Center, which does not allow a public works campus use. Changing the zoning would also entail changing the Comprehensive Plan. These are possible, but would likely meet public resistance.

We further discussed the land on Greatland Street (too sloped) and the HERC site. The HERC site was studied by the HERC Task Force. While it is a larger flat site, there are higher and better uses for this property. The pros and cons of the HERC site could be further discussed by the full Task Force.

Conclusions

- The sand pile at public works is a source of a lot of equipment noise, and takes a large flat area. Leaving the pile where it is may be a reasonable solution. Similarly, snow storage would remain at its current location. This would allow a new Public Works facility to be on a smaller lot, and have less impact on adjoining properties.
- If the old Public Works building remains in place, all the heavy equipment, repair shop, materials storage and offices could move 'up town.' Parks maintenance and building maintenance could remain or be re-located to the existing building. This would allow the City of move out of the HERC 2 building.
- The lot on Lake Street is for sale, and is the best fit for PW at this point. There are additional lots that are not for sale, but are not heavily developed. Perhaps the City could pursue a first right of refusal agreement on those lands.

Requested Action: What are the next steps the Task Force would like to take?

~Task Force members could visit these sites

~We can share observations at the next meeting.

~I can write a more fleshed out 'report' based on your observations and this memo, for a June agenda.

Attachments

1. Potential Sites Map
2. 5/3/21 Draft site plan/very basic space planning
3. Real Estate Listings



MEMORANDUM

To: Mayor Castner and the Homer City Council
From: Public Works Campus Task Force
RE: Risk Catalogue and Evaluation
Date: April 30, 2021

Introduction

Resolution 20-125 set out three goals for the task force to address and make recommendations to Council. To date, the group has held eight meetings. The purpose of this memo is to provide a report of our activities so far.

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 Estimates Tsunami Inundation report published by the Alaska Division of Geological and Geophysical Surveys**
- ii. Develop a system for evaluating risks**
- iii. Catalogue and evaluate risks**

b. Deliverable: Report of findings of probable Risks

Tsunami Report Evaluation

The Task Force reviewed the Tsunami report, and then heard a presentation by Drs. Suleimani¹ and Salisbury, two of the report authors. The Task Force learned that even a low level of water can cause extreme damage. Unlike a typical wave, a Tsunami is like a fast flooding tide that continues for hours and hours. It carries an immense amount of debris, so between the strong flood and the amount of debris, it's very damaging. The report determined a number of tsunami scenarios that would cause catastrophic damage to coastal areas of Homer.

We quizzed Drs. Suleimani and Salisbury about the probability of the “worst case scenario” happening. They said it was impossible to say because the data in Alaska are not well enough developed to determine the probability of occurrence. This is why they use the “worst case scenario”

¹ Elena Suleimani, Ph.D.
Research Analyst & Tsunami Modeler
Alaska Earthquake Center, University of Alaska Fairbanks

Barrett Salisbury, Ph.D.
Neotectonic Geologist, Engineering Section
Division of Geological & Geophysical Surveys

approach. Dr. Suleimani said it's up to the communities to decide what to do with this information; that is, to decide (a) what would be at risk if the worst case scenario occurred and (b) what the community wanted to do to address the risks. For this reason, we focused on identifying the risks that may be suffered if the worst case scenario happened at the Public Works Campus.

The elevation of the Public Works parking lot is 30 feet. In the worst case scenario, the water could reach 50 feet high, leaving the campus inundated with 20 feet of water. In lesser scenarios, hours long fast moving flood waters could erode the fill that Public Works sits on, causing the loss of the parking lot and potentially threatening the structural stability of the buildings. Additional potential outcomes are discussed in the attached Risk Table.

Catalogue and Evaluate Risks

The Task Force developed a spreadsheet of risks by type of risk – environmental, harm to workers, harm to Public Works operations, and overall negative impacts to city services, in the event a tsunami flooded the Public Works Campus. The draft table is attached here. In addition to gathering input from task force members, we used the All Hazard Mitigation Plan to further consider risks to the facility. The risks evaluated are specific to the Public Works campus in case of tsunami - a regional earthquake will be felt city wide and the impacts are not specific to Public Works.

