
Lowell Creek Flood Diversion Study

Appendix G -

Correspondence

Seward, Alaska



April 2021



**US Army Corps
of Engineers®**
Alaska District

**Appendix G –
Correspondence
Table of Contents**

1. Correspondence: Endangered Species Act, Section 7 & Fish and Wildlife Coordination Act
 - 1.1. FWCA Letter from USACE (21 January 2020)
 - 1.2. FWCA Letter from USFWS
 - 1.3. Letter to NOAA requesting species list (17 December 2019)
 - 1.4. Email from NOAA (17 December 2019)
 - 1.5. Emails No Effects Determination NOAA
 - 1.6. EFH Letter from NFMS (19 October 2020)
2. Correspondence: National Historic Preservation Act, Section 106
 - 2.1. Letter to SHPO: Notification of Feasibility Study (21 June 2019)
 - 2.2. Letter from SHPO: Historic Properties Effects Determination (08 October 2019)
3. Correspondence: Tribal
 - 3.1. Chagach Corporation
 - 3.2. Chugachmiut
 - 3.3. Qutekcak
4. Correspondence: Clean Water Act, Section 401
 - 4.1. Prefiling Meeting Request (23 September 2020)
 - 4.2. Certification Request (24 September 2020)
 - 4.3. Water Quality Certification (21 December 2020)
5. Correspondence: National Environmental Policy Act
 - 5.1. Notification of Availability for Public Comment: Draft Integrated Feasibility Report & Environmental Assessment (21 September 2020)
 - 5.2. Notification of Virtual Public Meeting (16 October 2020)
6. Correspondence: Policy Exceptions
 - 6.1. 3x3x3 Policy Exception Approval
 - 6.2. NED Policy Exception Approval
7. Correspondence: Real Estate
 - 7.1. Emails regarding timber merchantability
8. Correspondence: Non-Federal Sponsor Financial Self Certification
 - 8.1. Non-Federal Sponsor Self-Certification ()
9. Correspondence: Non-Federal Sponsor and Stakeholder
 - 9.1. Seward Letter of Intent (29 June 2015)
 - 9.2. City Manager of Seward Information Letter (01 December 2015)
 - 9.3. Letter from Seward Historical Preservation Commission (18 May 2016)
 - 9.4. FSCA Executed (12 August 2016)
10. Public Comments
 - 10.1. State Comments

- 10.2. SeaLife Center Comments
- 10.3. Seward Comments

**Correspondence:
Endangered Species Act, Section 7 & Fish and Wildlife Coordination Act**



DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 6898
JOINT BASE ELMENDORF-RICHARDSON, AK 99506-0898

Douglass Cooper
Conservation Planning Assistance
Anchorage Fish & Wildlife Field Office
4700 BLM Road
Anchorage, AK 99507

Dear Mr. Cooper,

The U.S. Army Corps of Engineers (USACE) respectfully requests your formal collaboration under the Fish and Wildlife Coordination Act in the identification, characterization, or development of either alternatives or mitigation strategies associated with a USACE feasibility assessment of potential flood control measures located at Lowell Creek, Seward, Alaska.

USACE's feasibility study is being conducted under authority granted by Section 5032 of the Water Resources Development Act of 2007 (P.L. 110-114):

SEC. 5032. LOWELL CREEK TUNNEL, SEWARD, ALASKA.

(a) LONG-TERM MAINTENANCE AND REPAIR.—

(1) MAINTENANCE AND REPAIR.—The Secretary shall assume responsibility for the long-term maintenance and repair of the Lowell Creek tunnel, Seward, Alaska.

(2) DURATION OF RESPONSIBILITIES.—The responsibility of the Secretary for long-term maintenance and repair of the tunnel shall continue until an alternative method of flood diversion is constructed and operational under this section, or 15 years after the date of enactment of this Act, whichever is earlier.

(b) STUDY.—The Secretary shall conduct a study to determine whether an alternative method of flood diversion in Lowell Canyon is feasible.

(c) CONSTRUCTION.—

(1) ALTERNATIVE METHODS.—If the Secretary determines under the study conducted under subsection (b) that an alternative method of flood diversion in Lowell Canyon is feasible, the Secretary shall carry out the alternative method.

(2) FEDERAL SHARE.—The Federal share of the cost of carrying out an alternative method under paragraph (1) shall be the same as the Federal share of the cost of the construction of the Lowell Creek tunnel.

Implementation Guidance provided by HQUSACE for Section 5032 states that the feasibility study should be conducted in accordance with current budgetary policy and procedural guidance contained in ER 1105-2-100, USACE's Planning Guidance Notebook, for projects authorized without a report.

Because construction authority is included in Section 5032, the final product of this study will be a Report of the Director of Civil Works.

Lowell Creek's existing flood control structure is comprised of an elevated spillway diversion and 2,068 foot-long concrete-lined, steel rail reinforced tunnel running southeast through Bear Mountain where the entirety of Lowell Creek's surface waters are diverted and discharged via elevated spillway, subsequently flowing beneath Lowell Point Bridge, and into Resurrection Bay. These structures were constructed between 1939 and 1940 by USACE, and are not thought to be capable of mitigating the watershed probable maximum flood or a catastrophic failure due to tunnel blockage, greatly endangering the residents of Lowell Creek's historic channel. Similarly, Lowell Creek poses a persistent flood risk to nearby infrastructure at its outflow terminus due to its predisposition to rapidly accrete debris and overtop Lowell Point Bridge. Due to its steep-walled, sparsely vegetated, talus-strewn watershed, Lowell Creek produces significant quantities of rock and boulder debris during peak flow conditions, once generating an estimated 10,000 cubic yards in an 11-hour timeframe (Stauffer 2010). Lowell Creek's historic alluvial deposition constitutes a large portion of the landmass that the town of Seward is built upon, and its relative rate of deposition is readily apparent when viewing sequential timeline satellite or aerial photographs of the existing outfall terminus.

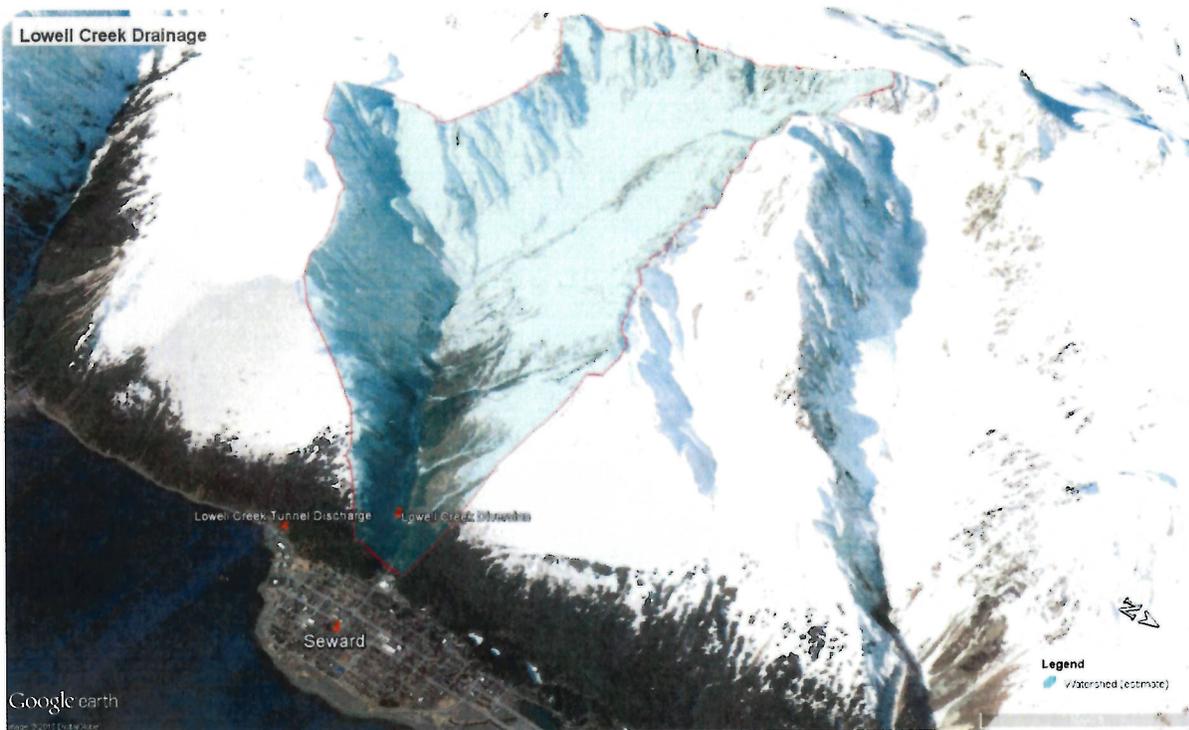


Figure 1. Lowell Creek Watershed



Figure 2. Existing Lowell Creek outfall terminus

In 2016, USACE developed an Environmental Analysis and subsequently issued a Finding of No Significant Impact for maintenance actions necessary to the longevity of the existing Lowell Creek flood control structures. Maintenance actions were conducted in mid-winter to avoid surface flows that might preclude repair actions. Due to the project footprint (the majority of work occurring within the Lowell Creek Tunnel, and previously disturbed and paved areas used as laydown sites), the type of work being conducted, and specific timing of the repair actions, impacts to threatened and endangered species, bald and golden eagles, and migratory birds were not reasonably expected to occur. Similarly, downstream effects of such work were negligible and were not anticipated to impact anadromous waters, essential fish habitat, marine mammals, or threatened or endangered species and their respective critical habitats.

Currently, USACE is evaluating the efficacy of a suite of alternatives that address a watershed probable maximum flood scenario that include the creation of a second, larger tunnel, upstream of the existing tunnel structure; increasing the existing tunnel diameter; increasing the height and length of the existing spillway structure; or a combination of all alternatives. Potential impacts to the natural environment as a result of this project are not anticipated to be significant. However, USACE intends to implement reasonable mitigation measures that further negate perceived impacts to natural systems and the species that utilize them.

USACE believes that two of these potential alternatives, increasing the diameter of the existing tunnel and creation of a second tunnel, will generate a volume of granitic rubble that will likely have to be disposed of in the waters of the adjacent Resurrection Bay. These volumes of debris would be quantified in the few

tens of thousands of cubic yards, and pale in comparison to Lowell Creek's natural capacity to generate sediment. Similarly, there exists the potential for vegetation clearing in the lower Lowell Creek Watershed, but this is not expected to be excessive.

Under its NEPA and project planning guidance, USACE is currently preparing an Environmental Assessment for this feasibility assessment and seeks to include USFWS coordination in the identification, characterization, or development of either alternatives or mitigation strategies. Precision data and schematics of proposed alternatives do not exist at this stage of the project development process. However, USACE is resolved to share all existing and pertinent data related to the Lowell Creek flood control feasibility assessment with USFWS in the spirit of satisfying the precepts of the Fish and Wildlife Coordination Act.

Please direct any questions or considerations that you may have to Mr. Michael Rouse, Fisheries Biologist / NEPA Coordinator, U.S. Army Corps of Engineers, Alaska District, 907-753-2743, or at Michael.B.Rouse@usace.army.mil

References

Stauffer, C., 2010. Learning To Live With Water: A History of Flooding in Seward, Alaska. 1903-2009. Seward/Bear Creek Flood Service Area.

A handwritten signature in black ink that reads "Michael B. Rouse". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Michael Rouse
Fisheries Biologist / NEPA Coordinator
U.S. Army Corps of Engineers



United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Anchorage Fish and Wildlife Conservation Office
4700 BLM Road
Anchorage, Alaska 99507-2546



IN REPLY REFER TO:
FWS/IR11/AFES/AFWCO

January 21, 2020

Mr. Mike Rouse
U.S. Army Corps of Engineers
P.O. Box 6898
Joint Base Elmendorf-Richardson, Alaska 99506

Subject: Lowell Creek Flood Diversion Structure Seward, Alaska
(Consultation #07CAAN00-2017-CPA-0011)

Dear Mr. Rouse:

Thank you for requesting input from the U.S. Fish and Wildlife Service (Service), pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) on the Lowell Creek Flood Diversion Structure Project. The Service has reviewed the project and has no objections at this time. Due to limited expected impacts on trust resources, we will not pursue further investigation or a report under the Fish and Wildlife Coordination Act Report. The Service could become more actively engaged in this project should project features be modified, or environmental conditions change so that impacts become more severe than currently anticipated.

Thank you for the opportunity to participate in the project and we look forward to working with you in the future. If you have any questions please contact Ms. Jennifer Spegon at 907-271-2768 or via email at Jennifer_J_Spegon@fws.gov and refer to consultation number 07CAAN00-2017-CPA-0011.

Sincerely,

Douglass M. Cooper
Branch Chief, Ecological Service



DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 6898
JOINT BASE ELMENDORF-RICHARDSON, AK 99506-0898

December 17, 2019

Mr. Greg Balogh
NOAA Fisheries
Protected Resources Division
222 West 7th Avenue, Box 43
Anchorage, AK 99513

RE: Request for Concurrence of NMFS Status Species List, Feasibility Assessment, Lowell Creek, Seward, Alaska.

Mr. Balogh,

The U.S. Army Corps of Engineers (USACE), Alaska District is conducting a feasibility assessment of potential flood control measures at Lowell Creek, Seward, Alaska. These measures include increasing the existing tunnel's diameter, creation of a second tunnel, and addressing flood conditions at the existing outlet. Under the provisions set forth for interagency consultation and coordination under Section 7 of the Endangered Species Act (ESA), and of the National Environmental Policy Act (NEPA), USACE has compiled a status-species list derived from the Alaska Protected Resources Division's Species Distribution Mapping tool for your interpretation and approval moving forward.

ESA Status Species

Steller sea lion (*Eumetopias jubatus*) Western DPS
Fin whale (*Balaenoptera physalus*)
Humpback whale (*Megaptera novaeangliae*) Western North Pacific and Mexico DPS
North Pacific right whale (*Eubalaena japonica*)
Sperm whale (*Physeter macrocephalus*)

Marine Mammal Protection Act Status Species

Harbor seal (*Phoca vitulina*)
Steller sea lion (*E. jubatus*) Eastern DPS
Northern fur seal (*Callorhinus ursinus*)
Dall's porpoise (*Phocoenoides dalli*)
Gray whale (*Eschrichtius robustus*)
Harbor porpoise (*Phocoena phocoena*)
Killer whale (*Orcinus orca*)
Humpback whale (*Megaptera novaeangliae*) Hawaii DPS
Minke whale (*Balaenoptera acutorostrata*)
Pacific white sided dolphin (*Lagenorhynchus obliquidens*)
Northern sea otter (*Enhydra lutris kenyoni*) Southcentral Alaskan stock

USACE currently envisions its potential flood control measures at Lowell Creek to require in-water disposal of virgin bedrock material generated by the drilling and blasting of a new tunnel. Long-term effects would be similar to the existing condition, surface waters, and gravel and debris from Lowell Creek's watershed, the same material that comprises the Seward alluvium, would be directed to the waters of Resurrection Bay.

USACE appreciates NMFS' helpful coordination in determining an appropriate species list for consideration in forthcoming analyses.

Sincerely,

A handwritten signature in black ink that reads "Mike Rouse". The signature is written in a cursive style with a large initial "M" and "R".

Mike Rouse
Fisheries Biologist
U.S. Army Corps of Engineers
Alaska District

From: [Greg Balogh - NOAA Federal](#)
To: [Rouse, Michael B CIV USARMY CEPOA \(USA\)](#)
Subject: [Non-DoD Source] Re: Lowell Creek Feasibility Study Species List
Date: Tuesday, December 17, 2019 12:35:35 PM

Thanks, Mike.

I don't know the full extent of the project's effects, but considering effects on right and sperm whales strikes me as overkill. You might take a few moments to consider whether the project would actually affect these two species at all (and how). It might be the case that a no effect determination would be appropriate.

On Tue, Dec 17, 2019 at 10:16 AM Rouse, Michael B CIV USARMY CEPOA (USA)
<Michael.B.Rouse@usace.army.mil> <<mailto:Michael.B.Rouse@usace.army.mil>> > wrote:

Good Morning Greg,

The Alaska District of the U.S. Army Corps of Engineers is currently assessing the feasibility of enacting flood control measures at Lowell Creek, Seward, Alaska. These measures may include enhancements to the existing tunnel and diversion system, creation of a new, larger diameter tunnel, and addressing the flood-prone outlet area. The Corps acknowledges that some of these measures may affect the waters of Resurrection Bay.

We have developed a list of status species for your review and input.

Thank you,

Mike Rouse
Fisheries Biologist / NEPA Coordinator
Alaska District US Army Corps of Engineers
(907) 753-2743

--

Greg Balogh

AKR PRD ANC Field Office Supervisor
NOAA Fisheries
222 W 7th Ave Rm 552, Box 43
Anchorage, AK 99513
907-271-3023 (w)
907-306-1895 (c)

To report a stranded or entangled marine mammal, contact the Stranding Network at 1-877-925-7773 <tel:
(877)%20925-7773>

From: [Greg Balogh - NOAA Federal](#)
To: [Rouse, Michael B CIV USARMY CEPOA \(USA\)](#)
Cc: [Ellen Wilt - NOAA Affiliate](#); [Salyer, Michael R CIV USARMY CEPOA \(USA\)](#)
Subject: Re: [Non-DoD Source] Re: Lowell Creek Feasibility Study Species List
Date: Tuesday, December 8, 2020 8:15:05 AM

Hi Mike,

As a matter of policy, NOAA do not concur with no effect determinations, on letterhead or otherwise.

From <https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-no-effect-determinations-greater-atlantic-region>

In order for an action agency to determine if any activities will have “no effect” on listed species and critical habitat in the action area, you must be able to make the determination for ALL species and critical habitat (CH) in the action area. If you determine that the action has no effect, there is no further Section 7 consultation with NOAA Fisheries. You should document the “no effect” determination for your files in order to explain why you are not consulting with NOAA Fisheries under ESA Section 7. Be sure to indicate which STRESSORS are relevant to the action under consideration. It is not necessary to notify NOAA Fisheries or seek our concurrence with your no effect determination as we are not obligated to review it, concur with it, or otherwise provide comments on it. We focus our limited resources on actions that do require Section 7 consultation. This outline provides general guidance. Each action agency is responsible for ensuring that it has considered all relevant factors and circumstances, as well as the best available scientific and commercial data.

On Mon, Dec 7, 2020 at 3:21 PM Rouse, Michael B CIV USARMY CEPOA (USA) <Michael.B.Rouse@usace.army.mil> wrote:

Ellen,

Good afternoon and thank you for your prompt reply. I was wondering if the Corps might be able to get your reply on NOAA letterhead? Our higher headquarters is quite particular when it comes to documenting the coordination/consultation process, even under the auspice of a no effect determination, as Greg may be able to tell you.

We are grateful for your cooperation.

Sincerely,

Mike Rouse

Fisheries Biologist / NEPA Coordinator

U.S. Army Corps of Engineers, Alaska District

(907) 753-2743

From: Ellen Wilt - NOAA Affiliate <ellen.wilt@noaa.gov>
Sent: Monday, December 7, 2020 12:22 PM
To: Rouse, Michael B CIV USARMY CEPOA (USA)
<Michael.B.Rouse@usace.army.mil>
Cc: Greg Balogh - NOAA Federal <greg.balogh@noaa.gov>
Subject: Re: [Non-DoD Source] Re: Lowell Creek Feasibility Study Species List

Hi Mike,

Greg Balogh asked me to review your most recent communication on the proposed Lowell Creek water diversion project in Seward, Alaska. Particularly considering the refinement of the preferred alternative, NOAA has **not disputed similar determinations** for projects of this sort in this area. Thank you very much for your continued collaboration.

