Draft Supplemental Environmental Assessment

Temporary Barge Channel and Landing, and Isaac Lake Material Site in Support of the Kotzebue Airport and Runway Safety Area Improvements - Stage III Project

Kotzebue, Alaska

November 2013
State Project Number: 63851
DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

Temporary Barge Channel and Landing, and Isaac Lake Material Site
Kotzebue Airport and Runway Safety Area Improvements - Stage III Project
State Project Number: 63851

Prepared for:

United States Department of Transportation
Federal Aviation Administration
222 West 7th Avenue
Anchorage, Alaska 99513-7587

On behalf of the sponsor:

State of Alaska Department of Transportation & Public Facilities
Northern Region
2301 Peger Road
Fairbanks, Alaska 99709

Prepared by:

USKH Inc.
544 4th Avenue, Suite 102
Fairbanks, Alaska 99701
Phone (907) 452-2128
Fax (907) 452-4225

The Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official

Responsible FAA Official Date

The following individuals may be contacted for additional information concerning this document:

Bruce Greenwood Brett Nelson
Environmental Protection Specialist Northern Region Environmental Coordinator
Federal Aviation Administration Alaska Department of Transportation
Airports Division and Public Facilities
222 W. 7th Avenue 2301 Peger Road
Anchorage, Alaska 99513 Fairbanks, Alaska 99709
Telephone: (907) 271-5439 Telephone: (907) 451-2238
# TABLE OF CONTENTS

1 INTRODUCTION ................................................................................................................. 1  
1.1 Background History of the Barge Channel and Landing and the Material Site Proposal .. 1  
1.2 Purpose and Need ........................................................................................................... 2  

2 PROPOSED ACTION .......................................................................................................... 4  
2.1 Isaac Lake Material Site ................................................................................................. 4  
2.2 Temporary Barge Channel and Landing ......................................................................... 5  

3 ALTERNATIVES ................................................................................................................. 7  
3.1 No Action Alternative .................................................................................................... 7  
3.2 Proposed Action Alternative ......................................................................................... 7  

4 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION ..................................................................................................................... 10  
4.1 Overview ....................................................................................................................... 10  
4.2 Coastal Resources ......................................................................................................... 10  
4.3 Compatible Land Use ..................................................................................................... 11  
4.4 Construction ................................................................................................................. 13  
4.5 Fish, Wildlife, and Plants ............................................................................................... 16  
4.6 Floodplains .................................................................................................................. 18  
4.7 Hazardous Materials, Pollution Prevention, and Solid Waste ....................................... 19  
4.8 Historic, Architectural, Archaeological, and Cultural Resources .................................. 21  
4.9 Wetlands and Waters of the U.S. .................................................................................. 22  
4.10 Socioeconomic Impacts and Environmental Justice .................................................... 24  
4.11 Summary of Environmental Commitments .................................................................. 25  

5 PUBLIC INVOLVEMENT AND AGENCY COORDINATION ..................................... 27  

6 LIST OF PREPARERS ...................................................................................................... 31  

7 FIGURES ............................................................................................................................. 32
Tables

Table 1: Public Involvement Activity Summary ................................................................. 27
Table 2: Agency Coordination Activity ................................................................................. 28
Table 3: Section 106 Consultation and Consulting Parties Activity Summary ....................... 29

Figures

Figure 1: Location and Vicinity Map ..................................................................................... 33
Figure 2: Existing Conditions ............................................................................................... 34
Figure 3: Proposed Action from the 2012 Final Environmental Assessment ....................... 35
Figure 4: Plan View of the Material Site and Haul Route .................................................... 35
Figure 5: Typicals of the Material Site and Haul Road ........................................................ 36
Figure 6: Plan view of the Temporary Barge Channel and Landing .................................... 37
Figure 7: Potential Haul Routes ........................................................................................... 38
Figure 8: Typical Sections of the Temporary Barge Channel and Landing ....................... 39
Figure 9: Conceptual Barge Channel and Landing Photos ................................................ 40

APPENDICES

Appendix A: Public Involvement Records
Appendix B: Agency Consultation and Coordination
Appendix C: Section 106 Consultations and Coordination
Appendix D: Permits
# LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADEC</td>
<td>Alaska Department of Environmental Conservation</td>
</tr>
<tr>
<td>ADF&amp;G</td>
<td>Alaska Department of Fish and Game</td>
</tr>
<tr>
<td>APDES</td>
<td>Alaska Pollutant Discharge Elimination System</td>
</tr>
<tr>
<td>APE</td>
<td>Area of Potential Effect</td>
</tr>
<tr>
<td>ATV</td>
<td>All-Terrain Vehicle</td>
</tr>
<tr>
<td>BMPs</td>
<td>Best Management Practices</td>
</tr>
<tr>
<td>Brice</td>
<td>Brice, Inc.</td>
</tr>
<tr>
<td>CGP</td>
<td>Construction General Permit</td>
</tr>
<tr>
<td>cy</td>
<td>cubic yards</td>
</tr>
<tr>
<td>DOT</td>
<td>U.S. Department of Transportation</td>
</tr>
<tr>
<td>DOT&amp;PF</td>
<td>Alaska Department of Transportation and Public Facilities</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>EFH</td>
<td>Essential Fish Habitat</td>
</tr>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>ft</td>
<td>feet or foot</td>
</tr>
<tr>
<td>FONSI</td>
<td>Finding of No Significant Impact</td>
</tr>
<tr>
<td>GA</td>
<td>General Aviation</td>
</tr>
<tr>
<td>KIC</td>
<td>Kikiktagruk Inupiat Corporation</td>
</tr>
<tr>
<td>KSFA</td>
<td>Kotzebue Sound Fishermen’s Association</td>
</tr>
<tr>
<td>MLLW</td>
<td>Mean Low Low Water</td>
</tr>
<tr>
<td>MOA</td>
<td>Memorandum of Agreement</td>
</tr>
<tr>
<td>MMPA</td>
<td>Marine Mammal Protection Act</td>
</tr>
<tr>
<td>NAB</td>
<td>Northwest Arctic Borough</td>
</tr>
<tr>
<td>NAVAIDs</td>
<td>Navigational Aids</td>
</tr>
<tr>
<td>NMFS</td>
<td>National Marine Fisheries Service</td>
</tr>
<tr>
<td>NVK</td>
<td>Native Village of Kotzebue</td>
</tr>
<tr>
<td>PVC</td>
<td>Polyvinyl chloride</td>
</tr>
<tr>
<td>RSA</td>
<td>Runway Safety Area</td>
</tr>
<tr>
<td>ROW</td>
<td>right of way</td>
</tr>
<tr>
<td>SEA</td>
<td>Supplemental Environmental Assessment</td>
</tr>
<tr>
<td>SHPO</td>
<td>State Historic Preservation Office</td>
</tr>
<tr>
<td>U.S.</td>
<td>United States</td>
</tr>
<tr>
<td>USACE</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>USFWS</td>
<td>U.S. Fish and Wildlife Service</td>
</tr>
</tbody>
</table>
In July 2012, the Federal Aviation Administration (FAA) approved the Final Environmental Assessment (EA) and signed a Finding of No Significant Impact (FONSI) for the Kotzebue Airport and Runway Safety Area (RSA) Improvements - Stage III project (No. 63851) (hereafter, called the Kotzebue Airport Project). The purpose of the project is to enhance safety at the Kotzebue Airport by bringing the runway safety area (RSA) into compliance with FAA standards to the extent practicable based on available funding.

