Public notice ER-12-03

Classification: UNCLASSIFIED
Caveats: NONE
The U.S. Army Corps of Engineers, Alaska District (Corps) in support of The Denali Commission, has prepared an environmental assessment (EA) and finding of no significant impact (FONSI) titled: Eek Barge Landing, Eek, Alaska. The EA and FONSI describe the proposed project and potential environmental consequences of constructing the barge landing.
The EA and FONSI are also posted for public review on the Alaska District web page at: http://www.poa.usace.army.mil.
Click on Civil Works and Planning and look under Documents Available for Public Review, Reports and Environmental Documents.
The public comment period on this EA ends on 1 Feburary 2012.
PLEASE DO NOT reply to sender. Questions and comments should be directed to Guy R. McConnell by the above date via email at: Guy.R.McConnell@usace.army.mil

Environmental Assessment
and Finding of No Significant Impact

Eek Barge Landing
Eek, Alaska

December 2011

Finding of No Significant Impact

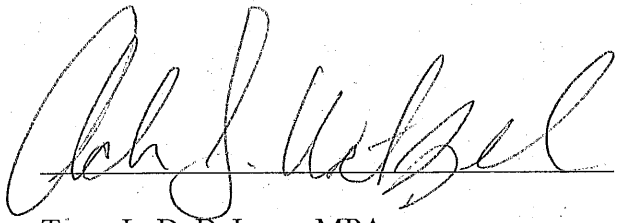
In accordance with the National Environmental Policy Act of 1969, as amended,
The Denali Commission has assessed the environmental effects of the following action:

Construct Barge Landing
Eek Alaska

The Denali Commission, in partnership with the City of Eek, will construct a barge landing in the Eek River to facilitate transfer of fuel and materials from barges and to improve boat launching and landing. The landing will be constructed at the site that barges use now. If funding is available, a maximum of 26.4 acres of the Eek River will be dredged to remove a shoal that limits barge access to the site. Dredged material will be used to construct 1.8 acres of additional staging area near the barge landing.

The project and reasonable alternatives are addressed in the Eek Barge Landing Environmental Assessment. The assessment describes the affected environment and evaluates consequences of the action. As concluded in the assessment, the action will not substantially affect marine mammals, migratory birds, essential fish habitat, endangered species, or other plants or animals of regional or national concern. The action will not adversely affect cultural, social, or economic resources or disadvantaged populations. The action will not act in association with past, present or anticipated future actions to cause appreciable cumulative impacts. The action is consistent with community planning objectives and with regional coastal management planning.

I find that constructing the Eek barge landing will not cause significant impacts to the human environment and that the substantive requirements of the National Environmental Policy Act (NEPA) have been satisfied. An environmental impact statement is not required for this federal action.



12/20/11
Date

Tessa L. D. DeLong, MPA
Director of Programs
Denali Commission

Eek Barge Landing
Eek Alaska
Environmental Assessment

Purpose and Need for the Action

Eek is a community of approximately 300 people on a tidally influenced section of the Eek River in western Alaska. The location is shown in figure 1. Transportation from Eek to Bethel, the nearest hub community, is by light aircraft, open skiff, and commercial barge during the open-water season (generally from early June until late September or October). Light aircraft and snow machines are the only mechanical transportation when the rivers are frozen. Barges deliver building materials, fuels, and most other supplies that are not perishable. Deliveries by barge are essential to the continued existence of the community.