Sincerely,

Ellen Wilt

Consultation Biologist, NOAA affiliate

NMFS Office of Protected Resources

222 W 7th Ave Rm 552, Box 43

Anchorage, AK 99513

From: Rouse, Michael B CIV USARMY CEPOA (USA)
<Michael.B.Rouse@usace.army.mil>
Date: Wed, Dec 2, 2020 at 5:23 PM
Subject: RE: [Non-DoD Source] Re: Lowell Creek Feasibility Study Species List
To: Greg Balogh - NOAA Federal <greg.balogh@noaa.gov>

Good afternoon Greg,

The Corps has refined its preferred alternative for enacting flood control measures at Lowell Creek, Seward, Alaska. Please see the attached figure for your reference. Alternatives 4A and 4B would share the same tunnel alignment but would incorporate different diameter tunnels, 18ft and 24ft, respectively. Alternative 4A is our preferred alternative.

We had previously approached your office with a list of species that could have potentially been affected by the implementation of our project (attached). At the time, we envisioned in-water elements of the project, including: dredging, drilling for support piles, sediment placement, moving the existing outfall to deeper water, etc. However, we have abandoned those particular elements not only because of their prohibitive cost, but because they do not achieve our overall goal of protecting the City of Seward from catastrophic flooding should the existing flood control system fail. Currently, the Corps envisions the emplacement of a larger diversion dam, intake, tunnel and outfall flume system upstream of the existing project. The existing project would be left in tact and maintained appropriately so that it would provide some level of redundancy to the new project. Also, by leaving the existing system in-tact, construction of the new project would occur year-round, whereas if the existing tunnel were to be enlarged, it could only be accomplished during the lowest period of the system's hydrograph, typically Dec-Feb.

Sediment deposition at the point of outfall would not be affected by the Corps' new project (100 % of Lowell Creek's surface flow and corresponding bedload would still flow to the outfall point immediately south of Seward). The City of Seward would likely continue their sediment management actions at the point of outfall which consists of the utilization of bulldozers to manipulate the sediment and push it ever further into the Resurrection Bay as the alluvium expands. Lowell Creek is vigorous in its depositional capacity, it is ultimately responsible for the creation of the Lowell alluvium that Seward is established on.

In summary, the Corps has decided against the incorporation of any in-water elements to this project and believes that as it is envisioned, there would be no change to the existing baseline condition, and as such, would not affect threatened or endangered marine mammals or those marine mammals covered under the MMPA. USFWS responded to our request for coordination under the FWCA (attached) that it held no objections at this time, and that there was only limited impact on trust resources.

Please review the attached material and let us know what you think, or if there is

something you think that we have not considered with regard to impacts to endangered species or other protected marine mammals.

Sincerely,

Mike Rouse

Fisheries Biologist / NEPA Coordinator

U.S. Army Corps of Engineers, Alaska District

(907) 753-2743

--

Greg Balogh

Supervisory Biologist, Protected Resources Division, Alaska Region

NOAA Fisheries | U.S. Department of Commerce

Office: (907) 271-3023

Mobile: (907) 306-1895

www.fisheries.noaa.gov



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

October 19, 2020

Colonel Damon Delarosa
U.S. Army Corps of Engineers
P.O. Box 6898
JBER, Alaska, 99506-0898

Re: Lowell Creek Flood Diversion

Dear Colonel Delarosa:

NMFS Habitat Conservation Division (NMFS) has reviewed the details of the Draft Integrated Feasibility Report and Draft Environmental Assessment for flood diversion of Lowell Creek in Seward, Alaska. The current flood control in this area consists of a diversion dam and tunnel that are prone to heavy sediment loads and blockage from upstream debris and trees. In addition, the Lowell Creek watershed has been rated by the United States Geological Survey as having a high potential for landslide-induced surge release flooding, which creates an extremely hazardous flood condition. The purpose of this study was to identify a feasible solution that provides safe, reliable, and efficient flood diversion of the waters from Lowell Creek during precipitation and surge events. The Tentatively Selected Plan includes a new 18-foot diameter tunnel upstream from the existing tunnel, refurbishing the existing tunnel, extending the outfall 150 feet, protecting the tunnel inlet from landslide with a canopy, and improving the low flow diversion system.

The study concludes that the existing spillway is impassable to fish and no portion of the proposed project's footprint would extend into the water of Resurrection Bay, and therefore there would be no adverse impacts to Essential Fish Habitat (EFH). NMFS agrees and recognizes this action could prevent catastrophic flooding events and the associated debris and pollution, which could have adverse impacts on marine EFH.

In accordance with Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, the US Army Corps of Engineers is required to consult with NMFS on their actions that may adversely affect EFH. Thus, Section 305 of the Magnuson-Stevens Act and associated EFH consultation is satisfied. Should the project or preferred alternative change significantly, NMFS wishes to be informed of any such changes in order to reassess the conclusion that there would be no adverse impacts to EFH.



If you have any questions regarding this consultation, please contact Seanbob Kelly at seanbob.kelly@noaa.gov or (907) 271-5195.

Sincerely,


for James W. Balsiger
Administrator, Alaska Region

CC: Michael Rouse, USACE, Michael.B.Rouse@usace.army.mil
Michael Salyer, USACE, Michael.R.Salyer@usace.army.mil

Correspondence:
National Historic Preservation Act, Section 106



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

CEPOA-PM-C-ER

Ms. Judith Bittner
State Historic Preservation Officer
Office of History and Archaeology
550 West 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

JUN 21 2019

Dear Ms. Bittner:

The U.S. Army Corps of Engineers (USACE), under the Civil Works Program, in collaboration with the City of Seward (Sponsor), has initiated a study to investigate the feasibility of an alternative method of flood diversion in Lowell Canyon (Section 9, T1S, R1W, USGS Seward A-7, Seward Meridian; Figure 1). The existing flood diversion system in Lowell Canyon does not adequately manage flood events and presents risk to life, property, and critical infrastructure with little to no warning. This study is being conducted under the authority of Section 5032 of the Water Resources Development Act (WRDA) of 2007.

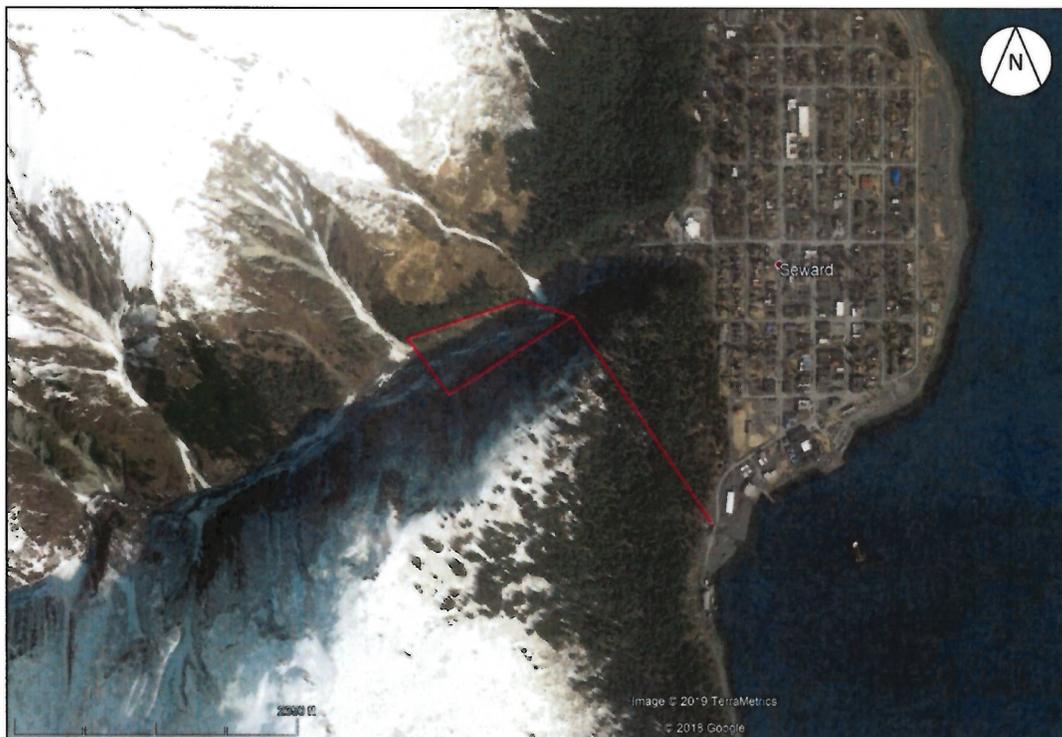
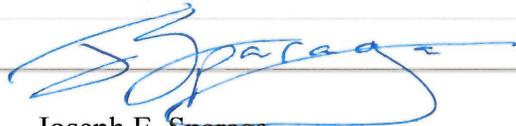


Figure 1. The Lowell Canyon area to the west of the city of Seward. The area outlined in red is the possible impacted area. This includes the Lowell Creek Diversion Tunnel.

Per 36 CFR § 800.3(c)(3), the purpose of this letter is to notify you that the study of a Federal undertaking has been initiated, and is in an early stage of development. Currently, a number of alternative construction designs are going through a preliminary filter for feasibility. When the Sponsor and USACE have narrowed the prospective list of alternatives to the Tentatively Selected Plan, USACE archaeologists will determine the Area of Potential Effect and identify historic properties in order to continue Section 106 consultation.

If you have questions, please email Joseph Sparaga at joseph.e.sparaga@usace.army.mil or call at 907-753-2640.

Sincerely,



Joseph E. Sparaga
Archaeologist
Environmental Resources Section



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

3130-1R COE-E

CEPOA-PM-C-ER

RECEIVED
 OCT 10 2019
 OHA

Ms. Judith Bittner
 State Historic Preservation Officer
 Office of History and Archaeology
 550 West 7th Avenue, Suite 1310
 Anchorage, AK 99501-3565

OCT 06 2019

Dear Ms. Bittner,

The U.S. Army Corps of Engineers (USACE), Alaska District, has begun researching the feasibility of constructing additional protection for the City of Seward from future flooding events at Lowell Creek (Section 9, T1S, R1W, USGS Quad Seward A-7, Seward Meridian; Figure 1). This study is being conducted under the authority of Section 5032 of the Water Resources Development Act (WRDA) of 2007. In compliance with Section 106 of the National Historic Preservation Act of 1966, the purpose of this letter is to notify you of a Federal undertaking [36 CFR § 800.3(c)(3)] and to seek your concurrence on an assessment of effect [36 CFR § 800.5(b)].

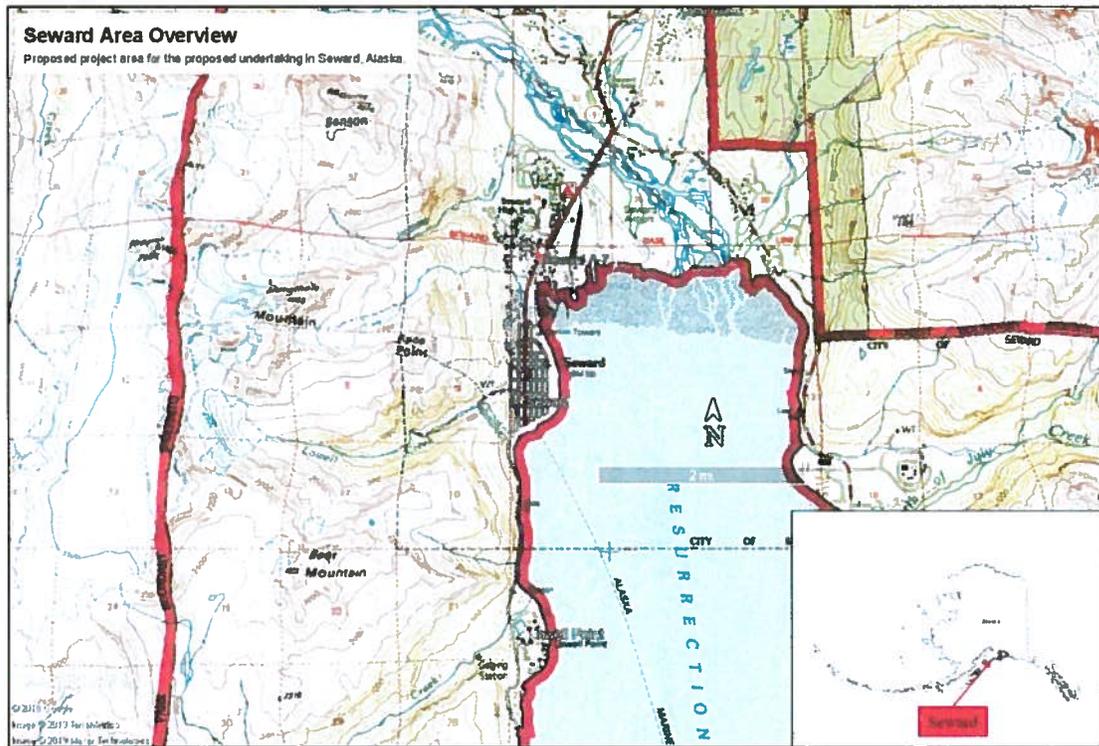


Figure 1. Project area overview.

2019-00828

Historic Context

Precontact History

The City of Seward is located on the eastern side of the Kenai Peninsula, on Resurrection Bay west of Prince William Sound. The earliest known occupation of Prince William Sound is estimated to have been around 4,000 to 3,500 years ago (Langdon 2002). Tools and objects commonly associated with these populations include small stone oil lamps, painted wooden boxes, wooden storage and cooking baskets, carved wooden serving bowls, skin bedding, crooked knives with blades of cold-hammered copper, bow drills, chisels, wedges, stone adzes, and other ground-slate tools (Crowell and Mann 1998:55). The primary seasonal pattern involved semi-mobile groups of people who moved between summer fishing camps and more permanent winter villages. The earliest-known contact between the people of Resurrection Bay and outsiders occurred in the late 1700s. In 1793, Aleksandr Baranov established a fort and ship building site in *Voskresenskaia*, or Resurrection, Harbor at the head of Resurrection Bay (Trepal 2010).

American Period

The City of Seward was founded in 1902 by surveyors for the Alaska Railroad, built sometime between 1915-1923. Due to its ice-free harbor, and with the added construction of an airfield, it became an important port for unloading supplies headed for Alaska's Interior (Orth 1967). During the early twentieth century, periodic flooding impacted the port and airfield, and the House Territories Committee allocated \$125,000 to construct an intake dam and timber flume. In 1927 the dam and timber flume was constructed but failed in 1935 as the river deposited an estimated 10,000 cubic yards of gravel in 11 hours (KPB 2016; Figure 3). In 1937, additional funds were allocated for a diversion tunnel on Lowell Creek. In 1941, Colonel Benjamin Talley of the USACE convinced the Port of Seward and the Alaska Railroad to upgrade the harbor facilities to increase capacity for military cargo, and upgrade the railroad to handle the increased use. The military was granted authority to construct additional facilities in Seward, which were completed in 1943 (Mighetto and Homstad 1997).



Figure 2. The Lowell Creek funnel structure built through Seward by the railroad (AHR Record #16122578).

Lowell Creek Diversion Tunnel

Congress authorized the Lowell Creek Diversion Tunnel project in 1937, and USACE constructed the utility in 1940 (Figure 4). The original project consisted of a dam and a tunnel to divert Lowell Creek away from town and through Bear Mountain into Resurrection Bay. The tunnel was lined with reinforced concrete, with the floor armored with 40-pound railroad rails welded to the channel cross-ties embedded in the floor. Space between the rails was filled with concrete during subsequent tunnel repairs. The tunnel exits into a concrete flume above the ocean south of the city, flowing under a bridge that connects Lowell Point to Seward. In 1945, the City of Seward took over the operation and maintenance of the tunnel. In 1969, 1988, 1989, 1991, and 2003, 2018, and 2019 the cement lining and rails were repaired or replaced (Table 1). The Lowell Creek Diversion Tunnel (SEW-00011) was placed on the National Register of Historic Places on November 23, 1977, due to its pioneering engineering characteristics. USACE submitted a Finding of Effect letter to the SHPO's office on 4 November 2015 for the actions in 2018 and 2019, and was concurred by the SHPO on 13 November 2015 (SHPO 2015; USACE 2015).



Figure 3. Lowell Creek Diversion Tunnel as-built (USACE 1945).

Table 1. Major repair activities at Lowell Creek (from Lowell Creek Tunnel Operations and Maintenance Report [USACE 2019]).

Date	Responsibility	Repair Details
1945	USACE/City	Rails welded to steel channel cross-ties and finished with concrete to complete project.
1968-69	USACE	PL 84-99 authorized repairs performed to replace loose rails in the floor and tunnel walls. Rails welded to sole plates and concrete lining between the floor rails were replaced.
1980	City	All loose rails removed from tunnel by the City of Seward
1984	City	Local interests repaired tunnel: loose rails removed and replaced, concrete placed between invert rails, cover of "Anvil Top" concrete placed over existing concrete between invert rails, sidewall rails repaired at tunnel entrance. All protective rails in the middle third of the tunnel and the outfall flume section were removed due to degraded conditions. New concrete was not placed in this area due to lack of funding and the end of the low flow period.
1988	USACE	Alaska District performs emergency repairs under PL 84-99. Funding was spent filling one large hole in the tunnel

		floor and other adjacent holes. 145 feet of the tunnel invert between station 8+39 and 9+84 was lined with 8000 psi silica fume concrete. Lack of funding and the end of the low flow period prevented any other work from being completed.
1991	USACE	Alaska District performs repairs under PL 84-99. Repairs included filling holes in the invert with concrete and installing silica fume concrete over the invert.
2003	USACE	The Alaska District performs one-time emergency repairs as authorized by Section 510 of WRDA 2000. Repairs included replacement of ten rails in the ogive section and the entire invert was brought up to the original finish grade with 10,000 psi silica fume concrete.
2017-2018	USACE	The Alaska District performed repairs as authorized under Section 5032 of WRDA 2007. Repairs included filling cavities with 10,000 psi silica concrete and replacing 6 damaged 132 pound per yard steel rails.

Project Description

The USACE is conducting a study to determine the feasibility of the construction of a similar diversion dam and tunnel to the current Lowell Creek Diversion Tunnel (SEW-00011). The tentatively selected plan (35% construction design) would be larger and be located upriver of the current diversion dam and tunnel. SEW-00011 will remain as backup if the new diversion tunnel is overtopped. Currently, there is an access road along the northern edge of the Lowell Creek canyon; it currently stops at the gravel berms ahead of the diversion dam. Construction equipment would access the project area via this route. The flat area behind SEW-00011 would serve as the staging area for equipment and construction material.

The tentatively selected plan proposed the excavation of a second tunnel through Bear Mountain at a similar slope to the current diversion tunnel. A new dam would be constructed upriver of the current diversion infrastructure; this dam would be taller and larger than the current dam, extending across a greater area of the valley. An aqueduct exiting the tunnel will extend over Lowell Point Road, crossing between the current diversion tunnel outlet and the Resurrection Bay Seafood cannery. This project is expected to look like the current diversion tunnel (SEW-00011); however, it will be able to handle a greater capacity of water and with decreased chances of blockage.