While the original purpose and need for the project has not changed since the Final EA and FONSI, the chosen contractor for the project, Brice, Inc. (Brice), proposes to Alaska Department of Transportation and Public Facilities (DOT&PF), the airport sponsor, two additional project elements: 1) extraction of material from a gravel mining site on the airport property to acquire needed fill and, 2) construction of a temporary barge channel and landing at the airport to bring in the remaining fill that is needed. Brice’s proposal differs from the method and location approved in the Final EA and FONSI, which involved obtaining all needed material outside of Kotzebue, barging that material and the needed equipment to construct the Kotzebue Airport Project to existing barge landings on the north side of Kotzebue, and hauling them through the City of Kotzebue to the airport project site. The Final EA included the use of Best Management Practices (BMPs) to minimize impacts to the community from dust, noise, and other temporary construction impacts associated with hauling through the city.

1.1 Background History of the Barge Channel and Landing and the Material Site Proposal

One previously considered alternative for delivering equipment and material to the airport (as described in the Draft EA published on August 17, 2011) was use of a proposed, temporary barge channel and landing on airport property south of the currently proposed temporary barge channel and landing, and which would have been constructed off the west end of the main runway into Kotzebue Sound. That temporary airport barge channel would have been constructed perpendicularly to coastal wave energy, and dredged materials from its excavation would have been side cast into Kotzebue Sound to allow for their natural re-deposition within the channel during subsequent winter storms. Construction and use of that temporary airport barge channel and landing was proposed as an alternative to using existing barge landings on the north side of the City of Kotzebue and hauling equipment and material through city streets.

The temporary airport barge channel and landing alternative were considered, though not carried forward to the Final EA because of public concerns over their effects on navigation arising from their potential altering a natural longshore channel paralleling the Kotzebue shoreline and used by boaters to access areas south of the airport. Instead, the DOT&PF concluded and the Final EA approved that all needed material and equipment could be brought by barge to existing barge landings on the north side of the City of Kotzebue and hauled through city streets (see Section 4.4.1 of the Final EA). After the Final EA and FONSI was published, Brice, the selected contractor for the project, now proposes the construction of a temporary barge channel and landing at the airport that incorporates design changes (described in detail in Section 3.2) intended to resolve previous public concerns (see Appendix B, Public Involvement Records, of the Final EA).

Brice also proposes excavation of a material site, located south of Isaac Lake on airport property (see Appendix A of this document for Brice’s April 18, 2013 scoping letter) and Brice elected to utilize this site in their bid. Brice determined that approximately 140,000 cubic yards (cy) of borrow, can be extracted from the “Isaac Lake Material Site” The Isaac Lake Material site is not suitable to meet all material needs for the Kotzebue Airport Project, other materials such as subbase aggregate and erosion
protection stone would still need to be imported from off-site. Therefore, the proposed airport barge channel and landing is necessary to provide materials for the project from off-site.

In the contract and bidding process, the DOT&PF stated:

“A material site within the southern portion of the airport property is identified in the May 2012 Kotzebue Airport Safety Area Improvements Geotechnical Report. While this site is available to Contractors for use on this project, this site has not been environmentally cleared by the Department. The Contractor will be required to obtain all environmental permits and clearances required to mine this site. At a minimum, this may include:

1) City of Kotzebue coordination: This site is located adjacent to a Sewage Lagoon that is leased and operated by the City of Kotzebue. The Contractor shall honor current lease boundaries, avoid interference with sewage lagoon infrastructure, ensure all mining is completed to not adversely affect the integrity or operation of the Sewage Lagoon, and comply with any permit stipulations associated with the Sewage Lagoon.

2) Utilities in this area include overhead power. Any utilities that may be present in this area are required to be located and avoided by the Contractor.

3) It is anticipated that this area may contain wetlands. All delineations and permitting associated with wetland impacts are the responsibility of the Contractor. The Contractor shall be responsible for any compensatory mitigation that may be associated with mining of this area.

4) This area has not been surveyed for archaeological or cultural clearances. This area may contain grave sites. The Contractor is responsible for all State agency, Federal agency, and local government consultations needed to obtain concurrence for a resolution of effects to cultural and archaeological resources, and the Native American Graves Protection Act. The Contractor shall be responsible for any compensatory mitigation that may be associated with mining of this area. The document “Memorandum of Agreement between the Federal Aviation Administration, and the Alaska State Historic Preservation Officer Pursuant to 36 CFR Part 800.6(c) regarding the Kotzebue Airport and Runway Safety Area Improvements Project” does not address this area.”