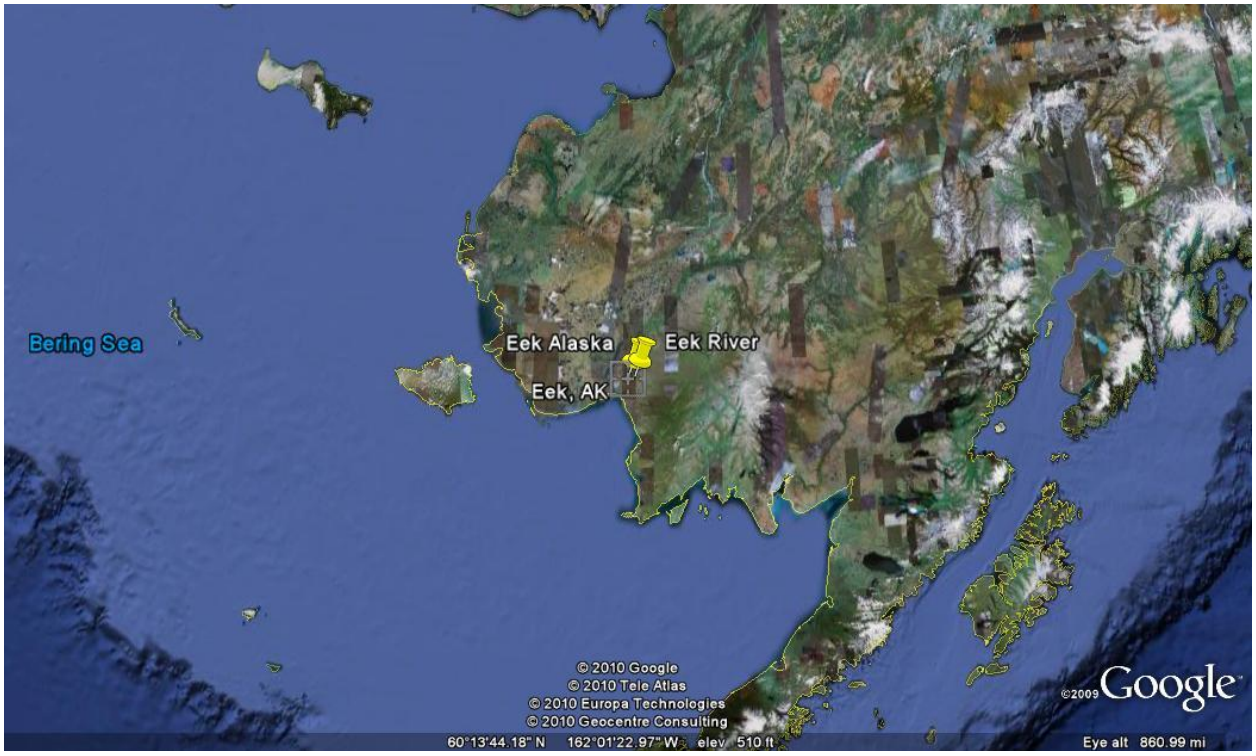


Figure 1. Eek location near the mouth of the Kuskokwim River.

Barges are towed up the Eek River when tides are favorable and are moored and unloaded at a gravel-fill landing site at Eek. Figure 2 shows the barge landing site. Barge landings and the unloading operations are constrained by the river current, shoaling adjacent to the barge landing, condition of the existing barge landing, and limited onshore area to stage, store, and transfer goods and materials (figure 3). River and barge landing conditions cause tug and barge operators to lose time, waste fuel, and face greater risk of fuel spills and vessel damage. Absence of fixed onshore mooring requires tug operators to maintain propulsion throughout the unloading process, which wastes fuel and scours the river bottom and banks. The inadequate onshore staging area

Figure 2. Tug holding a barge in position as it is unloaded at Eek barge landing. The landing has eroded substantially since this 2003 photograph.

also increases safety hazards, wastes time and fuel, and exposes goods and materials at the landing to more risk of damage or loss. The Denali Commission proposes to improve the barge landing so that barges can reach moorage during a wider range of tidal and river conditions. Barges would also have better slope and water depth at the barge landing so they can operate more efficiently and can moor securely without maintaining power. The commission also proposes to expand the existing staging area to alleviate material transfer and storage problems.

Figure 3. Crowded conditions at the Eek barge landing staging area. Old fuel storage tanks and super-sacks of contaminated soil waiting for transportation, fill material for road repairs, construction materials, and Conex's all compete for space on the existing staging area.