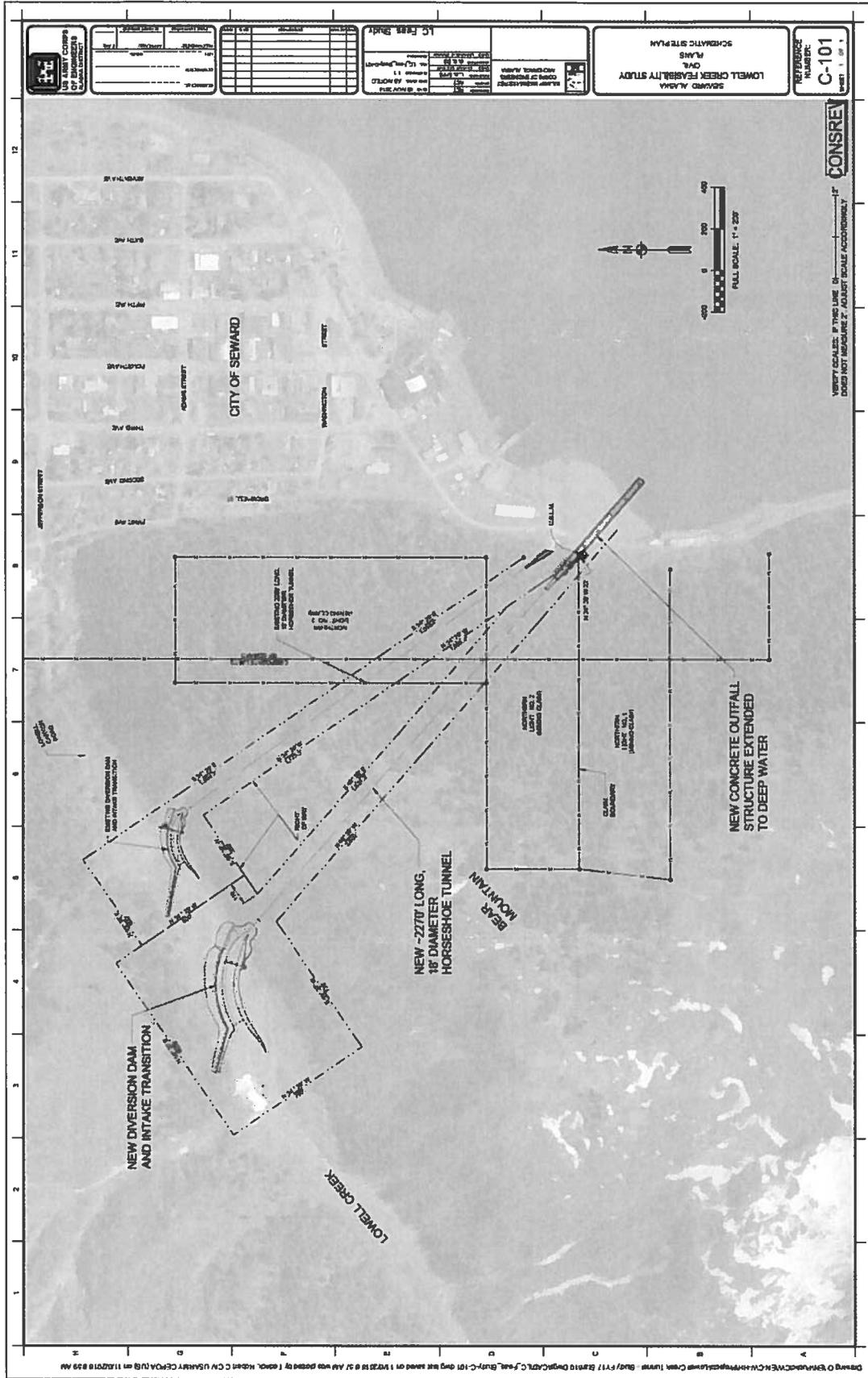


Figure 4. Tentatively Selected Plan of the USACE Feasibility Study.

Assessment of Effect

The proposed tentatively selected plan will construct infrastructure approximately 400 feet upriver from the current Lowell Creek Diversion Tunnel (SEW-00011), and approximately .75 miles downriver of the Water Intake Building (SEW-01315). These two sites are the only known cultural resources near the project. On 19 July 2019, an SOI-qualified USACE archaeologist surveyed the Area of Potential Effect (APE) north of Bear Mountain (dam and diversion tunnel entrance) and south of Bear Mountain (flume and outfall) and identified no other cultural resources. SEW-00011 is on the National Register of Historic Places (NRHP), and SEW-01315 has not been evaluated yet.

The proposed tentatively selected plan will help prevent adverse flooding impacts on known cultural resources and historic properties. In the event of an overtopping, there are 25 known cultural resources east of the canyon which could be adversely affected. (Table 2).

Table 2. Cultural resources downriver from a flood event from the Lowell Canyon.

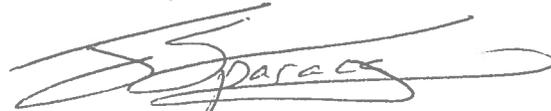
AHRS No.	Site Name	NRHP Status
SEW-00029	Alaska Railroad	Not Eligible
SEW-00032	Observation Car	Not Eligible
SEW-00033	Resurrection Lutheran Church	Not Evaluated
SEW-00034	Seward Memorial Methodist Church	Not Evaluated
SEW-00089	American Legion Post #5	Not Evaluated
SEW-00147	Sacred Heart Roman Catholic Church	Not Eligible
SEW-00148	Seward-Moose Pass Trail	Eligible
SEW-00150	Swetman House	Registered
SEW-00160	Van Gilder Hotel	Registered
SEW-00200	Government Cable Office	Registered
SEW-00223	Winter House	Eligible
SEW-00227	Holland House	Eligible
SEW-00231	Cameron House	Eligible
SEW-00232	Hale House	Eligible
SEW-00233	Odd Fellows Hall	Not Evaluated
SEW-00242	Alaska House	Not Evaluated
SEW-00246	Secton House	Eligible
SEW-00304	Brownell House	Not Evaluated
SEW-00414	Stewart House	Not Eligible
SEW-01122	First National Bank	Not Eligible
SEW-01123	Liberty Theatre	Not Eligible
SEW-01124	Navigant/World Express Travel	Not Eligible
SEW-01192	Seward Commercial Historic District	Not Eligible
SEW-01557	Seward Highway	Not Eligible
SEW-01606	Forest Service Office Building	Not Evaluated

Construction of the tentatively selected plan, a second dam and diversion tunnel located upriver of the Lowell Creek Diversion Tunnel, will not adversely affect SEW-00011 or the Water Intake Building (SEW-01315). It does not have the potential to impact any other known cultural resources; its construction will serve to protect other cultural resources from flooding damage.

Conclusion

The proposed tentatively selected plan to create a second diversion tunnel through Bear Mountain will not affect nearby historic properties, namely the Lowell Creek Diversion Tunnel (SEW-00011). SEW-00011 would remain in place and used as a backup in the event the new diversion tunnel is overtopped. The development of the new diversion tunnel will also protect historic properties within the City of Seward from possible future flooding. Following 36 CFR § 800.5(b), the USACE seeks your concurrence on the determination that the proposed undertaking will result in **no adverse effect**. If you have any questions about this project, please contact Joseph Sparaga by phone at 907-753-2640, or by email at joseph.e.sparaga@usace.army.mil.

Sincerely,



Joseph E. Sparaga
Archaeologist
Environmental Resources Section

Cc:

Scott Allen, Tribal Administrator, Qutekcaq Native Tribe
Angelina Sawden, Cultural Resource Project Coordinator, Chugach Alaska Corporation
Nathan Lojewski, Forestry Manager, Chugachmiut, Inc.
Brenda Ballou, City Clerk, City of Seward
Sue McClure, President, Resurrection Bay Historical Society

No Historic Properties Adversely Affected
Alaska State Historic Preservation Officer
Date: 11.8.19 File No.: 3130-1R00E-E
2019-00828
Please review: 36 CFR 800.13 / A.S. 41.35.070(d)

References Cited

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2010. *A Slice of Early Seward: How Archeology Provides a Glimpse into Daily Life in this Frontier Town*. National Park Service, Seward.
- U.S. Army Corps of Engineers (USACE)
2007. Lowell Creek Flood Damage Reduction, IPMP, Trip Report; Lowell Creek Tunnel Inspection, 15 Mar 2007.
2015. Letter to SHPO (Judith Bittner) from USACE (Shona Pierce) re: FOE at Lowell Creek Diversion Tunnel. November 3, 2015.
2019. Lowell Creek Tunnel Operations and Maintenance Assessment Report, Seward, Alaska. Alaska District.

Correspondence:
Tribal



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

09-DEC-2020

Mr. David Philips
Chugach Corporation
3800 Centerpoint Dr Suite 1200
Anchorage, AK 99503

Dear Mr. Philips:

In accordance with Section 161 of Public Law 108-199, Section 518 of Public Law 108-447 and E.O. 13175, I am writing to inform you that the U.S. Army Corps of Engineers (USACE) has prepared a Draft Feasibility Report and Environmental Assessment for the Lowell Creek Flood Diversion Study. The public can view the current draft report, appendices, and environmental assessment for this study on our website at <http://www.poa.usace.army.mil/Library/Reports-and-Studies/> under "Documents Available for Public Review" and expand the Civil Works link.

The existing flood diversion system at Lowell Creek in Seward, Alaska, does not adequately manage flood events and presents a risk to public safety, property, and critical infrastructure with little to no warning. Excessive flood waters from the current system continue to threaten the community and pose a significant risk of economic damages. Debris flowing from the outfall creates a tenuous situation with a history of damage and destruction to the bridge on Lowell Point Road and the flooding of the shellfish hatchery, Alaska SeaLife Center, and local sewage treatment facility. The tentatively selected plan recommends the construction of a new flood diversion system.

The USACE Alaska District is beginning to explore and evaluate applications of alternative flood diversion plans and preparing a draft feasibility report. Although in the preliminary stages of development, I would like to invite you to review the information on the proposed action and evaluate whether you believe there may be potential for this action to affect corporate lands, waters, or other natural resources. This invitation is made pursuant to USACE's policy for government-to-government consultation with American Indian and Alaska Native tribes.

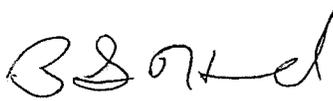
If you believe that corporate lands or resources may be affected by this activity please contact me via my contact information listed below.

We invite your comments at this time with acknowledgment of the health crisis facing our nations. During this unprecedented time, we are aware that your time is focused on the health and safety of your communities, elders, and families. Please feel free to

reach out to me if you have any concerns about reviewing the document at this time or if I can facilitate a more effective means for you to review the information.

If you have questions or concerns or require further information, please feel free to contact the Project Manager Steven Howard, at (907) 753-5729 or email at Brent.S.Howard@usace.army.mil. The Tribal Liaison, Kendall Campbell, can be reached at (907) 753-5582 or email Kendall.D.Campbell@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Steven Howard". The signature is written in a cursive, flowing style.

B. Steven Howard
Chief of Project Management, Civil Works
USACE, Alaska District

cc:
Kendall Campbell, Tribal Liaison



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

October 12, 2020

Mr. Patrick Norman
Chief
Chugachmiut, Inc
1840 Bragaw Street, Suite 110
Anchorage, AK 99508-3463

Dear Mr. Norman:

In accordance with Section 161 of Public Law 108-199, Section 518 of Public Law 108-447 and E.O. 13175, I am writing to inform you that the U.S. Army Corps of Engineers (USACE) has prepared a Draft Feasibility Report and Environmental Assessment for the Lowell Creek Flood Diversion Study. The public can view the current draft report, appendices, and environmental assessment for this study on our website at <http://www.poa.usace.army.mil/Library/Reports-and-Studies/> under "Documents Available for Public Review" and expand the Civil Works link.

The existing flood diversion system at Lowell Creek in Seward, Alaska, does not adequately manage flood events and presents a risk to public safety, property, and critical infrastructure with little to no warning. Excessive flood waters from the current system continue to threaten the community and pose a significant risk of economic damages. Debris flowing from the outfall creates a tenuous situation with a history of damage and destruction to the bridge on Lowell Point Road and the flooding of the shellfish hatchery, Alaska SeaLife Center, and local sewage treatment facility. The tentatively selected plan recommends the construction of a new flood diversion system.

The USACE Alaska District is beginning to explore and evaluate applications of alternative flood diversion plans and preparing a draft feasibility report. Although in the preliminary stages of development, I would like to invite you to review the information on the proposed action and evaluate whether you believe there may be potential for this action to affect corporate lands, waters, or other natural resources. This invitation is made pursuant to USACE's policy for government-to-government consultation with American Indian and Alaska Native tribes.

If you believe that lands or resources may be affected by this activity, please contact me via my contact information listed below.

We invite your comments at this time with acknowledgment of the health crisis facing our nations. During this unprecedented time, we are aware that your time is focused on the health and safety of your communities, elders, and families. Please feel free to

reach out to me if you have any concerns about reviewing the document at this time or if I can facilitate a more effective means for you to review the information.

If you have questions or concerns or require further information, please feel free to contact the Project Manager Steven Howard, at (907) 753-5729 or email at Brent.S.Howard@usace.army.mil. The Tribal Liaison, Kendall Campbell, can be reached at (907) 753-5582 or email Kendall.D.Campbell@usace.army.mil.

Sincerely,

A handwritten signature in black ink that reads "BS Howard". The letters are cursive and fluid.

B. Steven Howard
Chief of Project Management, Civil Works
USACE, Alaska District

cc:
Kendall Campbell, Tribal Liason



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

30-SEP-2020

Ms. Dolly Wiles
Tribal Administrator
Qutekcak Native Tribe
PO Box 1467
221 Third Ave
Seward, AK 99664

Dear Ms. Wiles:

In recognition of the U.S. Army Corps of Engineers' (USACE) government-to-government relationship with the Qutekcak Native Tribe and our federal trust responsibility, I am writing to inform you that USACE has prepared a Draft Feasibility Report and Environmental Assessment for the Lowell Creek Flood Diversion Study. The public can view the current draft report, appendices, and environmental assessment for this study on our website at <http://www.poa.usace.army.mil/Library/Reports-and-Studies/> under "Documents Available for Public Review" and expand the Civil Works link.

The existing flood diversion system at Lowell Creek in Seward, Alaska, does not adequately manage flood events and presents a risk to public safety, property, and critical infrastructure with little to no warning. Excessive flood waters from the current system continue to threaten the community and pose a significant risk of economic damages. Debris flowing from the outfall creates a tenuous situation with a history of damage and destruction to the bridge on Lowell Point Road and the flooding of the shellfish hatchery, Alaska SeaLife Center, and local sewage treatment facility. The tentatively selected plan recommends the construction of a new flood diversion system.

The USACE Alaska District is beginning to explore and evaluate applications of alternative flood diversion plans and preparing a draft feasibility report. Although in the preliminary stages of development, I would like to invite you to review the information on the proposed action and evaluate whether you believe there may be potential for this action to affect tribal trust and/or subsistence resources. This invitation is made pursuant to USACE's policy for government-to-government consultation with American Indian and Alaska Native tribes.

If you believe that tribal rights and/or protected resources may be affected by this activity and would like more information, please contact me via my contact information listed below.

We invite your comments at this time with acknowledgment of the health crisis facing our nations. During this unprecedented time, we are aware that your time is focused on the health and safety of your communities, elders, and families. Please feel free to reach out to me if you have any concerns about reviewing the document at this time or if I can facilitate a more effective means for you to review the information.

If you have questions or concerns or require further information, please feel free to contact the Project Manager Steven Howard, at (907) 753-5729 or email at Brent.S.Howard@usace.army.mil. The Tribal Liaison, Kendall Campbell, can be reached at (907) 753-5582 or email Kendall.D.Campbell@usace.army.mil.

Sincerely,

A handwritten signature in black ink that reads "BS Howard". The letters are cursive and fluid.

B. Steven Howard
Chief of Project Management, Civil Works
USACE, Alaska District

cc:
Kendall Campbell, Tribal Liason

**Correspondence:
Clean Water Act, Section 401**



Profiling Meeting Request for CWA §401 Water Quality Certification

Alaska Department of Environmental Conservation
Division of Water – Wastewater Discharge Authorization Program
555 Cordova Street, Anchorage AK 99501
email: dec-401Cert@alaska.gov Phone: 907-269-6285

All requests for a pre-filing meeting for a Section 401 Water Quality Certification per 40 CFR 121.4 must be provided in writing to DEC at least 30 days prior to submitting a certification request. All requests submitted after regular business hours will be considered received the next business day.

I. Identify the applicable federal license or permit

Permit License Number (if known): _____ Federal Agency: USACE, FERC, or Other:
Have you obtained a jurisdictional determination from the USACE or EPA? Yes, No
If yes, please attach the jurisdictional determination in PDF format. If you haven't, please contact the USACE or EPA to request for one.

II. Name, Location, and Description of Project or Activity

Feasibility Study - proposed improvements to the Lowell Creek flood diversion project

Project Name or Title (required)
Lowell Creek Seward AK 99664 -149.452270 60.102673
Project Street Address (if applicable) City State Zip Longitude Latitude
(Decimal Degrees, 6 places) (Decimal Degrees, 6 places)
(Use www.latlong.net if needed for online tool for lat/long)

Indicate the project category (check all that apply)

- Commercial Residential Institutional Transportation Recreational
- Maintenance Environmental Enhancement

Indicate the major elements of your project (check all that apply)

- Aquaculture Channel Modification Dredging Mining – Placer Mining Road
- Bank Stabilization Culvert Gravel Pad Mining – Sand/Gravel Pit Utility Line
- Bridge Dam / Weir Land Clearing Outfall Structure
- Bulkhead Ditch Marina / Moorage Piling / Dolphin
- Buoy Dock / Pier Mining – Large Hard Rock Retaining Wall (upland)

Other :

Nature of Activity (Brief description of project, attach any drawings that may also describe your project)

USACE seeks to improve the existing Lowell Creek diversion, tunnel, and outlet system. The preferred alternative would create a new diversion dam, larger diameter tunnel, and extended out. The existing project would be left in place as a redundant system for maintenance of the new tunnel and in the event of an emergency.

Provide a list of other required state and federal authorizations and describe the anticipated timeline for construction and operation if known. None. The project, as proposed, does not affect EFH or anadromous waters; does not affect threatened or endangered species; and there is no in-water marine component to the project. The project timeline is not available, but construction would likely last two or more years.

Describe what you would like to have the meeting about and any issues you desire to bring to the attention to DEC:

USACE does not anticipate any water quality issues as a result of project construction or operation. A meeting regarding project development would be informative for ADEC staff.

Provide a couple of dates you are available for a meeting: 28 September - 09 October, 2020.

III. Certification Statement:

By digitally signing below, I certify that I have read and understood that per the Federal Clean Water Act Section 401 Certification Rule the following statements:

- This form completes the requirement of the Pre-Filing Meeting Request in the Clean Water Act Section 401 Certification Rule.
- I understand by signing this form that I cannot submit my application until 30 calendar days after this pre-filing meeting request.
- I also understand that DEC is not required to respond or grant the meeting request.

Your project's thirty-day clock starts upon receipt of this application. All requests submitted after regular business hours will be considered received the next business day. You will receive notification regarding meeting location and time if a meeting is necessary.

Applicant Information

Michael B Rouse U.S. Army Corps of Engineers, Ala Fisheries Biologist
First (required) Middle Last (required) Company Title (Required)
2204 Talley St JBER AK 99506 Michael.B.Rouse@usac 907-753-2743
Mailing Address Street or PO Box City State Zip Email (required) Phone (Required) Fax (optional)

Agent Name (Optional) Agent Email (Optional) Agent Phone (optional)

Digitally signed by ROUSE MICHAEL.BARRY:1155134743
Date: 2020.09.21 09:23:03 -0800

09-23-20

Signature

Date

Submit the CWA §401 Certification Profiling Meeting Request to DEC-401Cert@alaska.gov.