Another issue this process raised is opportunity cost. If Public Works personnel were not moving equipment during every tsunami warning, workers could be helping with the evacuation of people from low lying areas. In the event of a tsunami and damage to the campus, Public Works staff would be needed to respond to that facility, rather than taking part in the city wide response that will surely be needed. Rather than having the resources to participate in the city emergency response and recovery, the facility will require those resources and personnel to stabilize operations.

Conclusion of Goal 1 work:

The Public Works Campus is critical City infrastructure and lies within the maximum tsunami inundation zone. At an elevation of 30 feet, the campus is in a vulnerable location. Planning for the mitigation of a tsunami event can include short and long term strategies. The Task Force recommends, among other solutions, the long term replacement of the Public Works Campus at a higher elevation.

Next Steps

The Task Force will continue its work as outlined in Resolution 20-125. Risk mitigation strategies for short and long term implementation will be provided, with associated costs. The group intends to have the strategies and costs, a report on Goal 2 and deliverables, for a future Council meeting.

Attachments

- 1. Map**
- 2. Risks Spreadsheet**
- 3. Resolution 20-125**

4/21/21 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

4/21/21 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

4/21/21 WS draft PWTF
Risks, Evaluation and Mitigation

	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.

4/21/21 WS draft PWTF
Risks, Evaluation and Mitigation

	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 move - 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	

4/21/21 WS draft PWTF
Risks, Evaluation and Mitigation

	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				

**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.

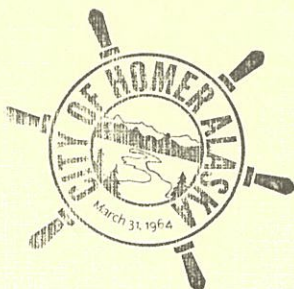
NOW, THEREFORE, BE IT RESOLVED that the City Council of Homer, Alaska, hereby creates the Public Works Campus Task Force for the following purposes:

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

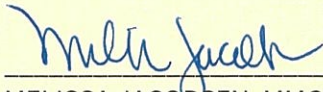
KEN CASTNER, MAYOR

85 ATTEST:

86

87

88

A handwritten signature in blue ink, appearing to read "Melissa Jacobsen", is written over a horizontal line.

89 MELISSA JACOBSEN, MMC, CITY CLERK

90

91 Fiscal Note: Staff time and advertising.



City of Homer

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To: Public Works Task Force
From: Julie Engebretsen, Deputy City Planner
Date: April 22, 2021
RE: Short and long term mitigation costs

Resolution 20-125

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

Requested Actions:

1. Work through the table as a group to get ideas.
2. Is a table a good way to present this information? ...should this become a word document with paragraphs instead? Suggestions welcome!
3. See conundrum below

Conundrum...

The resolution (line 56) asks for mitigation strategies for all the risks identified, including long and short term costs. As I went through the risks table, some of the items are opportunity costs. There isn't a tangible dollar value. For example, if PW wasn't evacuating equipment, they could be helping to knock on doors in low-lying areas and evacuate people. The city is paying wages either way. I don't have a solution at the moment for how to take all the risks and turn them all into a dollar value. These risks/opportunity costs may be better captured in our final report with preferred alternatives. Open to any and all suggestions on how we might proceed on a report to Council.

Attachment: 4/22/21 costs table

4/28/21 draft PWTF
Prioritized mitigation and costs

	A	B	C	D
1	Potential Risk/Outcome	Mitigation Options	Timeframe- short term/long term	Cost
2				
3	Loss of fueling depot	Move fuel island.	Short term opportunity	Fuel island is already under design for replacement? Status? I.e. are we already spending that \$?
4	Loss of PW mechanic services due to loss of personal and city tools, parts, materials and shop space	Hire out repair services (light vehicles only). Services may not be available or have the expertise needed for emergency vehicles. Short term solution only? Move facility.	Long term cost	
5	Loss of all PW administrative records	Short term: Scan plan sheets and institute electronic records management.	Shorter term opportunity	e-document management program
6	Loss of PW administration office	Short term: Remote work, or re-home administrative functions in other city facilities. Long term: Move offices	Long term cost	
7	Radio and communication systems would be impacted	Would require people on the ground to do check infrastructure manually due to loss of communications infrastructure.	Long term cost	High cost. If the campus moves, and would be part of a larger communications package. Unlikely to be a standalone mitigation measure.
8	Loss of rolling stock	Higher value stock rolls first during an evacuation. Lower value stock does not move - 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.	Long term cost	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
9	RV holding tank storage	Create a new higher elevation RV dump location	Long term cost	
10	Loss of signs, traffic cones, traffic control supplies	Mobilize the cone and sign trailer as part of an evacuation. Consider storing some supplies off site.		No cost? Operational change? Cut from this table?