Proposed Action and Alternatives

The proposed action consists of three separate, but inter-related activities, which are as follows:

1. The existing barge landing would be expanded and modified so that barges could moor and unload more efficiently. Figure 4 shows the dimensions and location of the proposed landing. It would be constructed by placing classified fill in the Eek River and on the river bank. Armor rock would be placed around the fill material to protect it from stream erosion and ice scouring. A total of 2,985 cubic yards of fill and armor would be placed. Pipe piles (12-inch-diameter) with mooring bollards would be driven as mooring points in two locations at the new barge landing to provide secure mooring for barges
   .
2. The shoal immediately offshore from the barge landing would be dredged so barges could approach the landing directly and over a wider range of tidal stages than at

present. A maximum of 35,000 cubic yards would be dredged from the shoal, depending upon funding availability. The shoal and the areas to be dredged are shown in figure 5. Dredging would be to a depth of approximately 4 feet below ordinary low water. The contractor would select the dredging method to be used. Bottom samples collected in 2011 indicate that dredged material would be predominantly fine sand and silt.

3. Dredged material would be placed on undeveloped uplands adjacent to the existing staging area and would be graded to serve as additional staging area. A maximum of 1.8 acres would be filled for the staging area. The fill material would be contained and stabilized to prevent sediment transport into surrounding lands. Fill material would be compacted and would resemble road base material that has been used throughout the Eek community. The staging area location and its maximum dimensions are shown in figure 4. If more material was dredged than required to construct the staging area, then the excess material would be stockpiled at the new staging area or in some other upland location. Stored material would be used to maintain roads and for other upland development.