Include in the subject line the following: "Profiling Meeting Request - CWA §401 Certification - [include project title]".



Request for CWA §401 Water Quality Certification

Alaska Department of Environmental Conservation
Division of Water – Wastewater Discharge Authorization Program
555 Cordova Street, Anchorage AK 99501
email: dec-401Cert@alaska.gov Phone: 907-269-6285

I. Identify the applicable federal license or permit

Permit License Number: _____ Federal Agency: USACE, FERC, or Other: _____

II. Project Proponent and Point of Contact

Applicant Information				Point of Contact or Agent Information			
First _____ Middle _____ Last _____ USACE, Alaska District				Mike _____ Rouse _____ First _____ Middle _____ Last _____			
Company _____ Title _____ 2204 Talley St _____ JBER _____ AK _____ 99506				Company _____ Title _____ _____			
Mailing Address Street or PO Box _____ 2204 Talley St		City _____ JBER		State _____ AK		Zip _____ 99506	
Mailing Address Street or PO Box _____ _____		City _____ _____		State _____ _____		Zip _____ _____	
Email _____ _____		Phone _____ _____		Email _____ Michael.B.Rouse@usace.army.mil		Phone _____ 907-753-2743	
Email _____ _____		Phone _____ _____		Fax (optional) _____ _____		Fax (optional) _____ _____	

III. Name, Location, and Description of Project or Activity

Feasibility Study - Proposed improvements to the Lowell Creek Flood Diversion System

Project Name or Title		Seward		AK	99664	-149.452270	60.102673
Project Street Address (if applicable)		City	State	Zip	Longitude (Decimal Degrees, 6 places)	Latitude (Decimal Degrees, 6 places)	
Other Location Descriptions, if known:						01/01/2022	12/31/2027
State Tax Parcel ID	Meridian	Section	Township	Range	Estimated Start Date	Estimated End Date	

Directions to the site:
From Seward: Take Jefferson St west until it transitions into Lowell Canyon road and terminates at the Diversion structure of the existing project.

Nature of Activity (Description of project, include all features)
Flood control: diversion of all Lowell Creek surface waters through Bear Mountain to discharge in Resurrection Bay at a point south of the city of Seward.

Project Purpose (Describe the reason of the project)
The USACE's feasibility study examines methods of improvement to flood control systems at the existing Lowell Creek diversion dam, conveyance tunnel, and outfall structure.

The USACE's feasibility study's preferred alternative is to construct a larger diversion dam, larger diameter tunnel, and elevated outfall, located upstream of the existing project. The existing project would be maintained in place and would provide an element of redundancy to the overall system. Similarly with the existing project in place, construction of the new project would occur year-round
Types of material being discharged and the amount of each type in cubic yards:

Type	yd ³	Type	yd ³	Type	yd ³

Surface area in acres of wetlands or other waters filled:
Acres: Approximately 1 Acre Or, linear feet: _____

Is dredging involved? Yes, No
a. If yes, how much? _____ acres and volume _____ yd³.
b. Proposed Placement of dredged material: Upland, In water, Other: _____
c. Has a Tier analysis been conducted of the dredged prism? Yes, No; If yes, attach tier analysis and sample results.
(for example of Tier analysis, see [EPA Inland Testing Manual](#) or [USACE Seattle District Civil Works DMMP User Manual](#))

Is any portion of the work already complete? Yes, No If yes, describe the completed work:

IV. Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters;

Name and location of receiving waters, and geographical extent potentially affected by the proposed discharge:

The project, as proposed, would discharge the entirety of Lowell Creek's surface waters into Resurrection Bay, a condition that the existing flood control project currently exhibits, and as was the natural state of Lowell Creek before the location of the point of discharge was changed in the 1930's.

Parameter(s) of Concern: (check all that apply): Turbidity, Sediment, Petroleum Hydrocarbons, Metals, Other, Describe:

N/A

Location of potential discharge (Decimal Degrees, 6 places), describe if necessary: Latitude: -149.445217 Longitude: 60.097861

Immediately east of the Lowell Point Bridge.

Impaired Waters: Does a discharge of any parameter identified above occur to an impaired waterbody listed as a Category 4 [304(b)] or Category 5 [303(d)] in the current EPA approved Alaska's Integrated Water Quality Monitoring and Assessment Report? (See <http://dec.alaska.gov/water/water-quality/impaired-waters.aspx> for the most recently approved report and category listings.) Yes, No

If determined necessary and requested by the Department, submit sufficient and credible baseline water quality information for the receiving water which meets the requirements of 18 AAC 70.016(a)(6)(A-C).

Social or Economic Importance (18 AAC 70.016(c)(5): Provide information that demonstrates the accommodation of important social or economic development. The applicant shall complete either a social OR economic importance analysis (or both) for each affected community in the area where the receiving water for the proposed discharge is located. (if additional space is needed, attach separate sheet)

- (A) Social Importance Analysis:**
(select one or more areas, and describe below)
- community services provided;
 - public health or safety improvements;
 - infrastructure improvements;
 - education and training;
 - cultural amenities;
 - recreational opportunities

- (B) Economic Importance Analysis:**
(select one or more areas, and describe below)
- employment, job availability, and salary impacts;
 - tax base impacts;
 - expanded leases and royalties;
 - commercial activities;
 - access to resources;
 - access to a transportation network

Describe (checked items above or attach as separate document)

Please refer to the USACE Feasibility study and its appendices for detailed analysis of social and economic ramifications regarding the implementation of the study's preferred alternative.

The report is available for the next 30 days until Oct. 21. It may be viewed on the Alaska District's website at: <http://www.poa.usace.army.mil/Library/Reports-and-Studies/>. On that webpage, look under "Documents Available for Public Review" and expand the Civil Works link.

V. Include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge

(Include best management practices (BMPs) that will be implemented to minimize the environmental impacts.)

Construction of the preferred alternative would implement industry-standard BMPs to control fugitive dust and maintain existing water quality levels.

There are no identified ADEC cleanup sights in the vicinity of the proposed project footprint.

Once implemented, the project would not affect water quality in Lowell Creek or Resurrection Bay.

VI. Include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received;

List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in this Application.

Agency	Type of Approval*	Identification Number	Date Applied	Date Approved	Date Denied
USFWS	FWCA Concurrence	Consultation #07C4	12/01/2019	01/21/2020	

* Would include but is not restricted to zoning, building, and flood plain permits.

Attachments:

VII. Attachments: Include documentation that a prefilng meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request;

- Prefiling meeting request documentation is attached.
- Copy of the federal license or permit requiring certification under 33 U.S.C. 1341 (Clean Water Act, Section 401) to include all accompanying information, contemporaneous with the submission of the application to the federal licensing or permitting agency.

Prefiling meeting requested 23 September 2020. No reply email has been generated to document its receipt as of 24 September 2020.

VIII. Certification Statement:

The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Company or Organization:		Name:		Title:	
USACE, Alaska District		Mike Rouse		Fisheries Biologist	
Phone:		Fax (optional):		Email:	
907-753-2743				Michael.B.Rouse@usace.army.mil	
Mailing Address:		Street (PO Box):			
<input checked="" type="checkbox"/> Check if same as Applicants Info		City:		State:	
				Zip:	



Digitally signed by ROUSE.MICHAEL.BARRY.1155134743
Date: 2020.09.24 16:49:51 -08'00'

Signature

Date

Submit the CWA §401 Certification Request to DEC-401Cert@alaska.gov. Include in the subject line the following: "CWA §401 Certification Request - <Insert Federal Agency and permit number or license number> - <insert project title>".

Instructions for Preparing a Request for CWA §401 Certification for an Individual Permit or License

I. Identify the applicable federal license or permit

Include the Federal Agency's permit license number and identify the corresponding agency for which you are applying for the Alaska DEC CWA §401 certification.

II. Project Proponent and Point of Contact

Enter the name, contact information to include the E-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information. Point of Contact or Agent Information to be completed if you choose to have an agent.

III. Name, Location, and Description of Project or Activity

Project Name: Please provide name identifying the proposed project, e.g., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center. Include location and description of the project or activity.

Estimate Start/End Dates: What are the anticipated start and end dates for project construction?

Location: Provide Latitude and Longitude in decimal degrees with six decimal places, example: 61.216883 N Latitude / -149.878756 W Longitude. Use www.latlong.net if needed for online tool for finding lat/long. Provide street address if applicable, and other location descriptions if known.

Directions to the site: Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known.

Nature of the Activity: Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper.

Project Purpose: Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

Types of Material Being Discharged and the Amount of Each Type in Cubic Yards. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

Surface Areas of Wetlands or Other Waters Filled. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper.

Dredging: Identify if any dredging is involved. If so, quantify the acres and volume to be dredged. Provide an assessment of the dredge prism and sample results to support a Tier analysis. Consult the [EPA Inland Testing Manual](#) or the [USACE Seattle District Civil Works DMMP User Manual](#) for an example of a Tier analysis of the dredge prism. It is recommended to consult with DEC and Corps prior to conducting sampling during pre-application meetings to avoid delays.

Is any portion of the work already complete: Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identify the authorization, if possible.

IV. Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters;

Name and Location of potential discharge. Provide latitude and longitude coordinates (Decimal Degrees, 5-digit places) of potential discharge. Describe the location if necessary. Include the geographic extent potentially affected by the proposed discharge.

Parameters of Concern: Identify the parameters of concern that may be present in your discharge. Consider if other parameters may be present from past activities in the area. Describe if known respective concentrations, persistence, and potential impacts to the receiving water and data on parameters that may alter the effects of the discharge to the receiving water.

Impaired Waters: Does a discharge of any parameter identified may occur to an impaired waterbody listed as a Category 4 [304(b)] or Category 5 [303(d)] in the current EPA approved Alaska's Integrated Water Quality Monitoring and Assessment Report?

See <http://dec.alaska.gov/water/water-quality/impaired-waters.aspx> for the most recently approved report and category listings.

Social or Economic Importance Analysis: select as appropriate and provide a description per 18 AAC 70.016(c)(5).

V. Include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge

Nature of potential discharge and potential environmental impacts on the receiving water: Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Include best management practices (BMPs) for sediment and erosion controls that will be implemented to minimize the environmental impacts.

VI. List of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received;

You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for the CWA §401 certification.

VII. Attachments: Include documentation that a prefiling meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request;

Prefiling meeting request: Include documentation (copy of email) that a prefiling meeting request was submitted to DEC. Acceptable format is an email sent to the DEC 401 Certification email address, dec-401cert@alaska.gov requesting a prefiling meeting request. Include as much information as relevant to describe the nature of your proposed activity. The certifying authority (DEC) may or may not respond depending on the information you provide in the prefiling meeting request.

Provide a copy of the federal license or permit requiring certification under 33 U.S.C. 1341 (Clean Water Act, Section 401) to include all accompanying information, contemporaneous with the submission of the application to the federal licensing or permitting agency. This would include all site drawings and maps and illustrations.

VIII. Certification Statement

As per 18 AAC 15.030 Signing of applications, all permit or approval applications must be signed as follows:

- 1) in the case of corporations, by a principal executive officer of at least the level of vice president or his duly authorized representative, if the representative is responsible for the overall management of the project or operation;
- 2) in the case of a partnership, by a general partner;
- 3) in the case of a sole proprietorship, by the proprietor; and
- 4) in the case of a municipal, state, federal or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

For more information regarding CWA §401 Certifications, see the DEC website at <http://dec.alaska.gov/water/wastewater/wetlands>, or contact:

Alaska Department of Environmental Conservation
Division of Water – Wastewater Discharge Authorization Program
555 Cordova Street, Anchorage AK 99501
email: dec-401Cert@alaska.gov Phone: 907-269-6285

Submit the CWA §401 Certification Request to DEC-401Cert@alaska.gov. Include in the subject line the following:

“CWA §401 Certification Request - <Insert Federal Agency and permit number or license number> - <insert project title>”.



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

DIVISION OF WATER
Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, Alaska 99501-2617
Main: 907.269.6285
Fax: 907.334.2415
www.dec.alaska.gov/water/wwdp

December 21, 2020

U.S. Army Corps of Engineers, Alaska District
Attn: CEPOA-PM-E-ER, Michael Rouse
2204 Talley Street
JBER, Alaska 99506

Re: USACE AK District, Lowell Creek Flood Diversion
ER-20-019, Lowell Creek

Dear Mr. Rouse:

In accordance with Section 401 of the Federal Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation (DEC) is issuing the enclosed Certificate of Reasonable Assurance for placement of dredged and/or fill material in waters of the U.S., including wetlands and streams, associated with improving flood diversion capacity at Lowell Creek, in Seward, Alaska.

DEC regulations provide that any person who disagrees with this decision may request an informal review by the Division Director in accordance with 18 AAC 15.185 or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. An informal review request must be delivered to the Director, Division of Water, 555 Cordova Street, Anchorage, AK 99501, within 20 days of the permit decision. Visit <http://dec.alaska.gov/commish/review-guidance/> for information on Administrative Appeals of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department of Environmental Conservation, PO Box 111800, Juneau, AK 99811-1800; Location: 410 Willoughby Avenue, Suite 303, Juneau within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived.

By copy of this letter we are advising the U.S. Army Corps of Engineers of our actions and enclosing a copy of the certification for their use.

Sincerely,

Handwritten signature of James Rypkema in black ink.

James Rypkema
Program Manager, Storm Water and Wetlands

Enclosure: 401 Certificate of Reasonable Assurance

cc: (with encl.)

Michael Salyer, USACE, Anchorage
Brian Blossom, ADF&G/Habitat, Anchorage

Kenai USFWS Field Office
EPA, AK Operations

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CERTIFICATE OF REASONABLE ASSURANCE

In accordance with Section 401 of the Federal Clean Water Act (CWA) and the Alaska Water Quality Standards (18 AAC 70), a Certificate of Reasonable Assurance, is issued to U.S. Army Corps of Engineers, Alaska District (Attn: Michael Rouse) at 2204 Talley Street, JBER, Alaska 99506 for placement of dredged and/or fill material in waters of the U.S. including wetlands and streams in association with improving flood diversion capacity at Lowell Creek, in Seward, Alaska.

A state issued water quality certification is required under Section 401 because the proposed activity will be authorized by a U.S. Army Corps of Engineers civil works project (ER-20-019) and a discharge of pollutants to waters of the U.S. located in the State of Alaska may result from the proposed activity. Public notice of the application for this certification was given as required by 18 AAC 15.180 in the DEC Public Notice ER-20-019 posted from November 6 to November 26, 2020.

Project Description and Location

The proposed project includes a new 18-foot diameter tunnel upstream from the existing tunnel, refurbishing the existing tunnel, extending the outfall 150 feet to carry flow and debris over Lowell Point Road, a new canopy to protect the tunnel inlet from landslides, and improving the low-flow diversion system. The project would also include select tree removal, implementation of an early warning system and evacuation plan. The proposed project is expected to mimic existing conditions without altering water quality conditions.

The applicant proposes placement of approximately 67,400 cubic yards of material into approximately one acre of Waters of the U.S., to construct the new diversion dam structure in the creek channel above the existing project.

The proposed activity is located within Section 9, T. 01 S., R. 01 W., Seward Meridian; Latitude 60.102673° N., Longitude -149.452270° W.; in Seward, Alaska.

Antidegradation Analysis

The Corps of Engineers completed a Draft Integrated Feasibility Report and Draft Environmental Assessment for the project in accordance with the National Environmental Policy Act of 1969. Based on the assessment, the Corps of Engineers determined that the proposed project would comply with Clean Water Act Section 404(b)(1) Guidelines and that the proposed project would not violate State of Alaska water quality standards or cause significant adverse effects on the quality of the human environment. The Environmental Assessment and supporting documentation can be assessed on the Corps of Engineers Reports and Studies webpage under the Civil Works tab at: <https://www.poa.usace.army.mil/Library/Reports-and-Studies/>.

Pursuant to the Department's Antidegradation implementation methods for discharged authorized under the federal Clean Water at 18 AAC 70.016(a)(1)(B), DEC finds that the Environmental Assessment and Finding of No Significant Impact are sufficient to comply with state antidegradation requirements for Tiers 1 and 2 with regard to water quality impacts to receiving water immediately surrounding the dredge or fill material.

Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law

The Department of Environmental Conservation (DEC) reviewed the application and certifies that there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards, 18 AAC 70, provided that the following additional measures are adhered to.

Pursuant to 18 AAC 70.020(a) and the Toxics and Other Deleterious Organic and Inorganic Substances in 18 AAC 70.020(b), the following conditions are designed to reduce pollutants from construction activity and ensure compliance with the applicable water quality standards.

Pollutants/Toxics

1. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface waterbodies.
2. During construction, spill response equipment and supplies such as sorbent pads shall be available and used immediately to contain and cleanup oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount must be reported in accordance with Discharge Notification and Reporting Requirements (AS 46.03.755 and 18 AAC 75 Article 3). The applicant must contact by telephone the DEC Area Response Team for Central Alaska at (907) 269-3063, during work hours or 1-800-478-9300 after hours. Also, the applicant must contact by telephone the National Response Center at 1-800-424-8802.
3. Construction equipment shall not be operated below the ordinary high-water mark if equipment is leaking fuel, oil, hydraulic fluid, or any other hazardous material. Equipment shall be inspected and recorded in a log daily for leaks. If leaks are found, the equipment shall not be used and pulled from service until the leak is repaired.
4. Fill material (including dredge material) must be clean sand, gravel or rock, free from petroleum products and toxic contaminants in toxic amounts.

Turbidity

5. Runoff discharged to surface water (including wetlands) from a construction site disturbing one or more acres must be covered under Alaska's General Permit for Storm Water Discharges from Large and Small Construction Activities in Alaska (AKR100000). This permit requires a Storm Water Pollution Prevention Plan (SWPPP). For projects that disturb more than five acres, this SWPPP must also be submitted to DEC (Teri Buck, 907-334-2281) prior to construction.

Erosion and Sediment Control

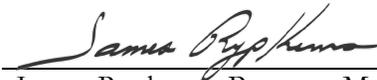
6. Excavated or fill material, including overburden, shall be placed so that it is stable, meaning after placement the material does not show signs of excessive erosion. Indicators of excess erosion include gullying, head cutting, caving, block slippage, material sloughing, etc. The material must be contained with siltation best management practices (BMPs) to preclude reentry into any waters of the U.S., which includes wetlands.

7. Include the following BMPs to handle storm water and total storm water volume discharges as they apply to the site:
 - a. Divert storm water from off-site around the site so that it does not flow onto the project site and cause erosion of exposed soils;
 - b. Slow down or contain storm water that may collect and concentrate within a site and cause erosion of exposed soils;
 - c. Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.

Vegetation Protection and Restoration

8. All work areas, material access routes, and surrounding wetlands involved in the construction project shall be clearly delineated and marked in such a way that equipment operators do not operate outside of the marked areas.
9. Any disturbed ground and exposed soil not covered with fill must be stabilized and re-vegetated with endemic species, grasses, or other suitable vegetation in an appropriate manner to minimize erosion and sedimentation, so that a durable vegetative cover is established in a timely manner.

Date: December 21, 2020



James Rypkema, Program Manager
Storm Water and Wetlands

**Correspondence:
National Environmental Policy Act**



NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

For Immediate Release:
September 21, 2020
Release No. 20 - 019

Contact:
John Budnik, 907-753-2615
Public.affairs3@usace.army.mil

Corps releases draft report for Lowell Creek project in Seward, seeks public input

JOINT BASE ELMENDORF-RICHARDSON – The U.S. Army Corps of Engineers – Alaska District prepared a draft integrated feasibility report and environmental assessment for proposed improvements to the Lowell Creek flood diversion project in Seward.