A Draft Supplemental EA (SEA) addressing only the proposed temporary airport barge channel and landing was published on July 3, 2013. It was published without an assessment of the Isaac Lake Material Site proposal because the FAA was concurrently evaluating whether the temporary barge channel and landing proposal was eligible as an independent action for which an SEA could be published separately. Ultimately, the FAA decided that the two proposals were connected actions under the National Environmental Policy Act (NEPA) because they are both proposed in support of the Kotzebue Airport Project. This Draft SEA, therefore, provides an environmental assessment for both the temporary airport barge channel and landing proposal and the Isaac Lake material site proposal.

1.2 Purpose and Need

The Kotzebue Airport Project’s original purpose and need are unchanged. The purpose and need for the project is to improve the RSA to comply with FAA design standards, improve the alignment of a roadway that obstructs active airspace, and improve the security and safety of the airport by installing perimeter fencing, upgrading the gate system and navigational aids (NAVAIDs), repairing damaged pavement, reducing erosion, reducing wildlife hazards to aircraft, and reducing encroachment on runway surfaces.
from parked aircraft and winter snow storage. The purpose of an RSA is to provide a measure of safety in the event of an aircraft’s excursion from the runway by significantly reducing the extent of personal injury and aircraft damage during overruns, undershoots and veer-offs.
2 PROPOSED ACTION

The Proposed Action, as described in the Final EA and FONSI dated July 12, 2013, includes the following elements (see Figure 1 for a location and vicinity map, Figure 2 existing conditions, and Figure 3 for the approved Proposed Action; all figures are found in Section 7 of this SEA):

- Establish a 400-foot (ft) long west RSA by constructing an 80-ft embankment into Kotzebue Sound and shifting the Runway 9 threshold 200 ft east.
- Realign the existing access road around the perimeter of the west RSA and relocate the southern portion of the access road within the FAA’s property boundary. Armor rock shore protection would be placed along the portion of the access road realigned in the Kotzebue Sound.
- Dredge a shallow channel around the western embankment extension and access road in Kotzebue Sound to speed the natural re-establishment of the longshore channel.
- Improve an existing beach access site north of the runway by constructing a paved access driveway to the existing beach ramp.
- Establish a 400-ft long east RSA by constructing a 400-ft embankment across Kotzebue Lagoon and shifting the Runway 27 threshold 200 ft east. A new channel, approximately 125 ft wide at the water’s surface and 30 ft wide at the bottom, would be excavated around the embankment extension to maintain hydraulic function, fish passage, and boat access in the lagoon.
- Remove obstructions to the Runway 27 approach airspace by excavating material from the eastern hillside.
- Place unusable and excess material generated from the excavation of the eastern hillside in various areas of open water areas for a variety of safety improvements (e.g., to reduce erosion, reduce wildlife hazards, and reduce encroachment on runway surfaces from parked aircraft and winter snow storage).
- Expand an existing Kikiktagruk Inupiat Corporation (KIC) disposal site to accommodate unusable and excess material generated from excavation of the lagoon channel and eastern hillside.
- Improve and replace NAVAIDs.
- Improve airport fencing and gates.
- Repair pavement cracks on operational surfaces.
- Relocate utilities as needed due to the construction of the western embankment.
- Acquire property easement from the FAA and purchase property from the City of Kotzebue for the west embankment extension and relocated access road.

DOT&PF contracted to have the needed materials, now estimated at 377,325 tons, for construction of the Kotzebue Airport Project to be supplied by the chosen contractor. The Final EA stated that imported material would be delivered to barge landings on the north side of the City of Kotzebue and hauled through city streets to the airport.

2.1 Isaac Lake Material Site

The alternative material site identified in section 1.1, is located on DOT&PF Kotzebue Airport property south of Isaac Lake, west of the crosswind runway, and adjacent to the west berm of the City of Kotzebue’s sewage lagoon (Figure 4). In order to utilize the potential Isaac Lake Material Site, Brice with DOT&PF proposes the following action elements (see Figures 4 and 5):

- Excavate approximately 140,000 cy of material to depths of 0.5 – 20 ft below the existing ground surface within approximately 8.5 acres of land.
- As a result of the potential excavation, the surface area of Isaac Lake may be enlarged or a pond would be created south of the lake, depending on the extent of suitable material that can be mined.
Extracted gravel would be processed on-site and used to construct the project as described in the 2012 EA.

To avoid airspace incursions, staged equipment and overburden stockpiles would be temporarily placed not more than 20 ft above existing grade within the boundaries of the material site.

The existing road surface from the proposed material site through the airport would serve as a temporary haul route, and be widened to 30 ft where needed to accommodate construction vehicles. Most of the haul route would be within previously developed road and airport surfaces.

The material site would be reclaimed in phases as its excavation progresses. Reclamation would include grading final slopes to no steeper than 3:1, spreading of the overburden on slopes, and seeding with a certified weed-free seed mix. If it is determined by FAA and DOT&PF that escapement slopes are necessary, some type of escapement slope will be added to the design. On its eastern perimeter adjacent to the sewage lagoon, slopes would be graded to a 3:1, and a 30-ft wide separation dike left between the limits of excavation and the sewage lagoon to protect the sewage lagoon’s integrity, as recommended in a Shannon & Wilson’s geotechnical report in Appendix D. See Figure 5.

The 140,000 cy of borrow proposed for removal from the Isaac Lake site represents about 71 percent of all the materials needed for the Kotzebue Airport Project. These mined materials would be transported to the project site via a proposed haul route that parallels the west side of the proposed material site and Isaac Lake along existing access roads (Figure 4). Portions of the proposed haul route would use roads that are currently submerged along the shore of Isaac Lake. For these portions, use of the haul route would require additional filling into Isaac Lake or may require lowering the lake level 2 to 3 feet to expose the existing submerged road.