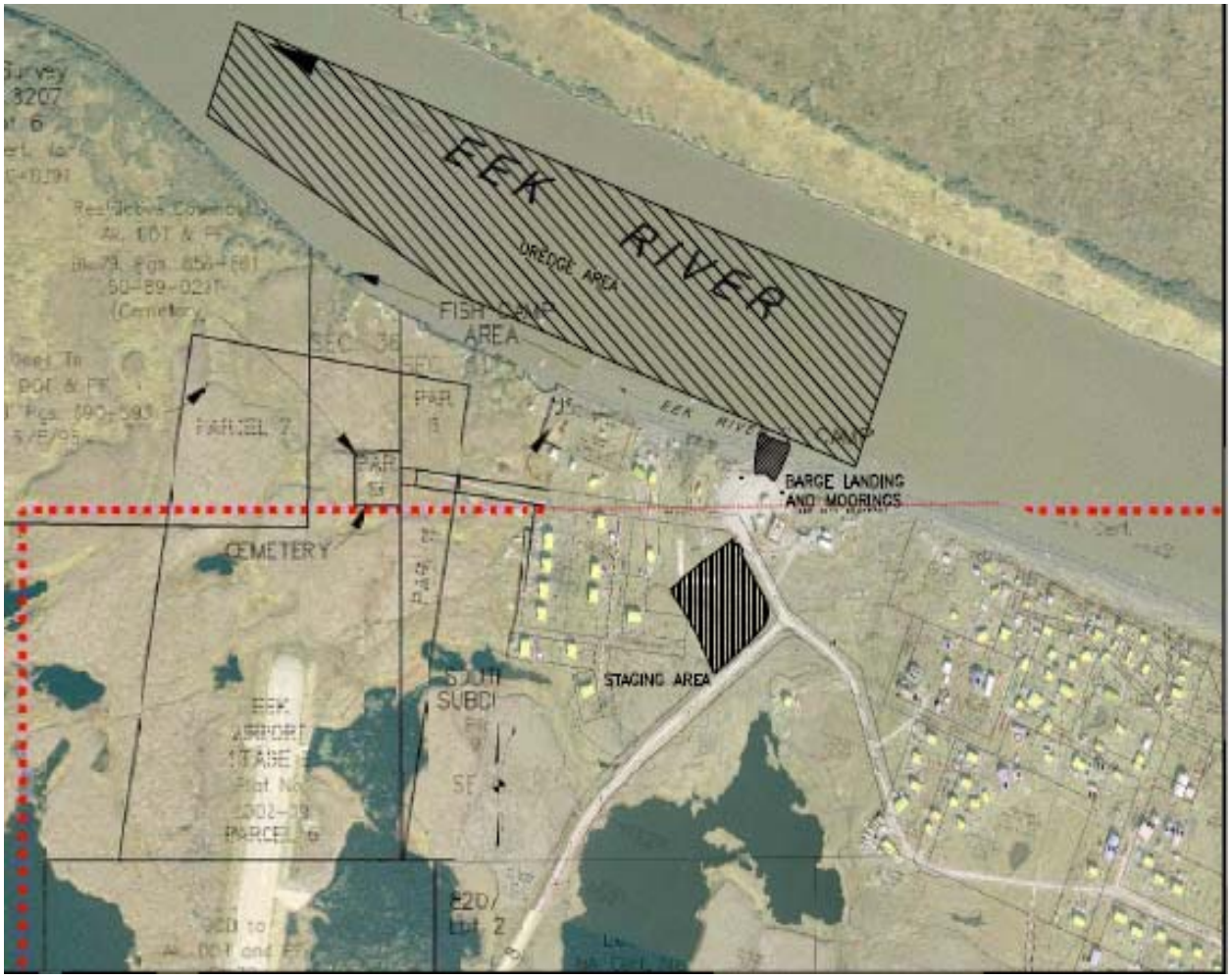


Figure 4. Plan view of proposed barge landing, area to be dredged, and staging area