The tentatively selected plan recommends the construction of a new flood diversion system. It is available for public review and to elicit comments.

“Public safety is our top priority and we are committed to addressing risks associated with aging infrastructure,” said Bruce Sexauer, chief of the Civil Works Branch. “This is an important project for the citizens of Seward, and we will continue to work with our partners to achieve a viable solution.”

New structural components would include a new 18-foot diameter tunnel upstream from the existing one; refurbishing the existing tunnel; extending the outfall 150-feet to carry flow and debris over the road; a new canopy to protect the tunnel inlet from landslides; and improving the low-flow diversion system. The project would include tree removal, implementation of an early warning system and evacuation plan. The total project cost is \$124.6 million.

The existing flood diversion system in Lowell Creek Canyon does not adequately manage flood events and presents a risk to public safety, property and critical infrastructure with little to no warning. Excessive flood waters from the current system continue to threaten the community and pose a significant risk of economic damages. Debris flowing from the outfall creates a tenuous situation with a history of damage and destruction to the bridge on Lowell Point Road, as well as flooding of the shellfish hatchery, Alaska SeaLife Center and local sewage treatment facility.

The report is available for the next 30 days until Oct. 21. It may be viewed on the Alaska District’s website at: <http://www.poa.usace.army.mil/Library/Reports-and-Studies/>. On that webpage, look under “Documents Available for Public Review” and expand the Civil Works link.

Comments may be submitted to the address below or via email to: Brent.S.Howard@usace.army.mil

U.S. Army Corps of Engineers, Alaska District
ATTN: CEPOA-PM-C-PL
Post Office Box 6898, Joint Base Elmendorf-Richardson, Alaska 99506-0898

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U.S. ARMY CORPS OF ENGINEERS – ALASKA DISTRICT

P.O. Box 6898, Joint Base Elmendorf-Richardson, AK 99506-0898
<http://www.poa.usace.army.mil> ♦ <http://www.facebook.com/AlaskaCorps>
<http://www.flickr.com/AlaskaCorps> ♦ <http://www.youtube.com/AlaskaCorps>
<http://www.twitter.com/AlaskaCorps>



NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG.

For Immediate Release:
October 16, 2020
Release No. 20 - 021

Contact:
John Budnik, 907-753-2615
Public.affairs3@usace.army.mil

Corps will host virtual public meeting for Lowell Creek study

JOINT BASE ELMENDORF-RICHARDSON – Representatives for the U.S. Army Corps of Engineers – Alaska District will host a virtual public meeting Tuesday, Oct. 20 at noon for anyone interested in learning about the draft report for the Lowell Creek Flood Diversion Project. The public will have an opportunity to ask questions and submit comments.

Within the Corps' authorities, the Alaska District is assisting the City of Seward to identify a project that provides an alternative method of flood diversion in Lowell Canyon. Public safety is a top priority and the Corps is committed to addressing risks associated with aging infrastructure.

The draft feasibility report provides a tentatively selected plan that delivers a long-term engineering solution to reduce potential risks to the community. It proposes the construction of a new 18-foot diameter tunnel and diversion dam upstream of the existing project. The new tunnel would have a capacity of 8,400 cubic feet per second in comparison to the existing tunnel that can handle a maximum flow of 2,800 cfs. Surface flow from Lowell Creek would be diverted through the new tunnel. The total project cost is \$124.6 million.

The existing flood diversion system in Lowell Creek Canyon does not adequately manage flood events and presents a risk to public safety, property and critical infrastructure with little to no warning. Excessive flood waters from the current system continue to threaten the community and pose a significant risk of economic damages. Debris flowing from the outfall creates a tenuous situation with a history of damage and destruction to the bridge on Lowell Point Road, as well as flooding of the shellfish hatchery, Alaska SeaLife Center and local sewage treatment facility.

The draft report is available for public review and comment until Oct. 21. It may be viewed on the Alaska District's website at: <http://www.poa.usace.army.mil/Library/Reports-and-Studies/>. On that webpage, look under "Documents Available for Public Review" and expand the Civil Works link.

For more information and instructions on how to join the virtual public meeting, please see the attached second page of this document.

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U.S. ARMY CORPS OF ENGINEERS – ALASKA DISTRICT

P.O. Box 6898, Joint Base Elmendorf-Richardson, AK 99506-0898

<http://www.poa.usace.army.mil> ♦ <http://www.facebook.com/AlaskaCorps>
<http://www.flickr.com/AlaskaCorps> ♦ <http://www.youtube.com/AlaskaCorps>
<http://www.twitter.com/AlaskaCorps>

**Lowell Creek Flood Diversion Feasibility
Public Meeting
October 20, 2020 at 12:00pm**

Instructions to participate virtually

If you are new to WebEx video web conference, please allow a little extra time to download a temporary meeting application.

It is not necessary to enable a web camera for this meeting.

Required Devices:

- Computer, tablet or other mobile device (with WiFi access)
- Phone

Join WebEx for both audio and visual connection

1. In your internet browser, search: <https://usace.webex.com/meet/brent.s.howard>. Or paste this link into your internet browser. WebEx may appear differently depending on the browser in use. If you are unable to connect through one browser, you might try a different one.

2. When you are on the meeting page, fill in your name and your email address as instructed. This information is required to access WebEx, however, USACE will not collect or store this information following the WebEx meeting.

3. Select the **'Join Meeting'** button.

4. Underneath the **'Select Audio Connection'** section, select the **'Call Me'** option.

5. Type in your phone number, including the area code, in the dialogue box (a green arrow in the image above points directly to this box) and then click **'Connect Audio'**. The program will then call your phone, so please be sure to answer it.

6. Using your phone keyboard, type **"1"** when directed.

You should now be connected audibly and visually to the meeting.

- All phone lines will be placed on mute by the meeting host
- It is not necessary to enable a web camera for this meeting

Troubleshooting

In the case that you encounter a lost or interrupted audio/telephone connection, you may either dial in directly using the information provided below,

----- Audio Conference -----

Call In #: 877-873-8017

Access Code: 4525056

Security Code: 1111

**Correspondence:
USACE Policy Waiver**



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

AUG 09 2019

CECW-POD

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Lowell Creek Flood Diversion Feasibility Study (LCFDFS), Seward, Alaska,
3x3x3 Exemption Request

1. Purpose. To provide the subject 3x3x3 rule exemption request for your approval of a 21-month study extension, for completion of the LCFDFS. The total study cost is \$2,950,000 (\$1,575,000 federal/\$1,375,000 non-federal) and total duration, pending approval of this request, will be 57 months, with the Director's Report (DR) to be completed in May 2021.

2. Background. This 3x3x3 rule exemption request is for the LCFDFS, located in Seward, Alaska. The City of Seward is the non-Federal cost-share sponsor. The mountains surrounding Seward and Resurrection Bay produce large amounts and significant size rock and woody debris requiring the City and the U.S. Army Corps of Engineers (Corps) to respond to flooding emergencies on a frequent basis, threatening the life, safety, and infrastructure in Seward.

The study was authorized by Section 5032 of the Water Resources Development Act (WRDA) of 2007, which directed the Corps to assume responsibility for the long-term maintenance and repair of the Lowell Creek (LC) tunnel and concurrently conduct a study to determine the feasibility of providing an alternative method of flood diversion in Lowell Canyon. Furthermore, the authority allows for construction of a feasible project providing an alternative method of flood diversion at the original cost share of the LC tunnel, which was constructed by the U.S. Army in 1940 at 100 percent federal cost.

3. Authority. Per Section 1001 of the WRRDA of 2014, Corps final feasibility reports are, to the extent practicable, to be completed in three years and have a maximum Federal cost of \$3 million dollars. Section 1001 provides further that the Secretary of the Army may extend the timeline or approve Federal costs greater than \$3 million, subject to notification to the non-Federal sponsor and the Senate Committee on Environment and Public Works and the House of Representatives Committee on Transportation and Infrastructure ("Authorization Committees").

4. Summary. The Feasibility Cost Sharing Agreement for the LCFDFS was signed on 12 August 2016. At the Alternatives Milestone held on 8 September 2017, the team presented alternatives that required further consideration of life safety risk, and were directed to continue working with the vertical team on how to determine risk buy-down of the alternatives moving forward if a National Economic Development (NED) Plan could

CECW-POD

SUBJECT: Lowell Creek Flood Diversion Feasibility Study (LCFDFS), Seward, Alaska,
3x3x3 Exemption Request

not be identified. In February 2017, the Alaska District and the Risk Management Center developed a semi-quantitative risk assessment to characterize the life safety risk of the project and to ensure that any alternatives developed do not increase the risk at the project. The Alaska District received concurrence from the Dam Senior Oversight Group on 29 April 2019 to proceed with the flood diversion feasibility study.

The request for an additional 21 months is driven by the complexity of the scope, engineering analyses, and extensive coordination required to characterize this unique flood risk in Seward, Alaska. There is a lack of existing watershed data, which needs to be acquired to reduce the uncertainty surrounding warning times due to the flash-flooding nature of the area. Lastly, due to the type, size, and volume of sediment and debris flows, the modeling efforts require national engineering and economic expertise. The non-Federal sponsor supports the revised study schedule.

5. The Corps has completed its review of the 3x3x3 exemption request for the LCFDFS that was submitted on 12 July 2019. Due to the complex scope and challenging analyses, the Senior Leaders Panel (SLP) recommends completion of the feasibility study with a 21-month study extension. However, due to the uncertainty related to identifying a Federal interest prior to reaching the Tentatively Selected Plan (TSP), the SLP also recommends revisiting the study at the TSP milestone, scheduled for January 2020, to determine if the study should proceed. Due to the likelihood of a non-NED plan recommendation at the TSP, we invite your staff to attend this critical milestone.

6. Funding Stream. The study has received the necessary Federal funds to complete the study. No additional funds are required to complete the DR.

7. Recommendation. I recommend you approve the exemption request for the LCFDFS for a 21-month study extension, and also forward the enclosed letters to the Authorization Committees. The DR will be completed in May 2021.



JAMES C. DALTON, P.E.
Director of Civil Works

5 Encls

1. POD memo dtd 12 Jul 2019
2. Exemption request slides
3. Non-federal sponsor letter
4. Draft House notification letter
5. Draft Senate notification letter



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON, DC 20310-0108

ASCW

02 September 2020

MEMORANDUM FOR THE COMMANDING GENERAL, U.S. ARMY CORPS OF
ENGINEERS

SUBJECT: Lowell Creek, Alaska Flood Diversion Feasibility Study, National
Economic Development Exception Request

1. Reference memorandum, CECW-POD, 31 Jul 2020, subject: Lowell Creek Flood Diversion Feasibility Study and Integrated Environmental Assessment, National Economic Development Exception Request.
2. I am responding to your memorandum requesting an exception to the policy requiring the recommendation of the plan that maximizes net NED benefits.
3. I approve the requested policy exemption to complete the report based on life safety criteria under the Other Social Effects (OSE) account in lieu of the No-Action Plan under the NED criteria. Upon receipt of the Chief's Report, I will provide my review and recommendation to Congress.
4. If there are any questions, your staff may contact Mr. Thomas Hughes, Project Planning and Review at (202) 761-0041.

A handwritten signature in blue ink, appearing to read "R. James", is positioned above the typed name.

R.D. JAMES
Assistant Secretary of the Army
(Civil Works)

CF:
DCG-CEO, USACE
DCW, USACE

**Correspondence:
Real Estate**

From: [Campbell, Diane M \(DNR\)](#)
To: [Green, Ronald J CIV USARMY CEPOA \(USA\)](#)
Subject: [Non-DoD Source] Re: QUESTION - Lowell Project Tree Cost
Date: Wednesday, September 2, 2020 11:04:48 AM

Ron:

With the current parameters you have set for tree removal and the size of the section, the State will not seek reimbursement for the timber. Due to the topography and location, I feel the number of trees removed will be negligible.

Please feel free to contact me if you need anything else.

Diane

Diane Campbell
Area Forester
Kenai Kodiak Area
907-260-4200

From: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>
Sent: Wednesday, September 2, 2020 10:27 AM
To: Campbell, Diane M (DNR) <diane.campbell@alaska.gov>
Subject: RE: QUESTION - Lowell Project Tree Cost

Diane:

This project is in the planning phase. We have not conducted any surveys of the tree-cutting area, and we won't until after the Corps of Engineers has gotten approval and funding to go forward with the project. So estimate is what I need. The approval and funding would be completed until 2021 or 2022.

I need to determine if this is something that needs to be done before the approvals and funding. Is there a per tree value or formula I could use?

I appreciate your prompt response.

RONALD J. GREEN
Realty Specialist
Real Estate Division
US Army Corps of Engineers, Alaska District
Tel 907/753-2848

From: Campbell, Diane M (DNR) <diane.campbell@alaska.gov>
Sent: Wednesday, September 2, 2020 9:43 AM
To: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>
Subject: [Non-DoD Source] Re: QUESTION - Lowell Project Tree Cost

Good Morning Ron,

I remember our discussions from earlier this spring on this project. Do you have an idea of the number of trees that will need to be cut? With the steepness of the slope, I am not sure how many trees will meet the cutting criteria. Do you have anyone on the ground at the project site that can get that information? Also, when would you plan to begin cutting?

Diane

Diane Campbell
Area Forester
Kenai Kodiak Area
907-260-4200

From: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>
Sent: Tuesday, September 1, 2020 2:24 PM
To: Campbell, Diane M (DNR) <diane.campbell@alaska.gov>
Subject: QUESTION - Lowell Project Tree Cost

Diane:

Request your assistance in determine the value tree to be removed from State land, that maybe required for a Civil Works Cost Share project with the City of Seward.

The purpose plan would require access to State land located within Tract A, T1S, R1W, Seward Meridian. The selective tree are those trees exhibiting a 48" or greater diameter at breast height or multiple trunks of 30" in diameter at breast height in a portion of the upper watershed. This measure has the objective of removing trees that are large enough to cause blockage in the tunnels if they fall and are swept into the tunnel(s) during a storm event. See attached.

Ron G
RONALD J. GREEN
Realty Specialist
Real Estate Division
US Army Corps of Engineers, Alaska District
Tel 907/753-2848

From: Rouse, Michael B CIV USARMY CEPOA (USA) <Michael.B.Rouse@usace.army.mil>
Sent: Tuesday, September 1, 2020 12:23 PM
To: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>; Howard, Brent S (Steven) CIV USARMY CEPOA (USA) <Brent.S.Howard@usace.army.mil>
Cc: Hejduk, Philip B CIV USARMY CEPOA (USA) <Philip.B.Hejduk@usace.army.mil>
Subject: RE: QUESTION - Lowell Project Tree Cost in BCERE

Ron,

My POC at the State is Diane Campbell, she is a forester out of Soldotna.

(907)260-4200

diane.campbell@alaska.gov

Hope that helps,

Mike Rouse
Fisheries Biologist / NEPA Coordinator
Alaska District US Army Corps of Engineers
(907) 753-2743

From: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>
Sent: Tuesday, September 1, 2020 11:57 AM
To: Howard, Brent S (Steven) CIV USARMY CEPOA (USA) <Brent.S.Howard@usace.army.mil>; Rouse, Michael B CIV USARMY CEPOA (USA) <Michael.B.Rouse@usace.army.mil>
Cc: Hejduk, Philip B CIV USARMY CEPOA (USA) <Philip.B.Hejduk@usace.army.mil>
Subject: RE: QUESTION - Lowell Project Tree Cost in BCERE

Team:

Where can I find a reference to lumber being left on-site?

Looks like I need to come up with the value of the trees being cut down on State lands. The property owner still deserves compensation for the trees.

Michael, Do you have a POC for the AK FISH and GAME, Forestry?

RONG

From: Howard, Brent S (Steven) CIV USARMY CEPOA (USA) <Brent.S.Howard@usace.army.mil>
Sent: Tuesday, September 1, 2020 11:34 AM

To: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>; Rouse, Michael B CIV USARMY CEPOA (USA) <Michael.B.Rouse@usace.army.mil>
Cc: Hejduk, Philip B CIV USARMY CEPOA (USA) <Philip.B.Hejduk@usace.army.mil>
Subject: RE: QUESTION - Lowell Project Tree Cost in BCERE

I'm not a cost or timber expert, but there is cost to get the trees off the mountainside and I am not sure how that that cost compares to the cost of the timber we are would be cutting down.

From: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>
Sent: Tuesday, September 1, 2020 11:24 AM
To: Rouse, Michael B CIV USARMY CEPOA (USA) <Michael.B.Rouse@usace.army.mil>; Howard, Brent S (Steven) CIV USARMY CEPOA (USA) <Brent.S.Howard@usace.army.mil>
Subject: FW: QUESTION - Lowell Project Tree Cost in BCERE

FYI,

Just got this message from the land appraiser at CENWS. See message below. Concern about the lumber being left on-site. Where can I find a reference to lumber being left on-site?

From: Kennedy, Heber III CIV USARMY CENWS (US) <Heber.Kennedy@usace.army.mil>
Sent: Tuesday, September 1, 2020 10:52 AM
To: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>
Subject: RE: QUESTION - Lowell Project Tree Cost in BCERE

Ron,

The trees do typically have value, presuming they could be cut down and sold to a logger/lumberyard. The fact that they will be left on-site is odd, but if they are just going to rot away and not be sent to a lumberyard, the property owner still deserves compensation. You could get a timber cruiser/forester to estimate value of the trees, we have one down in our Forestry office. Are there no land rights needed in the project? Who owns the land?

ad

Heber Kennedy III, MAI
USACE Seattle District

From: Green, Ronald J CIV USARMY CEPOA (USA) <Ronald.J.Green@usace.army.mil>
Sent: Monday, August 31, 2020 1:54 PM
To: Kennedy, Heber III CIV USARMY CENWS (US) <Heber.Kennedy@usace.army.mil>
Subject: QUESTION - Lowell Project Tree Cost in BCERE
Importance: High

Heber:

First: Should I go through your change of command?

Hopefully you have a little time to answer a quick question, Doris Cope is the ATR for real estate for the Lowell Creek Project. She recommended that I talk to you. See attached comments.

Please provide your Org Code and funds required for your assistance.

This project will require a temporary easement to remove selective trees, exhibiting a 48" or greater diameter at breast height or multiple trunks of 30" in diameter at breast height in a portion of the upper watershed. This measure has the objective of removing trees that are large enough to cause blockage in the tunnels if they fall and are swept into the tunnel(s) during a storm event. However, the select tree removal specifications will be re-evaluated during PED because the tree specifications reported here were developed for the existing 10-ft diameter tunnel, and the new 18 ft diameter tunnel may tolerate larger trees and still avoid blockage issues.

The plan is to cut down tree and cut into segment small enough to be swept into the tunnel during a storm event. Considering the tree will not be re moved, would there be any cost the trees, that I need to account for in the BCERE? If you have identified any other cost that should be included, please share with me.

The BCERE is a guess of the cost of acquiring a temporary easement from the State of Alaska.
Working on getting a better estimate

RONALD J. GREEN
Realty Specialist
Real Estate Division
US Army Corps of Engineers, Alaska District
Tel 907/753-2848

Correspondence:
Non-Federal Sponsor Financial Self Certification

CITY OF SEWARD
P.O. BOX 167
SEWARD, ALASKA 99664-0167



- Main Office (907) 224-4050
- Public Works (907) 224-4058
- Water & Sewer (907) 224-4094
- Fax (907) 224-5051

**NON-FEDERAL SPONSOR'S
SELF-CERTIFICATION OF FINANCIAL CAPABILITY
FOR DECISION DOCUMENTS**

I, Norm Regis, do hereby certify that I am the City Manager -Acting, of the City of Seward, Alaska; that I am aware of the financial obligations of the Non-Federal Sponsor for the Lowell Creek Flood Diversion Project; and that the Non-Federal Sponsor will have the financial capability to satisfy the Non-Federal Sponsor's obligations for that project. I understand that the Government's acceptance of this self-certification shall not be construed as obligating either the Government or the Non-Federal Sponsor to implement a project.