4/28/21 draft PWTF
Prioritized mitigation and costs

	A	B	C	D
1	Potential Risk/Outcome	Mitigation Options	Timeframe- short term/long term	Cost
11	Parks equipment doesn't move in an evacuation. Loss of lawnmowers, brush cutters, snow blowers, bobcat, traffic signs etc.	Relocate parks equipment	Long term cost	
12	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. Or, accept the loss of the sand pile.		Store sand pile in a different location... maybe
13	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.	Short term?	
14	Leaving equipment in an unsecured area after evacuation leaves it vulnerable to vandalism	Create secured area at a higher elevation	Short term?	
15	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.	Long term cost	



New Public Works Facility

Project Description & Benefit: The Public Works Department, located at the bottom of Heath Street, has outgrown its facilities. Additionally, the new Tsunami Inundation map shows the potential for a 30' high wave moving through the complex. The Public Works facility and associated heavy equipment is critical infrastructure for response and recovery activities before, during and after a disaster. To be best prepared to safeguard public health and safety, a new site and administrative/maintenance support infrastructure for Public Works should be developed. Building maintenance (located in HERC 2) may soon need a new location as well.

Based on an evaluation of current and future needs (see table), it is expected that a new site containing all Public Works maintenance facilities would require 4.6 acres. Ideally, this site would be located outside the tsunami inundation zone, within or close to the Central Business District, and compatible with adjacent land uses. The facility will be sized to provide for current and future administrative and customer support personnel; road, drainage, building, water, sewer, motor pool maintenance activities; and equipment/materials storage

The existing Public Works site could be converted into public summer use open space (adjacent to the animal shelter, Beluga Slough, and conservation land) and provide space for environmentally sensitive snow storage in the winter.

Plans & Progress: This project will most likely be completed in three phases consisting of concept design and property acquisition, full design and construction. The proposed timeframe is to prepare a concept design in 2020/2021; purchase property in 2025; design facility in 2026/2027; begin construction in 2029, with a new facility ready in 2030. Availability of funding would change these time periods.

Total Project Cost: \$12,027,750

2021-2022 (Concept Design):	\$ 100,000
2026 (Purchase Property):	\$1,150,000
2027-2028 (Facility Design):	\$ 828,500
2030-2031 (Construction):	\$9,949,250

Priority Level: 1



City of Homer existing Public Works facility.

Future Public Works Footprint/Cost Estimates

Use	SF	Constr. Cost
Building - Office	3,000	\$ 1,200,000
Building - Motor Pool	4,500	\$ 2,250,000
Building - Water/Sewer	3,000	\$ 1,275,000
Building - Building Maintenance	2,500	\$ 937,500
Building - Parks	1,500	\$ 562,500
Building - Heated Vehicle Storage	3,000	\$ 750,000
Total Building	17,500	\$ 6,975,000

Parking - Customer & Employee	30,000	\$ 450,000
Large Equipment Storage	20,000	\$ 400,000
Small Equipment Storage	10,000	\$ 250,000
Gravel Storage	7,500	\$ 10,000
Sand Barn	5,000	\$ 875,000
Material Storage	7,500	\$ 75,000
Access Corridors	5,000	\$ 150,000
Watering Point	1,000	\$ 100,000
Total Parking/Storage/Misc	86,000	\$ 2,310,000

Construction		\$ 9,285,000
Design		\$ 928,500
Inspection		\$ 371,400
Furnishings		\$ 200,000
1% for Art		\$ 92,850

Total Design/Construction		\$ 10,877,750
Land Purchase	4.6 acres	\$ 1,150,000
Total Project Cost Estimate		\$ 12,027,750