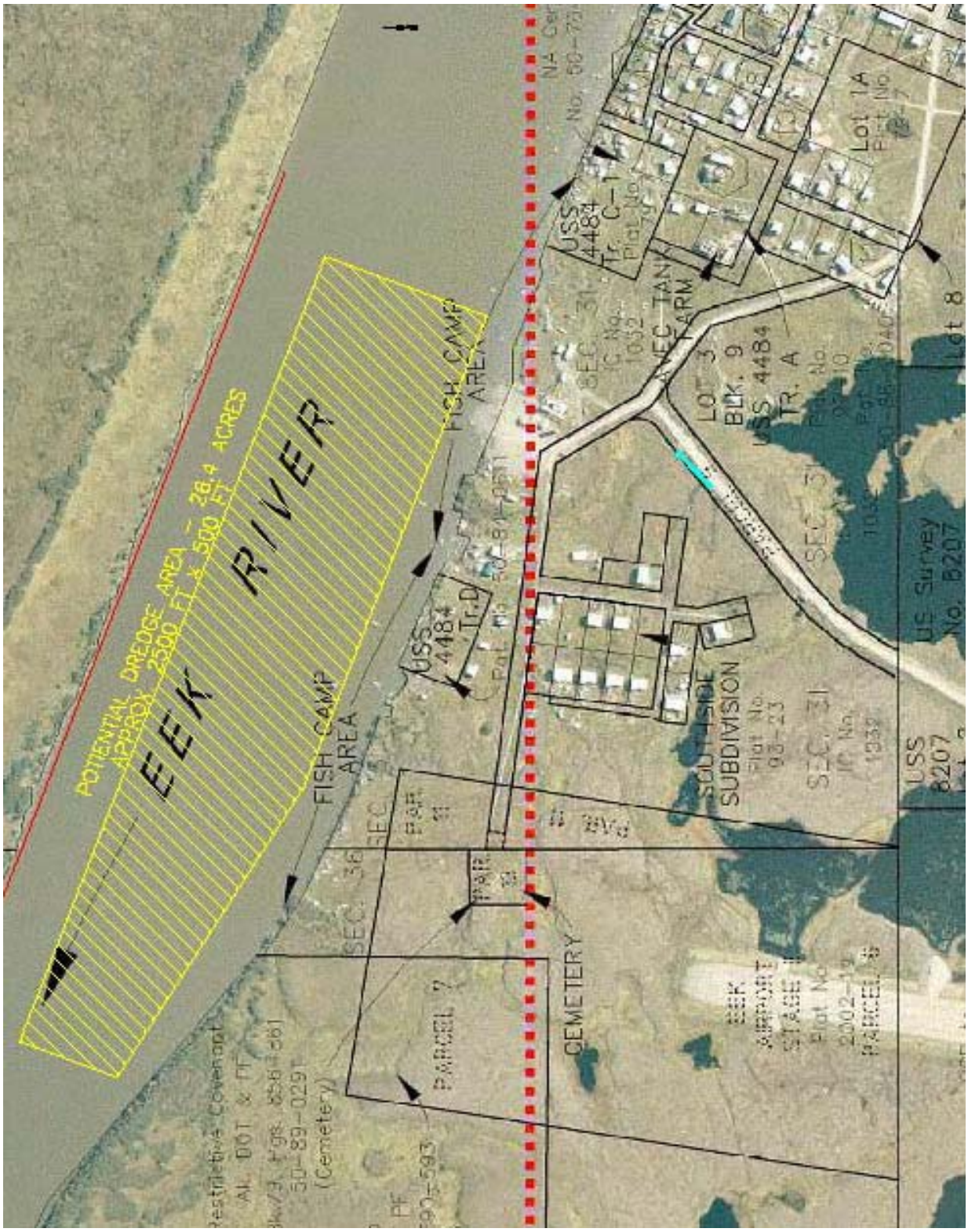


Figure 5. Shoal to be dredged at Eek. Funding may limit dredging to a smaller area and lesser quantity.

Dredging and barge landing construction is expected to require one summer season. The staging area would be constructed during dredging.

No feasible alternative could replace barge operations for delivery of fuels, building materials or many of the other items required for the community; therefore, any practicable alternative must address improvements that would facilitate barge operations.

A new barge landing could be constructed upstream where dredging would not be required. This could match well with plans for future community development, and an upstream location would avoid the shoal so dredging would not be required. Access to an upstream location, however, would cut down through the high river bank, which could increase erosion that would affect the community downstream. An upstream location also would be farther from existing fuel storage and would be considerably more expensive to develop than the proposed action. Concerns about cost and erosion eliminate an upstream project at this time.

No brush clearing is anticipated. If clearing was required, the area to be cleared would first be examined to ensure that nesting birds and their eggs would not be taken. Clearing would be postponed if necessary. Material placed for the staging area and stockpiled material would be contained to prevent erosion, and run-off would be contained or filtered to prevent degradation of surrounding waters and wetlands. There are no known cultural resources in the project area. If any potential cultural material was found during construction, work would be halted and the State Historic Preservation Officer would be notified.

Affected Environment

Eek is similar to many small communities in western Alaska. The majority of food is obtained from hunting, fishing, and gathering. All other food is imported from Bethel or more distant transportation centers. Essentially all building materials, petroleum fuels, equipment, household items, vehicles, and other goods are imported. Most fuels and other and bulk or heavy materials are delivered to the community by shallow-draft barge pushed by a relatively small tug. Passengers, perishable food, and mail are generally delivered by light aircraft. The area is treeless, so stove wood and un-sawn timbers for rough construction are towed by motorboat from forested land farther up the Kuskokwim drainage. Other construction materials are delivered by barge.

Eek River is a major source of essential subsistence resources for people in the area. It provides a transportation corridor in summer and winter and is habitat for fish, waterfowl, and other wildlife that are essential in local diets. The project site is not used to any important extent as a subsistence harvest area, but it is surrounded by fish camps, where fish are processed, and it is used for accessing, mooring, loading, and unloading boats that harvest fish and wildlife.

The Eek River near Eek is a meandering, tidally influenced river, but Eek is well upstream from any intrusion of marine salinity. Tidal range is estimated to be approximately 6 feet, based on water marks and information from local knowledge, but could be expected to vary substantially with river and wind conditions. Tidal activity appeared to lag published forecasts for the mouth of Eek River by approximately 3 hours during observations in June 2011.

Current in mid river was moderate (about 3 to 4 mph) midway through a receding tide. The Eek River, unlike some larger rivers of the region, does not receive glacial melt-water and is relatively clear. During a June site visit, the bottom could be seen to a depth of approximately 1 foot. Local knowledge tells us that the river is clearer later in the summer, as would be expected.

Eek is in the vast Yukon-Kuskokwim Delta. Landform and topography is typical of the delta; about half of the surface is covered by large and small lakes. Almost all the land is wetlands with little topographic relief. Terrain at Eek rises gently from the existing barge landing site to the town site, which is approximately 10 to 30 feet above the river surface. The river bank generally is steep and ranges from approximately 6 to more than 20 feet high near Eek.