2.2 Temporary Barge Channel and Landing

Material required for the Kotzebue Airport Project and not supplied by the Isaac Lake Material Site would need to be imported by barge. Rather than barging these materials and the equipment to existing barge landings on the north side of the City of Kotzebue and hauling through city streets, Brice proposes construction of a temporary barge channel and landing at the airport to import them directly to the project site. The proposed temporary barge channel and landing is located at the Kotzebue Airport on the shore of Kotzebue Sound, west of the aircraft parking apron and directly south of the planned boat ramp (Figure 6). The proposed action elements include (Figures 6 – 9):

- Excavation of an approximately 100 ft wide by 800 ft long submarine channel to a depth of 5 – 6 ft below mean lower low water (MLLW) of the existing submerged bottom. The proposed channel would extend northwest into Kotzebue Sound from the proposed barge landing, and cover a sea floor area of approximately 1.8 acres. Excavation would occur on the ice in the spring prior to break up depending on ice conditions. Excavation would be accomplished by operating an excavator on the ice and using excavated ice to create berms that would isolate the work area until completion of the submarine channel excavation. Reflective cones would be placed on top of the bermed ice to prevent pedestrian or vehicle traffic from entering the work area.

- Removal and disposal of the excavated material from the barge channel in a location permitted by USACE permit POA-1986-768-M6, such as the airport infield fill areas, by either or both of the following means: a) barging the material to an existing barge landing on the north side of the City of Kotzebue, where material would be offloaded and hauled by truck through city streets to disposal areas (truckloads required would be approximately 12 percent of the estimated 24,500 required by the other currently approved method); or b) placement of the material in trucks capable of entering the nearshore area, which would haul directly to the permitted disposal areas without hauling through city streets.
• Placement of 200 cubic yards cy of 3-inch minus material to construct a temporary barge ramp on airport property that would be removed after barging is complete.
• Burial of two concrete-filled containers within the active beach to serve as temporary barge anchors (removed after barging is complete).
• Temporary anchorage of a smaller “spud barge” offshore to assist in holding the larger, moored barges in place.
• Occasional maintenance dredging may be required to keep the barge channel open, as storm action can refill the channel. Maintenance dredging may occur during the summer months during ice free conditions by a combination of: a) operating an excavator from shore and/or from within nearshore areas; or b) operating an excavator from a barge.
• Survey and reclamation of the barge channel and active beach area to natural conditions as required by USACE permit POA-1986-768-M6.

For conceptual purposes, see Figure 9 for photos that show an actual 2008 barge channel and landing in Kivalina, Alaska.

Brice would coordinate all barge channel construction and barging operations with the Kotzebue Sound Fishermen’s Association (KSFA) to avoid barge operations during commercial fishing windows and minimize impacts to fishermen. In the event that a scheduling conflict becomes unavoidable, Brice would use an existing barge landing on the north side of the City of Kotzebue to dock, unload, and haul material through city streets. Brice anticipates that by approval of the proposed temporary airport barge channel and landing and the material site, Brice can reduce the total number of truck hauls through city streets to only 12 percent of the estimated 24,500 hauling trips required by the other currently approved method. All barging operations are expected to be complete by October 5, 2014. After barging is complete, the barge channel would not be mechanically refilled, but allowed to be reclaimed naturally with the sea bottom becoming restored to its equilibrium state through ongoing coastal processes. Brice proposes to begin the dredging of the barge channel after August 31, 2013 after the commercial fishing season is over, or begin and complete construction before the new 2014 fishing season begins (usually opening around July 10th and closing on August 31st). It is possible that occasional maintenance dredging may be required to keep the barge channel open, as storm action can refill the channel. Potential maintenance dredging would not occur without further coordination with the KSFA to avoid fishing windows, or would occur outside of the commercial fishing season set by the Alaska Department of Fish and Game (ADF&G).

2.3 Identification of Federal Action Requested

The federal action remains the same as the 2012 EA and FONSI which is approval of the revised Airport Layout Plan, and participation in funding through the FAA’s Airport Improvement Program for the proposed improvements to Kotzebue Airport. This recent proposal for the barge landing and the excavation of the materials is a connected action to the Kotzebue Airport Project.
3 ALTERNATIVES

3.1 No Action Alternative

The No Action Alternative would involve no change in the FAA’s currently approved direction as described in the Final EA and FONSI. The No Action Alternative involves barging 367,325 tons of material to an existing barge landing on the north side of the City of Kotzebue and hauling that material in approximately 24,500 truckloads through the City’s streets to the project site. Haul routes through the City of Kotzebue were not described in the Final EA. Per DOT&PF contract, Brice was informed that they could use the two most logical haul routes: 1.5 miles of Third Avenue and 1.5 miles of Fifth Avenue, as they are paved, wider, and the least residential of other Kotzebue streets. However, the Third Avenue route passes by three educational campuses and the Fifth Avenue route provides direct access to the hospital. Hauling hours would be limited to between 6 a.m. to 11 p.m. This alternative would result in a temporary amount of noise, dust, traffic congestion, and road use impacts to the City of Kotzebue for two years. The No Action Alternative meets the purpose and need to enhance safety at the airport by bringing the RSA in compliance with FAA standards to the maximum extent practicable based on available funding.