IN WITNESS WHEREOF, I have made and executed this certification this 23rd day of March, 2021.

BY: Norm Regis

TITLE: City Manager, Acting

DATE: March 23, 2021

Correspondence:
Non-Federal Sponsor and Stakeholder Correspondence

CITY OF SEWARD
P.O. BOX 167
SEWARD, ALASKA 99664-0167



- Main Office (907) 224-4050
- Police (907) 224-3338
- Harbor (907) 224-3138
- Fire (907) 224-3445
- City Clerk (907) 224-4046
- Community Development (907) 224-4049
- Utilities (907) 224-4050
- Fax (907) 224-4038

June 29, 2015

Colonel Christopher D. Lestochi
Commander, Alaska District
P.O. Box 6898
JBER, AK 99506-6898

Dear Colonel Lestochi:

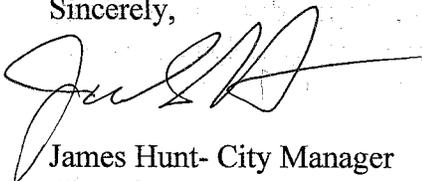
The City of Seward is willing and able to participate as the Sponsor for the Lowell Creek Tunnel, in partnership with the U.S. Army Corps of Engineers (USACE), to cooperatively investigate alternative methods of flood diversion per the language of Section 5032 of WRDA 2007 (P.L. 110-114) in the City of Seward, Alaska.

The City of Seward understands that a study cannot be initiated unless it is selected as a new start study with associated allocation of Federal funds provided through the annual Congressional appropriations process. If selected, we intend to sign a Feasibility Cost Sharing Agreement (FCSA) to initiate the study with USACE. It is our understanding the FCSA targets completion of the feasibility study within 3 years at a total cost of no more than \$3 million. After signing the FCSA, a Project Management Plan will be developed and agreed upon by the City of Seward and USACE. The study will be conducted and managed by USACE. The cost-sharing for the study is based on a 50% contribution by the Federal government, with our agency's 50% contribution provided in cash, or by a portion or all of the contribution provided through in-kind non-monetary services.

The City of Seward is aware that this letter constitutes an expression of intent to initiate a study partnership to address the specified water resources problems and is not a contractual obligation. We understand that work on the study cannot commence until it is included in the Administration's budget request, funds are appropriated by the Congress, and an FCSA is signed. It is understood that we or USACE may opt to discontinue the study at any time after the FCSA is signed but will commit to work together as partners from the scoping phase, and subsequent decision points throughout the feasibility study, on providing the necessary support to risk-informed decision making. If it is determined that additional time or funding is necessary to support decisions to be made in order to complete the study, our agency will work with USACE to determine the appropriate course of action.

If you require additional information, please contact: James Hunt (907)224-4047

Sincerely,



James Hunt- City Manager
City of Seward

City of Seward, Alaska
1963 1965 2005





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

Civil Works Branch

01 December 2015

Jim Hunt
City Manager
410 Adams Street
PO Box 167
Seward, Alaska 99664

Thank you for your inquiries regarding the Corps process to initiate a study to examine feasible alternatives for the Lowell Creek Tunnel. Your letter of 29 June 2015 demonstrates the City of Seward is acutely aware of the study requirement and is prepared to proceed as soon as possible. I have enclosed a document that provides additional information regarding the Corps Lowell Creek Tunnel efforts.

The Water Resource Development Act of 2007 Section 5032 directs the Corps to study whether "an alternative method of flood diversion in Lowell Canyon is feasible". If the study results in a feasible alternative, the Secretary shall carry out the construction on a cost shared basis equivalent to the Federal share of the cost of construction of the Lowell Creek Tunnel.

To date, Federal funds have not yet been appropriated for a cost shared feasibility study to evaluate long-term alternatives. The feasibility study would be performed under the Corps specifically authorized study program also referred to as the General Investigation program. New studies initiated under this program are generically scoped for \$3 million total with a schedule of three years. When a feasibility cost sharing agreement (FCSA) is executed, a detailed scoping process is undertaken to refine the particulars of the scope in a planning charrette. Federal Funding for this effort would require a study "new start" through the Federal appropriation process.

Once Federal funds are available, the Corps will initiate the development of the FCSA for Lowell Creek Tunnel. Upon execution of that agreement, the City, as the non-Federal sponsor, would then be requested to provide their share of the study funds as described in the agreement; typically, this study would require a 50/50 cost share.

If you have questions or require additional information, please feel free to contact me at (907) 753-5619 or at bruce.r.sexauer@usace.army.mil.

A handwritten signature in black ink, appearing to read "Bruce R. Sexauer".

Bruce R. Sexauer, P.E.
Chief Civil Works Branch
Alaska District USACE

Encl
1) Information Paper

18 May 2016

Seward Historic Preservation Commission
John French, Vice Chair
PO Box 167
Seward, AK 99664

RECEIVED
JUL 25 2016
OHA

Department of the Army
Alaska District, US Army Corps of Engineers,
Attn: Shona Pierce
PO Box 6898
Joint Base Elmendorf-Richardson, AK 99506-0898

RE: Local evaluation of potential adverse impacts to historic resources pursuant to Section 106 of the National Historic Preservation Act from Lowell Creek diversion tunnel project.

Dear Ms. Pierce,

A copy of your letter to Judith Bittner, dated 04 November 2015, regarding the Lowell Creek diversion tunnel project, was forwarded to the Seward Historic Preservation Commission (Commission) by the Seward City Clerk. It is our understanding that the engineering design for this project is still on-going so comments on the potential impacts of the project on historical or archeological resources are still appropriate.

Information received from the City of Seward administration indicates that the project is envisioned in two phases. First, emergency repairs which need to be expedited; followed by major renovation or replacement of the diversion tunnel. The Commission concurs with your determination that the emergency repairs should have minimal adverse effect on the historic character of the Lowell Creek diversion facilities under Section 106 of the National Historic Preservation Act of 1966 [36 CFR800.3(a)(1)]. Where there may be minor impacts the Commission agreed with the Seward City Council and administration that the need to address public health and safety issues should be given priority.

The major renovation phase of the Lowell Creek diversion project causes the Commission greater concern. First, to correct two inaccuracies in your letter, Table 1 on page four of your letter (from the AHRS card) implies that the "diversion tunnel" was the only part of the original project considered for listing. This is inconsistent with your first statement under 'Assessment of Effect' on page four. To clarify, the original nomination on the National Register of Historic Places attests that the listing was complete on 23 November 1977. More importantly, that the nomination and listing were for the "Flood Control Project on Lowell Creek at Seward Alaska" consisting of three parts: a) the new diversion dam, b) the tunnel, and c) the outflow works. This makes highly unlikely that major renovation work will not adversely affect the historic value of the site. However, the Commission concurs with USACE, the Seward City Council and administration that the health and public safety issues regarding the project should take precedent. Therefore we are recommending mitigation of the adverse effects on this historic

property by adding interpretive materials at the outflow end of the project. These could either be printed signage or a digital “app”. It should inform the public of nature and need for the original project, and the project’s completion enhanced development and safety within the City of Seward.

The Commission’s second concern relates to the low probability of encountering historically significant archeological artifacts during the course of the project. We differ with your implication that archeological deposits must be “intact” to be historically significant. Of course that would be preferable but considering the importance of early uses of Resurrection Bay and the shallowness of documentation, any datable finds would be significant.

Russian letters, de Laguna’s description of Chugach Prehistory (1956), and Alaska Native oral history (<http://www.chugachmiut.org/tribes/qutekcak.html>) report up to “three Native villages existing in the immediate vicinity of Seward. The village of Kangiaq was located at Day Harbor and belonged to a local group known as the Kaniaymiut or "Bay People." A second village, called the Qutatluq in Alutiiq, was located at or near the present town of Seward while a third village, located somewhere in the same vicinity, was called Kani lik or "Two Boys." In the Alutiiq language the site of Seward is known as Qutekcak, or "big beach."

The southwest corner of the Seward town site was site of the Russian Fort Voskresenskii and ship yard where the frigate Phoenix was constructed in 1794. Unfortunately the exact location of these historically important facilities is unknown. Later Frank and Mary Lowell, an Alutiiq from Port Graham, homesteaded the area which Mary sold to the Ballaine brothers in 1903. None of this early history has been well documented. So any archeological artifacts from those periods would be significant.

The Commission agrees that the probability of work on the project encountering such artifacts is not sufficiently high to warrant a survey prior to initiating the project. However, the Commission does believe that such findings are of sufficient potential importance that the project work should include a mitigation plan to stop work and document any such finds should they occur.

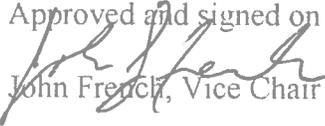
Pursuant to its duty to support enforcement of the Alaska Historic Preservation Act, AS 41.35 (Seward City Code 2.30.425(a)(6)) The Seward Historic Preservation Commission has reviewed the letter from the US Army Corps of Engineers describing its determination of no adverse effects to historic resources from the Lowell Creek flood control project as described in the letter. The Commission makes the following recommendations as enumerated in the discussion above:

1. The potential impact on the historic importance of the Lowell Creek flood control project is not sufficient to justify a full survey under NHPA, Section 106. Furthermore the importance of the project for the public safety of Seward residents outweighs the delays required for such a survey.
2. The Commission recommends the following actions to mitigate the potential adverse effects of the project:

- (a) The cost of public educational materials be added to the project. These could be either interpretive signage or a digital app.
- (b) A plan to stop work and document any unexpected archeological resources in the unexpected event of their encounter during the project.

The Commission has reviewed this letter and approved it on May 18, 2016 by a vote of unanimous.

Approved and signed on behalf of the entire Commission


John French, Vice Chair

21 May 16
date

Cc:

Ms. Judith Bittner
State Historic Preservation Officer
Office of History and Archeology
550 West 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

City of Seward – Seward City Council
C/O Johanna Kinney, City Clerk
PO Box 167
Seward, AK 99664-0167

City of Seward – Jim Hunt, City Manager
C/O Jackie Wilde, Executive Liaison
PO Box 167
Seward, AK 99664-0167

Qutekcak Native Tribe
C/O Scott Allen, Tribal Administrator
PO Box 1467
Seward, AK 99664-1467

Chugach Alaska Corporation
C/O Angelina Sawden, Cultural Resources Project Coordinator
380 Centerpoint Drive, Suite 1200
Anchorage, AK 99508-3463

Chugachmuit, Inc.
C/O Nathan Lojewski, Forestry Manager
1840 Bragaw Street, Suite 110



December 2015

INFORMATION PAPER

SUBJECT: Lowell Creek Flood Control Project, Seward, Alaska

1. Purpose. Lowell Creek Flood Control Project is located in Seward, Alaska 125 miles south of Anchorage at the head of Resurrection Bay. The project reroutes Lowell Creek through Bear Mountain and around the city of Seward. The project was completed in 1940 and responsibility for operation and maintenance was transferred to the City of Seward. Structures consists of an upstream diversion dam, inlet structure, tunnel outlet control structure, and a spillway. Alaska District has repaired the tunnel four times under the authority of P.L. 84-99 and one additional time under the authority and direction of Section 510 of P.L. 106-60 (WRDA 2000).

2. Major Points of Interest and Facts.

a. The Water Resource Development Act of 2007 Section 5032 directs the Corps to (1) assume O&M responsibility for the tunnel including the inlet and outlet structures until 8 November 2022 but excludes the diversion dam; (2) study whether "an alternative method of flood diversion in Lowell Canyon is feasible". If the study results in a feasible alternative, the Secretary shall carry out the construction on a cost shared basis equivalent to the Federal share of the cost of construction of the Lowell Creek Tunnel.

1. The Diversion Dam is subject to overtopping from a probable maximum flood (PMF) event, a plugged tunnel, or a surge-release event and is unusual in that the dam provides essentially no flood water storage, functioning only to divert water into the Lowell Creek Tunnel. Development of residential and commercial properties (to include the hospital and senior citizens home) are in the inundation area, and subject to high velocities and water depths along with the presence of large debris should overtopping occur.

2. The Screening Portfolio Risk Analysis Cadre evaluated the dam in the winter of 2011 and the Senior Oversight Group classified the project as a DSAC III in March 2011. An Interim Risk Reduction Measures Plan was prepared, followed by a public meeting in Seward in April of 2012. USACE IRRMs are complete.

3. The Alaska District also provided a one-time periodic inspection of the dam and annually inspects the tunnel.

b. The City of Seward has the following responsibilities:

1. Operation, maintenance, repair, replacement and rehabilitation of the diversion dam.
2. Day to day maintenance of the system.

3. Issues inundation maps to the public.
4. Oversees notification and evacuation of the public.
5. Provides emergency management services.
6. Coordinates emergency response.
7. Comply with State of Alaska Dam Safety Statutes and Regulations (AS 46.17 and Article 3 in 11 AAC 93).

3. Current Status

a. State Dam Safety Officer Concerns/Project Risk. The State of Alaska Dam Safety Office has public safety concerns and wants a complete Emergency Preparedness Plan from the City of Seward. Alaska District involvement is to provide technical analysis of its products.

b. O&M Responsibility for Tunnel. A Fall 2012 storm accelerated tunnel wear. A letter report documenting the need for the current repairs and projected repairs through 2022 is being prepared. ASA(CW) approval of the letter report is required prior to appropriation of funds for repairs.

c. Long Term Feasibility Study. Federal funds have not been received for the feasibility study to evaluate long-term alternatives. The feasibility study would be performed under the Corps specifically authorized study program also referred to as the General Investigation program. New studies initiated under this program are generically scoped for \$3 million total with a schedule of three years. Once a feasibility cost share agreement is executed, a detailed scoping process is undertaken to refine the particulars of the scope in a planning charrette. Funding for this study would require a study new start through the Federal budgetary process.

4. Congressional Interest. Senator Lisa Murkowski (R), Senator Dan Sullivan (R), and Representative Don Young (R) all have interest in the subject project.

AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
CITY OF SEWARD
FOR THE
LOWELL CREEK FLOOD DIVERSION FEASIBILITY STUDY

THIS AGREEMENT is entered into this 12th day of August, 2016, by and between the Department of the Army (hereinafter the "Government"), represented by the U.S. Army Engineer, Alaska District (hereinafter the "District Engineer") and the City of Seward (hereinafter the "Non-Federal Sponsor"), represented by the City Manager.

WITNESSETH, THAT:

WHEREAS, Section 5032(b) of the Water Resources Development Act of 2007 (P.L. 110-114) authorizes the Secretary to conduct a study to determine whether an alternative method of flood diversion in Lowell Canyon is feasible;

WHEREAS, Section 105(a) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2215(a)), specifies the cost-sharing requirements; and

WHEREAS, the Government and the Non-Federal Sponsor have the full authority and capability to perform in accordance with the terms of this Agreement.

NOW, THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITIONS

A. The term "Study" means the activities and tasks required to identify and evaluate alternatives and the preparation of a decision document that, as appropriate, recommends a coordinated and implementable solution for flood diversion at Seward, Alaska.

B. The term "shared study costs" means all costs incurred by the Government and Non-Federal Sponsor after the effective date of this Agreement that are directly related to performance of the Study and cost shared in accordance with the terms of this Agreement. The term includes, but is not necessarily limited to, the Government's costs for preparing the PMP; for plan formulation and evaluation, including costs for economic, engineering, real estate, and environmental analyses; for preparation of a floodplain management plan if undertaken as part of the Study; for preparing and processing the decision document; for supervision and administration; for Agency Technical Review and other review processes

required by the Government; and for response to any required Independent External Peer Review; and the Non-Federal Sponsor's creditable costs for in-kind contributions. The term does not include any costs for dispute resolution; for participation in the Study Coordination Team; for audits; for an Independent External Peer Review panel, if required; or for negotiating this Agreement.

C. The term "PMP" means the project management plan, and any modifications thereto, developed in consultation with the Non-Federal Sponsor, that specifies the scope, cost, and schedule for Study activities and tasks, including the Non-Federal Sponsor's in-kind contributions, and that guides the performance of the Study.

D. The term "in-kind contributions" means those planning activities (including data collection and other services) that are integral to the Study and would otherwise have been undertaken by the Government for the Study and that are identified in the PMP and performed or provided by the Non-Federal Sponsor after the effective date of this Agreement and in accordance with the PMP.

E. The term "maximum Federal study cost" means the \$1,500,000 Federal cost limit for the Study, unless the Government has approved a higher amount.

F. The term "fiscal year" means one year beginning on October 1st and ending on September 30th of the following year.

ARTICLE II - OBLIGATIONS OF THE PARTIES

A. In accordance with Federal laws, regulations, and policies, the Government shall conduct the Study using funds appropriated by the Congress and funds provided by the Non-Federal Sponsor. The Non-Federal Sponsor shall perform or provide any in-kind contributions in accordance with applicable Federal laws, regulations, and policies.

B. The Non-Federal Sponsor shall contribute 50 percent of the shared study costs in accordance with the provisions of this paragraph and provide required funds in accordance with Article III.

1. No later than 15 calendar days after the effective date of this Agreement, the Non-Federal Sponsor shall provide funds in the amount of \$25,000, for the Government to initiate the Study, including preparation of the PMP. In the event more funds are needed to develop the PMP, the Government shall provide the Non-Federal Sponsor with a written estimate of the amount of funds required from the Non-Federal Sponsor, and no later than 15 calendar days after such notification, the Non-Federal Sponsor shall provide the full amount of such funds to the Government.

2. As soon as practicable after completion of the PMP, and after considering the estimated amount of credit for in-kind contributions that will be afforded in accordance with paragraph C. of this Article, the Government shall provide the Non-

Federal Sponsor with a written estimate of the amount of funds required from the Non-Federal Sponsor to meet its share of the shared study costs for the remainder of the initial fiscal year of the Study. No later than 15 calendar days after such notification, the Non-Federal Sponsor shall provide the full amount of such funds to the Government.

3. No later than August 1st prior to each subsequent fiscal year of the Study, the Government shall provide the Non-Federal Sponsor with a written estimate of the amount of funds required from the Non-Federal Sponsor during that fiscal year. No later than September 1st prior to that fiscal year, the Non-Federal Sponsor shall provide the full amount of such required funds to the Government.

C. The Government shall include in the shared study costs and credit towards the Non-Federal Sponsor's share of such costs, the costs, documented to the satisfaction of the Government, that the Non-Federal Sponsor incurs in providing or performing in-kind contributions, including associated supervision and administration. Such costs shall be subject to audit in accordance with Article VI to determine reasonableness, allocability, and allowability, and crediting shall be in accordance with the following procedures, requirements, and limitations:

1. As in-kind contributions are completed and no later than 60 calendar day after such completion, the Non-Federal Sponsor shall provide the Government appropriate documentation, including invoices and certification of specific payments to contractors, suppliers, and the Non-Federal Sponsor's employees. Failure to provide such documentation in a timely manner may result in denial of credit. The amount of credit afforded for in-kind contributions shall not exceed the Non-Federal Sponsor's share of the shared study costs less the amount of funds provided pursuant to paragraph B.1. of this Article.

2. No credit shall be afforded for interest charges, or any adjustment to reflect changes in price levels between the time the in-kind contributions are completed and credit is afforded; for the value of in-kind contributions obtained at no cost to the Non-Federal Sponsor; for any items provided or performed prior to completion of the PMP; or for costs that exceed the Government's estimate of the cost for such item if it had been performed by the Government.