Soils and river bottom material at Eek appear to be universally fine sand and silt, with small amounts of material fine enough to be classified as clay. Gravel for runway and road resurfacing and for other construction is imported. Most of Eek and the area around it are underlain with permafrost, and most of the soils of the region display the wet conditions usually associated with permafrost.

Potential sources of chemical contamination are limited at Eek, although fuel spills are not uncommon in remote Alaska communities. During a June 2011 site visit, fuel-contaminated soil was containerized and stored at the barge landing awaiting transportation to an off-site remediation facility. While small amounts of fuel or other petroleum products may reach the Eek River, there was no significant petroleum contamination in sediment collected from the shoal adjacent to the barge landing site. Western Alaska soils tend to be relatively mineralized, and one or more naturally occurring minerals often exceed state cleanup levels in soil tests. Sediments collected from the shoal at Eek contained 6.8 to 9.4 mg/kg of arsenic, which is substantially higher than state cleanup criteria (3.9 mg/kg). There is no reason to believe that arsenic was from other than a natural source. Other soils in the area are likely to have similar background levels. No other minerals or chemicals in the river sediment exceeded state criteria.

Vegetation at Eek is typical of the Yukon-Kuskokwim Delta and is predominantly sedges, mosses, lichens, and other non-woody plants adapted to wet conditions and long, harsh winters. Woody vegetation is restricted to alders and willow along river banks and recumbent dwarf birch and willow in drier areas of the tundra. Almost all of the undeveloped land of the region is wetlands. Jurisdictional waters of the United States, including wetlands, in the project area include the open palustrine waters of Eek River and the wet tundra that comprises all the undeveloped segments of the proposed staging area. Open ponds and lakes are abundant in the region and even in the developed areas of Eek, but they are not in the proposed project area.

Eek River is rich in fisheries resources. The Alaska Anadromous Waters Catalogue (ADF&G 2011) lists Eek River as 335-10-16700. The catalogue notes the presence of five species of Pacific salmon, whitefish, and arctic char. Chinook are listed as using the river at Eek for rearing habitat. Other salmon species are listed as “present,” indicating they spawn and rear elsewhere or that specific life history information is not known for the Eek River. The project area does not appear to have any unique or rare habitat attributes that would make it especially important as fish habitat.

People in Eek did not report sightings of marine mammals as far upstream as Eek, but seals probably use the lower river. A variety of mammals range through the region, but the barge landing and the project are in an area heavily used by people and their dogs. No sign of mammal usage was observed during site visits, but small rodents may be present.

The Yukon-Kuskokwim Delta is one of the most important waterfowl breeding and nesting areas in North America. Ducks, geese, swans, and cranes, along with gulls, terns, and other water birds are abundant in the region from the time ice begins to melt in the spring until freeze-up in the autumn. While waterfowl range throughout the area, they are not commonly associated with the existing barge landing or the proposed project area. Passerine birds nest in the alders and willow along the Eek River, and swallows nest in the steep riverbanks upstream of Eek. None nest in the lower river banks near the barge landing.

The Anchorage U.S. Fish and Wildlife Field Office endangered species consultation guide (Alaska.fws.gov/fisheries/endangered/pdf/Consultation_guide_31010.pdf) lists several endangered or threatened species in the region, but none in the vicinity of Eek.

No sites or properties in or near the project are listed in the National Register of Historic Places. Records of the State Historic Preservation Officer do not list any cultural resources at the project site.

Environmental Consequences

Improving facilities for barges and for handling barge cargo at Eek would cause short-term inconvenience for commercial and personal use, but access to boats and fish camps would be maintained throughout the construction period. Effects on harvest of local resources would be negligible. Residents near the project could be disturbed by noise during construction, and the expanded staging area could bring operations closer to existing homes. The project site is not near a school or other area used disproportionately by children. Construction and operation of the project would not cause undue risk or other adverse effects to children or minorities.

Dredging would adversely affect water quality down-current from the project during construction. Fine sand from dredging would settle out close to the dredging site. Silt would drift farther downstream. Information is not complete or accurate enough to predict effects on turbidity at the dredging site or downstream. Effects would cease after dredging was completed, and turbidity would be unlikely to exceed that of annual high-water events. Dredging would not increase contamination to above background levels and would not expose people or biological resources to more than background levels of naturally occurring heavy metals.