3.1.1 Permits or Clearances

The following permits and/or clearances listed below have already been obtained for the Kotzebue Airport Project:

- USACE Section 10/404 permit for fill in wetlands and navigable waters of the United States (U.S.).
- Alaska Department of Environmental Conservation (ADEC) 401 Certificate of Reasonable Assurance to certify that the proposed project would meet State water quality standards.
- Establishment of a Memorandum of Agreement (MOA) with the State Historic Preservation Office (SHPO) and interested parties to mitigate the adverse effect to cultural and historic resources.
- Consultation with the U.S. Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) to comply with Section 7 of the Endangered Species Act.
- Additional consultation with the NMFS for newly listed species to comply with Section 7 of the Endangered Species Act.
- Northwest Arctic Borough (NAB) Title 9 Permit for construction within the NAB.
- City of Kotzebue Building Permit and lease agreement for construction within the City’s tidelands.
- Coverage under ADEC’s Alaska Pollutant Discharge Elimination System (APDES) Construction General Permit (CGP) for disturbing more than 1-acre of ground.
- Alaska Department of Fish and Game (ADF&G) Division of Habitat Fish Habitat Permit for construction in Kotzebue Lagoon and “OTZ Pond.”

3.2 Proposed Action Alternative

The Proposed Action resolves public concerns about both the environmental impacts of hauling approximately 24,500 truckloads of material and equipment through the city streets (see the May 29, 2013 Public Meeting Summary in Appendix A) and the adverse effects to the longshore channel from previous designs of the barge channel construction proposed in the August 17, 2011 Draft EA. The Proposed Action meets the purpose and need to enhance safety at the airport by bringing the RSA in compliance with FAA standards to the maximum extent practicable based on available funding.
3.2.1 Isaac Lake Material Site

Excavation of a material site south of Isaac Lake on airport property would eliminate the need to barge in 140,000 cy (260,000 tons) of borrow from outside Kotzebue to the project site via existing barge landings on the north side of Kotzebue, and hauling that material through the City of Kotzebue as approved by the Final EA and FONSI (the No Action Alternative). The 140,000 cy of borrow represents about 71 percent of all materials needed for the Kotzebue Airport Project. As a consequence of the proposed action, approximately 17,333 truckloads of borrow would no longer need to be hauled through city streets causing resulting air quality impacts, noise impacts, and traffic congestion to Kotzebue residents. The Proposed Action would result in loss of 1.1 acres of wetlands and waters of the U.S. due to fill placement, but there would be a net increase of 8.6 acres of wetlands from the conversion of low value wetlands and uplands to higher value lacustrine wetlands or palustrine pond wetlands. Excavation within the Kotzebue Archaeological District would have an adverse effect on historic properties in the district.

3.2.2 Temporary Barge Channel and Landing

The remaining 29 percent of material needed for the Kotzebue Airport Project which cannot be supplied by the proposed Isaac Lake Material Site would need to be imported by barge. Those remaining materials are comprised of various sized rock, from asphalt rock to armor stone, with an estimated total weight of 117,325 tons. Rather than bargeing these required materials to an existing barge landing on the north side of the City of Kotzebue and hauling them through city streets, Brice proposes to construct a temporary barge channel and landing at the airport to land material and equipment directly at the Kotzebue Airport Project site. While not all remaining fill and equipment can be brought directly to the proposed airport barge landing as barging operations to that landing could potentially conflict with daily fishing windows, Brice anticipates the Proposed Action would reduce truck hauls through city streets by 88 percent as compared to what is currently approved in the No Action Alternative. Thus, impacts to air quality, noise and traffic congestion would be greatly reduced for residents of Kotzebue in comparison to the No Action Alternative.

3.2.3 Coastal Engineering and Analysis

The temporary barge channel and landing have undergone a number of revisions in comparison to the design presented in the Draft EA for the Kotzebue Airport Project in order to reduce concerns with navigability, erosion, longshore transport, and long term viability of the longshore channel. The most notable design changes made by Brice and the DOT&PF are as follows:

- Dredged material would be removed rather than side casted. Removal of the dredged material would allow boaters to navigate freely as before; whereas side casting dredged material would have mounded up material along both sides of the barge channel, creating a navigational hazard and preventing boaters from accessing the longshore channel. Mounds could have also impeded or temporary altered the course of natural longshore currents. With the improved design, it is highly unlikely that longshore currents would be deflected by, or entrained along the barge channel. Consequently it is anticipated that boaters would be able to navigate in an unaltered manner.
- The barge channel would not be dredged above MLLW. If the channel were dredged above this height, adjacent beach material may migrate into the barge channel, leading to erosion of the beach.
- The barge channel would be oriented across the direction of wave propagation rather than in line with wave propagation. This would reduce the propensity for larger waves to form and reach the shoreline, potentially causing beach erosion. A channel dredged across the direction of wave propagation would have little effect on, and may even reduce the wave height.
• The barge channel would be orientated to follow the natural flow lines of the longshore channel, to the extent that the natural flow lines have been identified by local, knowledgeable individuals, survey data, and the fisherman’s association. This would minimize alterations of longshore currents.

• A barge landing would be constructed; however, to reduce the potential of erosion it would not run the full distance from the water to the upper beach, which could block the northward flow of sediment along the beach above water level.

• Two concrete-filled containers would be temporarily buried within the active beach to serve as barge anchors to minimize erosion. Barge anchors would allow barges to tie up, so that tug operators can stop engines after docking rather than continuing to use motor propulsion to hold the barge’s position on the shore. Motoring in place with the vessel’s powerful engines would have led to repeated unnecessary erosion of the shoal through prop wash.

• After barging operations are complete, natural processes would re-establish equilibrium depths of the Kotzebue Sound in the area of the temporary barge channel.

• Barge channel orientation has been revised to angle across the direction of the dominant southwest wave propagation to shorten channel distance to deep water thereby minimizing dredging.

• The barge channel and landing would be located just west of the aircraft parking apron and directly south of the planned boat ramp, which is farther north than as proposed in the Draft EA. By locating the barge channel and landing farther north, excavation equipment would not act as an airspace obstruction, and construction can be performed without consequential closures of the main runway.