D. To the extent practicable and in accordance with Federal laws, regulations, and policies, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on solicitations for contracts prior to the Government's issuance of such solicitations; proposed contract modifications, including change orders; and contract claims prior to resolution thereof. Ultimately, the contents of solicitations, award of contracts, execution of contract modifications, and resolution of contract claims shall be exclusively within the control of the Government.

E. The Non-Federal Sponsor shall not use Federal Program funds to meet any of its obligations under this Agreement unless the Federal agency providing the funds verifies in writing that the funds are authorized to be used for the Study. Federal program

funds are those funds provided by a Federal agency, plus any non-Federal contribution required as a matching share therefor.

F. Except as provided in paragraph C. of this Article, the Non-Federal Sponsor shall not be entitled to any credit or reimbursement for costs it incurs in performing its responsibilities under this Agreement.

G. In carrying out its obligations under this Agreement, the Non-Federal Sponsor shall comply with all the requirements of applicable Federal laws and implementing regulations, including, but not limited to: Title VI of the Civil Rights Act of 1964 (P.L. 88-352), as amended (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto; the Age Discrimination Act of 1975 (42 U.S.C. 6102); and the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Army Regulation 600-7 issued pursuant thereto.

H. If Independent External Peer Review (IEPR) is required for the Study, the Government shall conduct such review in accordance with Federal laws, regulations, and policies. The Government's costs for an IEPR panel shall not be included in the shared study costs or the maximum Federal study cost.

I. In addition to the ongoing, regular discussions of the parties in the delivery of the Study, the Government and the Non-Federal Sponsor may establish a Study Coordination Team to discuss significant issues or actions. The Government's costs for participation on the Study Coordination Team shall not be included in the shared study costs, but shall be included in calculating the maximum Federal study cost. The Non-Federal Sponsor's costs for participation on the Study Coordination Team shall not be included in the shared study costs and shall be paid solely by the Non-Federal Sponsor without reimbursement or credit by the Government.

ARTICLE III - PAYMENT OF FUNDS

A. As of the effective date of this Agreement, the shared study costs are projected to be \$3,000,000, with the Government's share of such costs projected to be \$1,500,000 and the Non-Federal Sponsor's share of such costs projected to be \$1,500,000. These amounts are estimates only that are subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Government shall provide the Non-Federal Sponsor with quarterly reports setting forth the estimated shared study costs and the Government's and Non-Federal Sponsor's estimated shares of such costs; costs incurred by the Government, using both Federal and Non-Federal Sponsor funds, to date; the amount of funds provided by the Non-Federal Sponsor to date; the estimated amount of any creditable in-kind contributions; and the estimated remaining cost of the Study.

C. The Non-Federal Sponsor shall provide to the Government required funds by delivering a check payable to "FAO, USAED, Alaska (J4)" to the District Engineer, or verifying to the satisfaction of the Government that the Non-Federal Sponsor has deposited such required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

D. The Government shall draw from the funds provided by the Non-Federal Sponsor to cover the non-Federal share of the shared study costs as those costs are incurred. If the Government determines at any time that additional funds are needed from the Non-Federal Sponsor to cover the Non-Federal Sponsor's required share of the shared study costs, the Government shall provide the Non-Federal Sponsor with written notice of the amount of additional funds required. Within 60 calendar days of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional funds.

E. Upon conclusion of the Study and resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with the written results of such final accounting. Should the final accounting determine that additional funds are required from the Non-Federal Sponsor, the Non-Federal Sponsor, within 60 calendar days of written notice from the Government, shall provide the Government with the full amount of such additional funds. Should the final accounting determine that the Non-Federal Sponsor has provided funds in excess of its required amount, the Government shall refund the excess amount, subject to the availability of funds. Such final accounting does not limit the Non-Federal Sponsor's responsibility to pay its share of shared study costs, including contract claims or any other liability that may become known after the final accounting.

ARTICLE IV - TERMINATION OR SUSPENSION

A. Upon 30 calendar days written notice to the other party, either party may elect at any time, without penalty, to suspend or terminate future performance of the Study. Furthermore, unless an extension is approved by the Assistant Secretary of the Army (Civil Works), the Study will be terminated if a Report of the Chief of Engineers, or, if applicable, a Report of the Director of Civil Works, is not signed for the Study within 3 years after the effective date of this Agreement.

B. In the event of termination, the parties shall conclude their activities relating to the Study. To provide for this eventuality, the Government may reserve a percentage of available funds as a contingency to pay the costs of termination, including any costs of resolution of contract claims, and resolution of contract modifications.

C. Any suspension or termination shall not relieve the parties of liability for any obligation previously incurred. Any delinquent payment owed by the Non-Federal

Sponsor pursuant to this Agreement shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13 week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3 month period if the period of delinquency exceeds 3 months.

ARTICLE V - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to the parties. Each party shall pay an equal share of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VI - MAINTENANCE OF RECORDS AND AUDIT

A. The parties shall develop procedures for the maintenance by the Non-Federal Sponsor of books, records, documents, or other evidence pertaining to costs and expenses for a minimum of three years after the final accounting. The Non-Federal Sponsor shall assure that such materials are reasonably available for examination, audit, or reproduction by the Government.

B. The Government may conduct, or arrange for the conduct of, audits of the Study. Government audits shall be conducted in accordance with applicable Government cost principles and regulations. The Government's costs of audits for the Study shall not be included in shared study costs, but shall be included in calculating the maximum Federal study cost.

C. To the extent permitted under applicable Federal laws and regulations, the Government shall allow the Non-Federal Sponsor to inspect books, records, documents, or other evidence pertaining to costs and expenses maintained by the Government, or at the request of the Non-Federal Sponsor, provide to the Non-Federal Sponsor or independent auditors any such information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of non-Federal audits shall be paid solely by the Non-Federal Sponsor without reimbursement or credit by the Government.

ARTICLE VII - RELATIONSHIP OF PARTIES

In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other. Neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights a party may have to seek relief or redress against that contractor.

ARTICLE VIII - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally or mailed by certified mail, with return receipt, as follows:

If to the Non-Federal Sponsor:
Assistant City Manager
City of Seward
P.O. Box 167
Seward, AK 99664-0167

If to the Government:
Chief, Civil Works Branch
U.S. Army Engineer District, Alaska
P.O. Box 6898
JBER, AK 99506-6898

B. A party may change the recipient or address for such communications by giving written notice to the other party in the manner provided in this Article.

ARTICLE IX - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

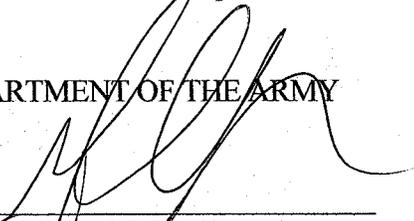
ARTICLE X - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

Nothing in this Agreement is intended, nor may be construed, to create any rights, confer any benefits, or relieve any liability, of any kind whatsoever in any third person not a party to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the District Engineer.

DEPARTMENT OF THE ARMY

CITY OF SEWARD

BY: 

BY: 

Michael S. Brooks
Colonel, U.S. Army
District Engineer

Jim Hunt
City Manager

DATE: 12 AUG 16

DATE: August 8, 2016

**Correspondence:
Public Comments**

From: [Cobb, Charles F \(DNR\)](#)
To: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
Cc: smeszaros@cityofseward.net; [Doug Schoessler](#); [Goodrum, Brent W \(DNR\)](#); [Parsons, Martin W \(DNR\)](#); [Barrett, Tom R \(DNR\)](#); [Pinckney, Charles A \(DNR\)](#); [Miller, Ori O \(DNR\)](#)
Subject: [Non-DoD Source] COMMENTS ON LOWELL CREEK DIVERSION FEASIBILITY STUDY
Date: Wednesday, October 21, 2020 4:08:51 PM
Attachments: [image001.gif](#)
[image002.jpg](#)
[USACE102120.pdf](#)

Dear Mr. Howard,

Comments from the Dam Safety and Construction Unit of the Alaska Department of Natural Resources on the feasibility study for the Lowell Creek Diversion project are included in the attached letter.

Thanks to the Corps of Engineers for its effort to mitigate the risk of flooding for the City of Seward.

cfc

Respectfully,

Charles F. Cobb, P. E.

State Dam Safety Engineer

Alaska Department of Natural Resources

(907) 269-8636 Desk

(907) 748-2942 Cell

Alaska Dam Safety Program <Blocked<http://dnr.alaska.gov/mlw/water/dams/index.cfm>>



October 21, 2020

United States Army Corps of Engineers, Alaska District
P.O. Box 6898
JBER, AK 99506-6898

Attention: Mr. Steven Howard

**RE: COMMENTS ON LOWELL CREEK DIVERSION INTEGRATED FEASIBILITY
REPORT AND DRAFT ENVIRONMENTAL ASSESSMENT**

Dear Mr. Howard:

The Dam Safety and Construction Unit (Dam Safety) of the Alaska Department of Natural Resources (ADNR) conducted a limited review of the draft *Integrated Feasibility Report and Environmental Assessment, Lowell Creek Flood Diversion* dated September 2020 published by the Alaska District of the United States Army Corps of Engineers (USACE), referred to herein as the General Investigation study (GIS). ADNR Dam Safety appreciates the efforts of the USACE to mitigate the risk of flooding to the City of Seward as reflected by the Executive Summary:

The purpose of the study is to identify a feasible solution that provides safe, reliable, and efficient flood diversion of the waters from Lowell Creek during precipitation and surge events...Alternatives were evaluated using total life safety risk as exemplified by average annual life loss (AALL) as a metric for Cost Effectiveness/Incremental Cost Analysis (CE/ICA).

Although the selected alternative provides a benefit/cost ratio of 0.25, the GIS indicates the project is granted a waiver to proceed under respective USACE authorizations. Comments on the GIS from ADNR Dam Safety follow.

COMMENTS:

- 1) ADNR Dam Safety regulates the safety of dams and appurtenant features in Alaska under Chapter 17 of Title 46 of the Alaska Statutes (AS 46.17) and Article 3 of Chapter 93 in Title 11 of the Alaska Administrative Code (11 AAC 93). AS 46.17.100 specifically exempts dams that are "federally owned or operated." While Section 1.3 of the GIS indicates that the City of Seward is a non-Federal sponsor, the GIS should clearly state whether the new project will be federally owned or operated, or subject to regulation by ADNR Dam Safety. If regulated by the state, an application and fee for a *Certificate of Approval to Construct or Modify a Dam* is required by 11 AAC 93.171 for most of the alternatives, including the "Tentatively Selected Plan" (TSP). This requirement should be discussed in Section 9.3 of the GIS, *Federal and State Agency Cooperation*.

- 2) The GIS describes 7 alternatives including two options under Alternatives 3 and 4. However, Alternatives 3A and 4A, and Alternatives 3B and 4B are essentially identical except for the size and alignment of the tunnels, and other ancillary features. Each alternative appears to include design features that are identical to the original design including the diversion dam and tunnel entrance, the grade of the tunnel, the tunnel cross-section shape and a waterfall discharge. Exceptions include the new tunnel floor detail, but there is no description of any improved performance including reduced maintenance requirements. In fact, Section 6 and Table 11 describe average annual costs for “operation, maintenance, repair, replacement, and rehabilitation” in excess of \$1,000,000 for each of these alternatives. This estimate appears to be based on historical expenses. The report should clearly indicate the party responsible for funding annual expenses.
- 3) The TSP is Alternative 4A, which is to construct a new, 18-foot diameter tunnel and refurbish the existing tunnel. ADNR Dam Safety requests clarification for how construction, operation and maintenance on two tunnels is less expensive than improvements on the existing tunnel. Based on personal communication with Rich Humphries of Golder Associates, a widely recognized expert in tunnel design, ADNR Dam Safety understands that a pilot hole for a new tunnel is typically an expensive element of tunnel construction relative to the expense of enlarging an existing tunnel. The GIS does not clearly reflect how the cost of tunnel construction was estimated.
- 4) Table 7 in Section 5.2.2 of the GIS describes structural and non-structural measures eliminated from further study, including lowering the tunnel outlet to grade, i.e. lowering the discharge point of Lowell Creek to tidewater. Eliminating this consideration caused the study to consider several options to extend the elevated outfall from 100 to 750 feet away from the mountain over the existing development and alluvial fan as described in Section 5.4.1. The preferred option applied to all structural alternatives (except Alternative 5) was to extend the outfall by 150 feet. While some benefits of this option are described, there are no discussions of precedence for such a feature; maintenance, inspection and operation requirements for an elevated flume; or safety risks for this option. The extended outfall effectively creates an aerial transfer and discharge of a productive, aggrading stream over a public right-of-way in an extremely high-risk hydrologic and seismic zone. This appears to be an awkward solution applied to all alternatives that essentially puts the road at grade and Lowell Creek overhead on bridge piers. The decision early in the study to eliminate a tidewater discharge from further consideration is not well supported in the GIS.
- 5) The GIS advances detailed design elements from the original design (circa 1939) including the tunnel entrance and discharge configurations, general tunnel cross-section shape, and tunnel lining. There are no discussions or consideration of innovative approaches or potential value-added engineering such as measures to reduce the annual maintenance costs, utilize modern tunnel construction such as boring machines, or alternative tunnel liners such as the granite pavers used in the USACE’s Mud Mountain project in Washington. The significant expertise of the USACE with marine dredging and sediment disposal appears to be underutilized by the decision to eliminate the tidewater discharge from further consideration. The disposition of sediment management only 150 feet from the existing discharge point is not discussed in detail, apart from the timing of the maintenance work with respect to the storm event (mentioned in Section 5.4.1).

- 6) All structural alternatives also include a canopy over the tunnel entrance which appears to be a reasonable a solution to reduce the risk of blockage from a landslide directly above the tunnel entrance. ADNR Dam Safety notes that no additional mitigation is provided by the TSP for surge releases from landslides or avalanches blocking flow upstream of the tunnel entrance.
- 7) All alternatives (except Alternative 1—No Action) assume that an early warning system and evacuation plan will be installed and implemented. Table 10 of the GIS lists the cost of this feature as \$39,186 while Section 9.3 of Appendix C to the GIS states, “the system is assumed to cost \$100,000 annually to maintain and operate” for one river gage and two snowpack accumulation monitoring stations. Additional detail on the early warning system, evacuation plan, expenses and respective responsibilities would be informative.

In conclusion, ADNR Dam Safety recommends that the GIS specifically include an alternative for the enlargement of the existing tunnel, respective enhancements to the diversion dam and tunnel entrance, a high-velocity discharge chute near tidewater elevations to provide a self-cleaning channel, a receiving area for sediment deposition during storm events (which can be maintained during safe times by conventional, heavy equipment such as a barge mounted dredge that transfers the sediment to deep water or adjacent shorelines for natural deposition) and an elevated, common bridge over Lowell Creek for the Lowell Point Road and utilities.

Thank you for the opportunity to comment on the GIS. ADNR Dam Safety appreciates the leadership of the USACE in this effort to reduce the risk to life and property in Seward from future floods of Lowell Creek.

Respectfully,



Charles Cobb, P.E.
State Dam Safety Engineer

cc: Scott Meszaros, City Manager, City of Seward
Doug Schoessler, Public Works Director, City of Seward
Brent Goodrum, Deputy Commissioner, ADNR
Marty Parsons, Director, Division of Mining, Land and Water, ADNR
Tom Barrett, Chief, Water Resources Section, ADNR
Chuck Pinckney, Division of Mining, Land and Water, ADNR

<J:\Dam Projects\Lowell Creek\2020\USACE102120.docx>

From: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
To: ["Cobb, Charles F \(DNR\)"](#)
Cc: [Doug Schoessler](#); [Goodrum, Brent W \(DNR\)](#); [Parsons, Martin W \(DNR\)](#); [Barrett, Tom R \(DNR\)](#); [Pinckney, Charles A \(DNR\)](#); [Miller, Ori O \(DNR\)](#); [Epps, Lewis N CIV USARMY CEPOA \(USA\) \(Lewis.N.Epps@usace.army.mil\)](#); [Chalup, Coleman J CIV USARMY CEPOA \(USA\)](#); [Stephen Sowell](#)
Subject: RE: COMMENTS ON LOWELL CREEK DIVERSION FEASIBILITY STUDY
Date: Friday, January 8, 2021 5:40:00 PM
Attachments: [ADNR Comments - Lowell Creek Feasibility Study.pdf](#)
[image003.gif](#)
[image004.jpg](#)

Mr. Cobb,

Thank you for providing comments from the Dam Safety and Construction Unit of the Alaska Department of Natural Resources (ADNR) on the Lowell Creek feasibility study. Attached are responses to the comments you provided.

Please let me know if a conference call would be beneficial to discuss any clarifications of responses provided or additional comments the ADNR may have.

Thank you,

Steve

Steven Howard

Chief of Project Management, Civil Works

USACE, Alaska District

W: 907-753-5729

C: 907-201-6600

From: Cobb, Charles F (DNR) <charles.cobb@alaska.gov>
Sent: Wednesday, October 21, 2020 4:08 PM
To: Howard, Brent S (Steven) CIV USARMY CEPOA (USA) <Brent.S.Howard@usace.army.mil>
Cc: smezzaros@cityofseward.net; Doug Schoessler <doug@cityofseward.net>; Goodrum, Brent W (DNR) <brent.goodrum@alaska.gov>; Parsons, Martin W (DNR) <marty.parsons@alaska.gov>; Barrett, Tom R (DNR) <tom.barrett@alaska.gov>; Pinckney, Charles A (DNR) <charles.pinckney@alaska.gov>; Miller, Ori O (DNR) <ori.miller@alaska.gov>
Subject: [Non-DoD Source] COMMENTS ON LOWELL CREEK DIVERSION FEASIBILITY STUDY

Dear Mr. Howard,

Comments from the Dam Safety and Construction Unit of the Alaska Department of Natural Resources on the feasibility study for the Lowell Creek Diversion project are included in the attached letter.

Thanks to the Corps of Engineers for its effort to mitigate the risk of flooding for the City of Seward.

cfc

Respectfully,

Charles F. Cobb, P. E.