A maximum of 1.8 acres of wetlands and 0.36 acre of river bottom would be filled for the project. Those areas would lose most biologic function and habitat value. The wetland vegetation is similar to vegetation in much of the surrounding area. The loss would not significantly affect any locally or regionally important resource. Loss of river bottom habitat would be minor and would be in an area already heavily used by boat traffic and associated activity. The short extension of the barge landing into the river would not substantially affect water movement away from the project and would not adversely affect water quality after construction.

Fish at the project site and immediately downstream could be temporarily displaced by construction activity and turbidity. Effects would be temporary and would not significantly affect viability.

Birds, mammals, and their habitats are poorly represented in the project area and would not be affected to any meaningful extent.

No marine mammals or endangered species would be adversely affected by the action.

Cultural resources would not be affected by the action.

Coastal Management Program
Alaska's coastal zone management program expired on July 31, 2011. Project proponents are no longer required to evaluate projects for consistency with enforceable standards of coastal management plans. Those plans do, however, offer useful criteria for evaluating projects in the coastal zone. Eek is in the Ceñaliulriit coastal district at N60 degrees13' W162 degrees 02.6'. The project would be constructed on Eek Village Corporation land and in the Eek River, and on lands of the State of Alaska. Ceñaliulriit District enforceable standards are described in the Ceñaliulriit CRSA Coastal Management Plan below.

The proposed action is consistent with the district's enforceable policies.

- The proposed action is water and coastal dependant and provides for multiple uses and avoids duplicative facilities.
- The project would maintain and improve public access to the Eek River.
- The proposed action is in a natural hazard area, but viability of the project will not be affected by the natural hazard (permafrost).
- The project would be adjacent to an area customarily used for subsistence, but would not impede those uses, wildlife passage, or traditional access.
- The project would be adjacent to existing fish camps, but would not use additional area of shoreline or impede their existing uses.

The project would affect wetland and river habitats, but the minimum areas necessary would be used and important functions would not be appreciably affected.

Ceñaliulriit CRSA Coastal Management Plan Enforceable Policies
The following are relevant enforceable policies from the Ceñaliulriit coastal management plan.

C. Coastal Development
C-1. Multiple Use
a. Project applicants shall site, design, construct, and operate structures or dredged of fill material placed in coastal waters to minimize the need for duplicative coastal facilities.
b. This policy applies to uses and activities areas covered by the Coastal Development standard (11 AAC 112.200).

C-2. Optimum Shoreline Use
a. The following water dependent uses shall be given priority consideration for waterfront use in the following order: Subsistence fishing sites, commercial fishing sites, and fishing gear storage.
b. This policy applies to uses and activities covered by the statewide Coastal Development standard (11 AAC.112.200).

D. Natural Hazards
D-1. Ice Hazards
a. Project facilities shall not be located in areas subject to ice hazards unless there is no practicable alternative.
b. This policy applies to all areas designated for natural ice hazards under 11 AAC 114.250(b) as described in Section 4.5.2.

G. Sand and Gravel Extraction
G-2. Sand and Gravel Priority Siting
a. Sand and gravel operations shall be located in areas using the following order of priority:
1) Sand and gravel from already disturbed areas where existing development has been abandoned,
2) Existing sand and gravel sources unless alternate sites would result in less impacts to habitat and subsistence uses,
3) New upland pits,
4) Rivers, streams and lakes that do not support fish,
5) Shoreline and offshore gravel sources,
6) Floodplain gravel sources

Designated Areas
Natural Hazard Areas
The CRSA designates three types of natural hazard areas under 11 AAC 114.250 for all non-federal lands within the district's coastal zone:

- Permafrost: All land based areas above high tide a natural hazard area for permafrost,
- Ice Hazards: All offshore areas for ice hazards.
- Uses and activities that could be proposed for areas designated as natural hazard areas include: Subsistence harvests, hunting and fishing, cultural uses, commercial fishing, independent backcountry recreation, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, remote camps, and off-road travel.