Minor erosion is anticipated at the seaward mouth of the barge channel where it connects, with the deeper Noatak Channel, due to barging operations, currents generated by storms, and constantly varying velocities due to non-steady-state flow conditions. With these proposed design changes to the barge channel and landing, no adverse short term or long term impacts are anticipated to the existing longshore channel, planned longshore channel, access through the planned longshore channel, or to the shoal or beach due to erosion. The design and configuration of the proposed barge channel, and the minimal relative haul through city streets as compared to the No Action Alternative, received support and no objection from the community of Kotzebue, City leaders, NAB, and the Native Village of Kotzebue (NVK) at the May 28, 2013 public meeting (see meeting minutes in Appendix A).

3.2.4 Permits or Clearances

The following permits and/or clearances listed below are required for the temporary barge channel and landing to comply with all applicable federal, state, and local regulations:

• USACE Section 10/404 permit for the placement of fill in wetlands and construction within navigable waters of the U.S.

• Alaska Department of Environmental Conservation (ADEC) 401 Certificate of Reasonable Assurance to certify that the proposed material site would meet State water quality standards.

• Consultation with the USFWS and the NMFS to comply with Section 7 of the Endangered Species Act.

• Section 106 consultation with the SHPO and other consulting parties, the SHPO’s concurrence on a finding of effect to historic properties, and ratification of a MOA to offset any adverse effects.

• City of Kotzebue building permit and tidelands lease agreement for the barge channel and landing.

• Coverage under ADEC’s APDES CGP for disturbing more than 1-acre of ground.
4 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION

4.1 Overview

Chapter 4 of the Final EA describes the affected environment and provides an environmental assessment of the approved Kotzebue Airport Project. Information presented in the Final EA and as qualified in the July 2012 FONSI remains valid; however, adding the proposed Isaac Lake Material site and temporary airport barge channel and landing to the existing project environmental documentation requires some additions be made to the descriptions of the affected environment and associated environmental analyses. Moreover, as part of the No Action alternative assessment, Chapter 4 of this SEA will take another detailed look at the approved method of getting equipment and material to the project site, which involves hauling material approximately 1.5 miles from an existing barge landing on the north side of the City of Kotzebue to the airport project area.

The Proposed Action has no permanent impacts in the following resource categories; therefore, this SEA makes no additions to what was stated for these resources in the Non-issue Resource Categories Table of the Final EA: Air Quality, U.S. Department of Transportation (DOT) Act, Section 4(f), Farmlands, Natural Resource and Energy Supply, Light Emissions and Visual Impacts, Noise, Secondary (Induced) Impacts, Children’s Environmental Health and Safety Risks, Water Quality, and Wild and Scenic Rivers. Only those impact categories in the Final EA that may require additional consideration due to the proposed barge channel and landing are discussed.

4.2 Coastal Resources

The information presented in the Final EA on the affected environment, and the impact analysis of what this SEA considers as the No Action Alternative, remain current and valid. In the SEA’s Section 4.2, Coastal Resources, this document makes no changes to Section 4.2, Coastal Resources, of the Final EA, except the following additions:

4.2.1 Affected Environment

The shoals and the beach adjacent to the City of Kotzebue are a valued resource to the community because they provide a buffer for developed areas against storm surges and scouring ice that have historically caused a considerable amount of ongoing erosion in Kotzebue. Natural erosion became such an issue along Shore Avenue north of the airport that the roadbed became undermined and several homes and businesses along the avenue were jeopardized. The DOT&PF and Federal Highway Administration consequently installed riprap along the beach and an extensive sheet pile wall along Shore Avenue to protect this area against further erosion.

4.2.2 No Action Alternative

The No Action Alternative includes hauling approximately 377,325 tons of material in approximately 24,500 truckloads through the City of Kotzebue over a two-year period. There are no direct, indirect, or cumulative impacts to coastal resources from hauling all equipment and material from an existing barge channel and landing on the north side of the City of Kotzebue to the airport on the south side of the city as this action occurs in a previously developed environment.
4.2.3  Proposed Action

Isaac Lake Material Site

Direct, Indirect, and Cumulative Impacts: Coastal resources would be impacted as a result of the Proposed Action. Impacts to access are discussed in Section 4.4. Impacts to fish, wildlife, and habitat are discussed in Section 4.5. Impacts to floodplains are discussed in 4.6. Impacts to wetlands are discussed in Section 4.9. Impacts to subsistence activities are discussed in Section 4.10.

Temporary Barge Channel and Landing

Direct and Indirect Impacts: This project element would result in the removal of 5,150 cy of marine sediments from tidelands within a 1.8-acre area. Construction of the proposed barge channel and landing is not anticipated to have any long term adverse effects on the planned longshore channel as it is unlikely that longshore currents would be: a) impeded by the barge channel, b) deflected along the barge channel, or c) entrained down the barge channel because excavated material would not be permanently side casted, but removed. Neither would the barge channel or landing have any long term effects on access to the planned new longshore channel, because mounds of side casted material would not be left behind as previously considered and rejected during review of the Draft EA. No erosion along the beach north of the airport is anticipated because the barge channel would not extend above MLLW such that beach material would migrate into the channel, resulting in erosion of the beach. Minor erosion is anticipated at the seaward mouth of the barge channel where it connects with the deeper Noatak Channel due to barging operations, currents generated by storms, and constantly varying velocities due to non-steady-state flow conditions.

Cumulative Impacts: Impacts to the tidelands from the previous Shore Avenue Project and the proposed barge channel and landing project would cumulatively impact tidelands. However, the additional effects of the temporary barge channel are minor.

4.3  Compatible Land Use

This SEA makes no changes to Section 4.3, Compatible Land Use, of the Final EA, except the following additions.