State Dam Safety Engineer

Alaska Department of Natural Resources

(907) 269-8636 Desk

(907) 748-2942 Cell

Alaska Dam Safety Program <Blocked<http://dnr.alaska.gov/mlw/water/dams/index.cfm>>



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

January 8, 2021

Mr. Charles Cobb, P.E.
State Dam Safety Engineer
Alaska Department of Natural Resources
550 West 7th Avenue, Suite 1020
Anchorage, AK 99501

Dear Mr. Cobb:

Thank you for providing comments on the Lowell Creek Flood Diversion Integrated Feasibility Report and Environmental Assessment (IFREA) on behalf of the Dam Safety and Construction Unit of the Alaska Department of Natural Resources (ADNR) in your letter dated October 21, 2020. The United States Army Corps of Engineers (USACE), Alaska District, values your comments on this project. Responses to your comments are provided below.

a. The fee for constructing a new dam would need to be paid to the State. The City of Seward would own, operate, and maintain the tunnel. Under USACE policy, the project may be eligible for Federal assistance under various authorities to repair flood damages to the system. Similar to the Federal authorities utilized for repairs since 1984, Congress directed the USACE to perform tunnel maintenance while the City operated the project by keeping the outfalls clear. Improved performance comes from the increased capacity and redundancy of the system. By planning a two-tunnel system, work could be performed in the primary 18-foot tunnel while diverting all inflow through the existing 10-foot tunnel. A second tunnel allows the entire construction and maintenance activities to be performed year-round. Simultaneously, the current one tunnel system requires winter work during February and March to use the approximately 30 cubic feet per second (cfs) water diversion system to allow access to the tunnel.

b. There is a critical difference between Alternatives 3 and 4; Alternative 3 plans enlarge the existing tunnel to increase diversion capacity while Alternative 4 plans construct a new tunnel and dam upstream of the existing tunnel. Operations and Maintenance (O&M) costs for these plans are based on the historical cost of clearing debris at the outfalls and concrete repair costs over the existing tunnel's life. These costs will be the responsibility of the local sponsor. Federal programs to assist the sponsor with rehabilitation costs such as PL84-99 will still apply. Per WRDA 2020, the Federal Government has maintenance responsibility for the project through 2027.

c. Like maintaining a one tunnel system, enlarging the existing tunnel would be constrained by the need to divert flow around or through the system while work is underway; this has the same seasonal limit and requires winter work. Due to the watershed's flashy nature, working in the active tunnel poses considerable construction risks to the tunnel workers and damaging work in progress, making the expansion of the existing tunnel more costly than constructing a new tunnel with water fully diverted through the existing system.

d. A tidewater discharge elevation point risks system blockage as debris would lose velocity when encountering still water and cause blockage at the discharge point, which would back up the flume section and cause overtopping onto the road. A discharge near tidewater elevation was the failure mechanism of the timber flume system that predated the tunnel. The study looked at elevating the road above the current grade to reduce the likelihood of damaging the bridge and found building a new highway bridge over a discharge point more costly than constructing the flume extension.

e. While there is potential to find construction efficiencies during the PED phase, to authorize a project, the Alaska District chose to assume methods similar to creating the existing system for this report. Additional safety features such as a concrete portal awning and system redundancy by having two tunnels are part of the proposed system. The use of granite blocks instead of concrete tunnel lining was not considered primarily due to the lack of a local source of material and a quarry established to cut the stone to the required dimensions. To use this method, we would need to assume that the blocks would be produced and shaped out of state and shipped to Alaska, whereas concrete can be sourced locally. Also, it was not evident that there would be any significant improvement in abrasion resistance. With concrete, reinforcing steel and admixtures can be used to improve the tunnel liner's longevity. Analysis of the outfall extension showed that even with a 750-foot extension, debris discharge would still need to be actively managed to prevent accumulating a mound that would block the discharge, i.e., the material would not simply dump into deep waters in Resurrection Bay. Since the City would still need to run equipment on the fan for all cases, the shorter option that protects the road from damage and closures in smaller events was selected.

f. The study did not look at methods to prevent landslides in Lowell Creek Canyon that would cause blockages and surge release events. The project development team assumed that methods to stabilize the slopes to prevent landslides would be costly and impractical to construct. It is also possible that measures to eliminate landslides would face significant regulatory challenges.

g. After further consideration, implementing an early warning system does not appear to be justified based on a reduction in risk to life safety due to the minimal warning time preceding a surge release, the primary risk driver. A stream gauge is still beneficial for O&M, and the project delivery team anticipates the inclusion of a stream gauge as part of the O&M with an anticipated average annual cost of \$25,000.

The USACE considered an array of measures for an alternative flood diversion method at Lowell Creek that was eliminated from further consideration due to cost, operability, and/or constructability. Enlargement of the existing tunnel was considered and included in the study as an alternative plan; however, this alternative was more expensive than constructing a new flood diversion tunnel. The USACE also considered moving material at the outfall with a dredge but found it more expensive than the current practice of using land-based equipment

The USACE thanks you for your review and comments on the Lowell Creek Flood Diversion Feasibility Study. If you have further questions or concerns, please contact me at (907) 753-5729 or email me at Brent.S.Howard@usace.army.mil.

Sincerely,

A handwritten signature in black ink that reads "BS Howard". The letters are cursive and fluid.

B. Steven Howard
Chief of Project Management, Civil Works
USACE, Alaska District

From: [Debby Queen](#)
To: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
Cc: [Bradley Moran](#); [Douglas Baird Jr](#); [Dustin Bryant](#)
Subject: [Non-DoD Source] Public Comment: Lowell Creek Flood Diversion Improvement Project
Date: Thursday, October 22, 2020 2:45:53 PM
Attachments: [UAF CFOS Lowell Creek Flood Diversion Improvement Plan Comments 2020.10.22.20.pdf](#)

Mr. Howard:

On behalf of University of Alaska Fairbanks College of Fisheries and Ocean Sciences Dean Brad Moran, please see the attached public comments on the Lowell Creek Flood Diversion Improvement Project.

If you have questions or need additional information please let me know.

Thank you,
Debby

Deborah Queen
Executive Officer, College of Fisheries and Ocean Sciences
University of Alaska Fairbanks
2150 Koyukuk Dr., 252 O'Neill
P.O. Box 757220, Fairbanks, AK 99775
Office: (907) 474-7111
dkqueen@alaska.edu <<mailto:dkqueen@alaska.edu>>
Blockedwww.cfos.uaf.edu <Blocked<http://www.cfos.uaf.edu>>
Blockedwww.sikuliaq.alaska.edu <Blocked<http://www.sikuliaq.alaska.edu>>

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Blocked<https://www.alaska.edu/nondiscrimination/>.



S. Bradley Moran, Dean

Office 907-474-7210

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sbmoran@alaska.edu

www.uaf.edu/cfos

University of Alaska Fairbanks

P.O. Box 757220, Fairbanks, Alaska 99775-7220

October 22, 2020

U.S. Army Corps of Engineers, Alaska District
ATTN: CEPOA-PM-C-PL
Post Office Box 6898
Joint Base Elmendorf-Richardson, Alaska 99506-0898

Email: Brent.S.Howard@usace.army.mil

Subject: Lowell Creek Flood Diversion Project

To whom it may concern:

As part of the University of Alaska (UAF) College of Fisheries and Ocean Sciences (CFOS), the Seward Marine Center (SMC) is a central feature in the community of Seward and the Kenai Peninsula. Established in 1970, SMC is one of Alaska's primary docking facilities for marine research vessels and is the homeport of the 261-foot, Global Class, ice-capable R/V *Sikuliaq*. Owned by the National Science Foundation and operated by CFOS, *Sikuliaq* is one of the most technologically capable vessels in the US Academic Research Fleet.

Heavy sediment accumulation from the nearby Lowell Creek is an ongoing issue at the SMC dock and adjacent buildings. Lowell Creek outfall leaves the dock susceptible to excessive deposits of gravel, mud, and silt accumulation during extreme flooding events. The result is costly regular maintenance and dredging to safely dock the vessel at its homeport and ensure access to SMC shore-side infrastructure.

The UAF College of Fisheries and Ocean Sciences strongly supports the Lowell Creek Flood Diversion Project proposed by USACE. However, as presented to the public on October 19, 2020, Alternative Plan 4A of the existing diversion system in Lowell Creek Canyon would not adequately manage flood events or sediment accumulation proximal to SMC and *Sikuliaq* moorage. As a result, this poses a significant risk to public safety, property, and critical infrastructure in the community and at SMC. While the tentatively selected Alternative Plan 4A would better manage flood events to the Seward community, the proposed outfall location does not adequately address accumulation deposits. While more costly to build in the short term, a longer tunnel would provide long-term benefits to both the community and critical infrastructure located at SMC and the adjacent Alaska SeaLife Center.

Thank you for the opportunity to comment on this important infrastructure proposal. We look forward to working closely with your team as this project proceeds.

Sincerely,

A handwritten signature in blue ink that reads 'S. Bradley Moran'.

S. Bradley Moran, Dean
UAF College of Fisheries and Ocean Sciences

Naturally Inspiring.

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Learn more about UA's [notice of nondiscrimination](#).

From: [Caryn Fosnaugh](#)
To: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
Cc: [Tara Riemer](#); [Chip Arnold](#)
Subject: [Non-DoD Source] Public Comment - Lowell Canyon Diversion System Feasibility Report
Date: Wednesday, October 21, 2020 1:49:33 PM
Attachments: [ASLC Intakes Coordinates.doc](#)
[ASLC Intake Line B coordinates 60°05'50.9 N 149°26'25.8 W - Google Maps.pdf](#)
[ASLC Intake Pipeline A Coordinates 60°05'52.1 N 149°26'19.4 W - Google Maps.pdf](#)

Dear Mr. Howard,

Thank you for the very clear presentations the past two days and the opportunity to comment on your draft report. The Alaska SeaLife Center has significant interest in this report, for several reasons. First, as the second largest private employer in town, the project is crucial to the wellbeing of the Seward community and our many employees, several of whom live in Lowell Point. Second, we own one of the closest structures to the current and proposed outfall locations, our freshwater pump house. And finally, our seawater intakes draw from the bay close to the outfall location. Disruption to our freshwater and/or saltwater supplies could be detrimental to our resident animals, research and to our daily operations.

We draw freshwater from Lowell Creek just south of the existing outfall. This freshwater pump house includes a holding tank and pumps water through a 6" HDPE pipeline to the Alaska SeaLife Center to maintain animal life. These pumps are also powered by a buried power line that runs adjacent to the HDPE line. Both of these lines are buried under the current channel and along the existing roadway. We would love to explore ways that your design can protect this valuable asset to our operations.

Our seawater intake lines (coordinates and images attached) currently extend 750ft south from the Alaska SeaLife Center into Resurrection Bay and reach a depth of 250ft. The inlet on Intake Line B is oriented to the SW, which is directly in line with the proposed outfall. As you have heard during the public meetings, all of the businesses here have been challenged by the debris and silt impacts from heavy rain events. We are concerned that the proposed outfall location may actually worsen the current impacts on Intake B and we have real concerns with the proposed discharge plume in a significant flood event. The alluvial fan that will be created will only add to the outfall debris at the shoreline and increase the risk of an underwater slide that could catastrophically damage this intake line. We are curious about opportunities for flexibility in the project plan to include reconfiguration of this line, additional mitigation study, or ways we can work together to find a solution.

We are also interested in learning more about the decision not to build a tunnel with an outfall point further south of Resurrection Bay Seafoods. This option would have the benefit of substantially mitigating the hazards currently present to the aforementioned facilities and permit discharge in deeper water without requiring a long flume. While alternative placement of a new tunnel would be more costly to build in the short term, we believe it would provide a significant long-term benefit to the community and reduce the annual required maintenance and marine dredging required in Alternate Plan 4A.

Thank you again, and we look forward to working closely with ACE staff to provide details on our freshwater pumphouse and saltwater intakes as this project proceeds. Please keep the following people on all lists of interested

persons relating to this project:

Caryn Fosnaugh, Operations Director; carynf@alaskasealife.org <<mailto:carynf@alaskasealife.org>>

Chip Arnold, COO; chipa@alaskasealife.org <<mailto:chipa@alaskasealife.org>>

Tara Riemer, President and CEO; tarar@alaskasealife.org <<mailto:tarar@alaskasealife.org>>

<Blockedhttp://www.alaskasealife.org/ASLC_Email_Logo.png>

<Blocked<https://www.facebook.com/AlaskaSeaLifeCenter>> <Blocked<https://twitter.com/alaskasealife>>

<Blocked<http://instagram.com/alaskasealifecenter>> <Blocked<https://www.youtube.com/user/AKSeaLifeCenter>>

<Blocked<https://www.linkedin.com/company/alaska-sealife-center>> Caryn Fosnaugh

Operations Director

Alaska SeaLife Center

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301 Railway

Seward, AK 99664

Fax: 907-224-6320

The Alaska SeaLife Center generates and shares scientific knowledge to promote understanding and stewardship of Alaska's marine ecosystems.

From: [Munter, Tony P \(DFG\)](#)
To: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
Cc: [Blossom, Brian D \(DFG\)](#)
Subject: [Non-DoD Source] Public Comment for Lowell Creek near Seward, AK
Date: Monday, October 12, 2020 2:07:46 PM

ADF&G, Habitat Section, has reviewed the Integrated Feasibility Report and Draft Environmental Assessment for the Lowell Creek Flood Diversion near Seward, AK. The Habitat Section has found no significant impacts to commercial fisheries or salmon spawning habitat for this project as proposed with the Tentatively selected Plan (TSP) of Alternative 4A. Alternative 4A would extend the outfall 150 ft. from the original tunnel, refurbishing the existing tunnel and construct a new 18 ft. diameter tunnel upstream from the existing tunnel.

Thank you for the opportunity to comment on the proposed project.

Tony Munter

Habitat Biologist

Department of Fish and Game

Habitat Section

Soldotna Office

907-714-2478

From: [rainyday](#)
To: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
Subject: [Non-DoD Source] Lowell Creek Flood Diversion Feasibility Study
Date: Tuesday, October 20, 2020 8:15:18 PM
Attachments: [IMG_0657-raging-waterfall.jpg](#)
[IMG_0676-workers-clear-creek.jpg](#)
[IMG_0698-Cat-in-creek.jpg](#)
[IMG_0918-dozer-clearing-channel.jpg](#)
[IMG_4816-clearing-waterfall-basin.jpg](#)
[IMG_4836-clearing-channel.jpg](#)
[IMG_4838-Lowell-Point-Road-bridge.jpg](#)
[IMG_4842-raging-waterfall.jpg](#)
[IMG_4906-raging-waterfall.jpg](#)
[IMG_4918-excavator-clearing-waterfall-basin.jpg](#)
[IMG_4921-clearing-channel.jpg](#)
[IMG_4930-Lowell-Creek-in-canyon.jpg](#)

----- Forwarded Message -----

From: rainyday <c_griz@yahoo.com>
To: Brent S Howard <brent.s.howard@usace.mil>
Sent: Tuesday, October 20, 2020, 07:25:15 PM AKDT
Subject: Lowell Creek Flood Diversion Feasibility Study

Dear Mr. Howard,

Thank you for this opportunity to comment. I was unable to call in to the SBCFSAB meeting on Monday, October 19 as I repeatedly got the message that it hadn't started yet, when it had. The notices for the public meeting changed so often, I missed the meeting today. It was very confusing.

I appreciate the PDF sent out by the city clerk this afternoon. Without the benefit of previous meeting comments, here are a few comments:

Page 13 of PDF: Goodwin Creek should be Godwin Creek, after Godwin Glacier. Not sure why Sawmill Creek is not included.

Page 15: Impact to economy should include nearby seafood processing plant, Resurrection Bay Seafoods, as their fishing vessels can't deliver to plant unless significant dredging at their dock occurs, especially after flood events.

Page 16: Environmental Conditions should note the danger of sediment loading underwater which could trigger a tsunami similar to the one triggered in 1964 by underwater landslides.

Page 20: Tree removal should be studied further for evidence that the trees in the diagram are hazardous. The trees may be helping to stabilize the banks and slopes.

Alternatives:

Alternative 1 No Action is not acceptable as it does not change the desperate emergency management as shown by my photos attached in the recent October 2020 flood event, or reduce the Life Safety threats to the community. Alternative 5 Debris Retention Basin looks like a fail from the start as it is a remote, inaccessible site and difficult to access and maintain.

Alternative 4A and 4B New tunnel sounds like a huge improvement. Bigger sounds better given the drastic flooding due to climate change in the future. Retaining existing tunnel for overflow and maintenance is an excellent idea. Will existing tunnel outfall have an extension or will it still threaten the bridge during flood events?

Outfall location of new tunnel will still deposit sediment near seafood processing plant and likely require dredging

more frequently than every five years. Who pays to keep this company in business?

Directing sediment deposition into the bay unless into deep water off the underwater slope, will increase underwater landslide potential and should be considered very carefully.

The Early Warning System is nice, but a good weather forecast is about as effective.

Tunnel inlet definitely needs a canopy to protect inlet from landslide. Its a wonder that unstable, steep slope has not yet plugged the tunnel inlet.

Note Diversion Dam is in terrible condition with many missing rocks and cracks. This should be refurbished as well.

I look forward to following this long-overdue and much-needed project.

Thank you for this opportunity to comment.

Sincerely,
Carol Griswold
Seward resident

From: [Sherry Furlong](#)
To: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
Subject: [Non-DoD Source] Lowel Creek Diversion Project
Date: Tuesday, October 20, 2020 4:41:11 PM

Steve,

Who is the 'Secretary' responsible for up to 15 years named on page 1 of the report - the Secretary of Defense?! Oh, I see, Secretary of the Army...

Basically, we shouldn't be here....We could take the 124 million and move all the businesses to the safe, low hills to the north, leaving the industrial facilities to the deep water port. and maybe have some nice parks to enjoy visiting. Hmm, that leaves the question of what I do with my residence - thankfully on the north side of Jefferson! And by the way, relocating residences would greatly diminish loss of life and property from the next major tsunami. I see this idea was looked at and discarded a few years ago. this town should never have been built here in the first place. Yes, the railroad, dock and other industrial complexes belong; not retail or residences. The Forest Service may own some of the hill acreage to the north.....well...time to share.

One thing bothers me about the outflow structure into the bay. When - how often this would need replaced?? OH, NO! we can't have all that water going OVER the road!!!!?? Talk about DANGEROUS! NO,NO, NO! The water MUST go UNDER the bridge!!! Make a really LONG tunnel! Yes, I see the trouble with debris on a shallow tunnel slope....hmmmm. That road is a big pain! A ferry?

Oh, I see. It would take about 90 years to pay for the added cost of the 750 outflow. By then the whole thing would need replaced anyway? But it would sure ease the mind of the man that owns the fish processing facility to the south.

I would feel much safer with the 24' tunnel. I hate culverts! I have seen them fail when the water was too great for their capacity. And cause loss of life and limb.

As you may have noticed, I like to leave trees because they hold soil in place.

A half million dollars every year! That is an incentive to not be a taxpayer of Seward!

The risks and uncertainties to me are having all that water on TOP of cars makes me wonder if a combination debris collection-refurbishing the current tunnel- building a bridge with a big hump in the middle to make it higher might be a safer solution, even though the debris collector could fail and then we would be back at square one, removing debris at the bridge. Yes I wonder about the water capacity in the current tunnel, although it seemed to handle it in 1986 - I have to say those people in the 40's did an amazing job!

Why is alternative 5 not included in the CE/ICA results? What was the column between the "cost" column and the "cost effective" column supposed to show?

Where are the "Principles and Guideline"s and the "four accounts" mentioned on page 68 of the report?

Enough now!

Sherry Furlong

From: darryljs@gci.net
To: [Howard, Brent S \(Steven\) CIV USARMY CEPOA \(USA\)](#)
Cc: [Tara Riemer](#); [Chip Arnold](#); [Caryn Fosnaugh](#)
Subject: [Non-DoD Source] Lowell Canyon Feasibility Report
Date: Wednesday, October 21, 2020 11:19:46 PM

Dear Mr. Howard,

Thank you for this opportunity to comment on the Lowell Canyon Feasibility Report.

1. For the record please describe the reasons an Alternate route moving the new tunnel discharge to a location south of the Resurrection Bay Seafoods plant was not included.
2. For the record please describe what other discharge outfall designs were examined beyond the incredibly expensive pile supported flume options presented in the report.

Alternate 4A leaves the discharge in virtually in the same location as the existing discharge which does little to nothing to mitigate substantial risks to the RV Sikuliaq dock, the City of Seward's critical sewer pump station, the shellfish hatchery, the Resurrection Bay Seafoods dock, and the Alaska SeaLife Center's critical fresh water system pump house and related utilities, and the Center's existing critical seawater intakes. And it leaves the City of Seward stuck with continued expensive annual maintenance. The scope of the Congressionally directed study was to include mitigation of the aforementioned impacts to these major and essential community facilities. In this regard the study has failed.

Sincerely,

Darryl Schaefermeyer
P.O. Box 1743
Seward, AK 99664
(907) 362-2271