4.3.1  Affected Environment

Isaac Lake Material Site

Kotzebue Airport, owned by the State of Alaska and operated by the DOT&PF, is designated by the State as an area for airport operations. Within the airport property boundaries are a few parcels owned by other entities besides the State of Alaska (see Appendix A of the Final EA for the Property Plan). To the north of Isaac Lake, the FAA owns Tract 11 (U.S.S. No. 2645) and Tract VIII, Parcel A. KIC owns Tract VIII, Parcel B, which includes the western portion of Isaac Lake and the land west of it. To the south of Isaac Lake, Tract I (Tract A, U.S.S. No. 3554) is owned by the State.

The area southwest of OTZ Pond, west of the Kotzebue Lagoon, and east of the Kotzebue Sound has seen a variety of uses by local residents, the City, and the airport. Isaac Lake has been expanded several times and drained due to past mining activities and has been used for unofficial float plane operations, according to the Ralph Wien Memorial Airport Master Plan Update (1998). To the east of Isaac Lake is the airport’s crosswind runway 18-36. To the west of Isaac Lake along the bluff above the beach, are numerous tent camps where fishermen set nets in Kotzebue Sound and dry their fish or marine mammal meat. The beach and dirt roads in the area are used by local residents to access their camps and areas south of the airport property. On some lands to the southwest and farther to the south of Isaac Lake are two sewage lagoon cells, which the City leases from DOT&PF.
Temporary Barge Channel and Landing
A portion of the proposed barge channel would be constructed within tidelands owned by the City of Kotzebue. The remaining, most landward portion of the proposed barge channel is located in an area perpetually leased to the DOT&PF by the City for airport purposes under the 1962 Interagency Land Management Transfer for these tidelands. A property plan showing land ownership for the barge channel is located in Appendix A of the Final EA.

Haul routes through the City were not described in the Final EA. Per DOT&PF contract, Brice was informed that they could use the two most logical haul routes, which are 1.5 miles of Third Avenue and Fifth Avenue, as they are paved, wider, and the least residential of Kotzebue streets. The Third Avenue route passes by three educational campuses and the Fifth Avenue route provides primary access to the hospital. Pedestrian, automobile traffic all-terrain vehicles (ATVs) and bicycle frequently use both routes.

Alaska State Shipping Regulations regulate truck hauling operations in the State of Alaska. The City of Kotzebue Municipal Code may apply to the truck hauling operations through Kotzebue's city streets. The City’s code limits noise levels of trucks over 10,000 pounds to 87 decibels measured at 50-ft maximum allowable limit, and 93 decibels measured at 25-ft maximum allowable limit.

Both sewer and water mains cross underneath Third and Fifth avenues. According to the City of Kotzebue Comprehensive Plan (2012), water mains underneath the haul routes are undersized 4-inch polyvinyl chloride (PVC) pipes that are deteriorating.

4.3.2 No Action Alternative

Direct and Indirect Impacts: Truck hauling operations through the City of Kotzebue would comply with the Alaska State Shipping Regulations and City of Kotzebue Municipal Code. Street-legal, state-licensed trucks with loads contained and confined would be used to haul all equipment and fill material from an existing barge landing to the project site. The 24,500 truckloads hauled through the City of Kotzebue would add to the traffic volume of the city streets over a two-year period.

Cumulative Impacts: The project does not conflict with future project land use plans and therefore, is not anticipated to contribute any cumulative impacts regarding compatible land use.

4.3.3 Proposed Action

Isaac Lake Material Site
Direct, Indirect, and Cumulative Impacts: Brice has signed a temporary lease agreement with the KIC for use of their property to widen and use the proposed haul route. By contract, Brice was given authorization by the DOT&PF to mine material on the DOT&PF’s Isaac Lake property as long as all permits and clearances are met. The northern portion of the haul route is within a Revocable Use Permit area held by DOT&PF on FAA land. The Proposed Action is compatible with land use plans, Ralph Wien Memorial Airport Master Plan Update and the Ralph Wien Memorial Airport Layout Plan (2013) and, therefore, is not anticipated to contribute any cumulative impacts regarding compatible land use. For temporary impacts due to construction, see Section 4.4.2.

Temporary Barge Channel and Landing
Direct and Indirect Impacts: At most, only about 12 percent of the number of truckloads required by the No Action Alternative (~2,940 vs. 24,500 truckloads) would need to be hauled through the City. Truck hauling operations would comply with the Alaska State Shipping Regulations and City of Kotzebue Municipal Code. During truck hauling operations, street-legal, state-licensed trucks with contained and...
confined loads would be used to haul a relatively small portion of the equipment and fill material needed for the Kotzebue Airport Project from an existing barge landing to the project site.

The remaining truck hauling operations that would haul the short distance from the proposed barge landing at the airport to other locations on the airport project may use both street-legal trucks and off-highway trucks without restricted hauling hours, but these operations would be limited to truck hauls that could begin and end on airport property to avoid violation of municipal codes. Barge operations at the airport would occur around the clock, including at night, except during time windows established to allow community fishing activities to take place unimpeded.

The proposed airport barge channel and landing would be compatible with existing land uses as the Proposed Action would not negatively affect boat access through the longshore channel or land access along the beach over the long term. A building permit and tidelands lease agreement with the City of Kotzebue has been obtained to construct the temporary barge channel and landing.

**Cumulative Impacts:** The project does not conflict with project land use plans and, therefore, is not anticipated to contribute any cumulative impacts regarding compatible land use.

### 4.4 Construction

This SEA makes no changes to Section 4.4, Construction, of the Final EA, except the following additions.

#### 4.4.1 No Action Alternative

**Direct and Indirect Impacts:** Impacts from the hauling of all equipment and material (24,500 truckloads) from an existing barge landing on the north side of the City of Kotzebue to the airport project would occur over a two-year period. The No Action Alternative would cause the following temporary construction impacts:

- **Air Quality:** The 24,500 truckloads that would be hauled through Kotzebue may increase the suspended airborne particulate load already caused by common coastal winds in the City, especially during dry conditions. This additional particulate loading would result in temporary, air quality impacts to local residents. Truck hauling would also result in a small, insignificant increase in exhaust emissions. Potential air quality effects would be temporary, occurring over a two-year period, and would be controlled by BMPs listed in Section 4.12 of the Final EA.
- **Noise:** Hauling all of the needed equipment and material through the City would temporarily increase noise along the haul route through city streets and at the airport for a period of two years.
- **Water Quality:** No water quality impacts from hauling through town are anticipated.
- **Fisheries, Subsistence:** No water quality impacts from hauling through town are anticipated.
- **Access:** City street access would continue unaffected, but traffic delays would likely occur due to occasional congestion.
- **Wildlife:** No wildlife impacts from hauling through town are anticipated on Kotzebue’s urban streets.
- **Marine Habitat:** Some marine habitat may experience erosion due to the many barge operations that would be required to bring in all equipment and fill material to an existing barge landing on the north side of town, but these effects are anticipated to be minimal.
- **Airport Operations:** Temporary vehicle and aircraft traffic delays and detours may occur during construction activities, but are expected to be minimal. Notices will be published to inform airport users in advance to avoid or minimize potential conflicts.
- **Socioeconomic:** Hiring construction workers from the Kotzebue area would locally reduce unemployment slightly during the construction period.
Cumulative Impacts: No cumulative impacts are anticipated as there are no known other construction activities that would overlap the No Action Alternative.

4.4.2 Proposed Action

Isaac Lake Material Site

Direct and Indirect Impacts: Construction impacts from the proposed Isaac Lake Material Site and haul roads would be local and temporary in nature. The Proposed Action would cause the following temporary construction impacts:

- Air Quality: The operation of heavy equipment at the material site and trucks on unpaved portions of the airport may increase the suspended airborne particulate load already caused by common coastal winds in the City, especially during dry conditions. This additional particulate loading may potentially result in temporary, negative air quality impacts to airport workers who enter the area, those that temporarily occupy nearby fish camps, or travel along nearby access roads that are nearby the material site and haul roads. Truck hauling would also result in a small, insignificant increase in exhaust emissions. Air quality effects would be temporary, occurring over a one-year period, and would be controlled by BMPs listed in Section 4.12 of the Final EA.

- Noise: Mining, processing of material, and truck hauling (no blasting would be involved) would temporarily increase noise in the airport vicinity surrounding the project area. Airport workers, temporary campers, and those travelling along nearby access roads would hear temporary increase in noise.

- Water Quality: Construction of the proposed Isaac Lake Material Site may result in some construction-related sedimentation and runoff into Isaac Lake and wetlands during excavation and fill activities. BMPs (summarized in Section 4.12 of the Final EA) would be implemented during construction and the site would be reclaimed in phases as excavation progresses to minimize erosion and sedimentation.

- Subsistence: Those subsistence hunters and fishermen (who set out their fish and game harvests to air dry in temporary camps, within the airport boundaries) that do not appropriately sheltered their harvests from fugitive airborne particulate matter which can be stirred up from local vehicles using the nearby access roads, may see a slight increase of airborne dust on drying fish and game, as a result of the excavation and hauling activities by Brice. BMPs, listed in Section 4.12 of the Final EA, would be employed to keep dust to a minimum. Air quality effects would be temporary in duration, occurring over a one-year period.

- Access: Pedestrians and vehicle operators may experience temporary traffic delays while hauling activities occurs. Flaggers would be employed to minimize delays to road access.

- Wildlife: Some species of birds and small mammals that would otherwise be present in the project vicinity may avoid the area during construction activities.

- Airport Operations: Temporary vehicle and aircraft traffic delays and detours may occur during construction activities, but are expected to be minimal. Notices will be published to inform users in advance to avoid or minimize potential conflicts.

- Socioeconomic: Hiring construction workers would reduce unemployment locally slightly during the construction period.

Cumulative Impacts: No cumulative impacts are anticipated as there are no known other construction activities that would overlap the Proposed Action.

Temporary Barge Channel and Landing
**Direct and Indirect Impacts:** Construction impacts from the proposed, temporary barge channel would be local and temporary in nature. The Proposed Action would cause the following temporary construction impacts:

- **Air Quality:** The operation of trucks on unpaved portions of the airport and Kotzebue’s dusty streets can increase the fugitive airborne particulate load already caused by common coastal winds in the City, especially during dry conditions. This additional airborne particulate loading would result in temporary, negative air quality impacts to local residents. Air quality impacts to the City of Kotzebue would be reduced substantially by limiting the number of truck hauls through town by 88 percent of the approximately 24,500 truckloads required by the No Action Alternative. Truck hauling would also result in a small, insignificant increase in exhaust emissions. Air quality effects would be temporary, occurring over a one-year period, and would be controlled by BMPs listed in Section 4.12 of the Final EA.

- **Noise:** Dredging of the proposed barge channel by excavator and directly hauling most equipment and material by truck to the project site, while hauling only a smaller, remaining portion of equipment and material through the City of Kotzebue would temporarily increase noise in the airport vicinity and along the haul route through town. However, the level and duration of noise impacts due to hauling through city streets would be reduced substantially by reducing the number of truck hauls through the City by 88 percent of the 24,500 truckloads required by the No Action Alternative.

- **Water Quality:** Construction of the proposed barge channel and landing would result in sediment being released into Kotzebue Sound, which would be controlled by operational BMPs such as phasing and dredging during low tide. Sediment loading resulting from the proposed action would add only relatively insignificant sediment load to Kotzebue Sound, which is naturally silt-laden. Sediment is expected to disperse quickly due to tidal action and other coastal currents and processes.

- **Fisheries, Subsistence:** As long as the dredging and maintenance dredging of the barge channel occurs before July 10 and after August 31st and does not impede boat traffic during daily permitted salmon fishing windows, as requested by the KSFA during the July 8, 2013 public meeting, impacts to commercial and subsistence salmon fishing would be minimal as salmon fishing activities drop off significantly after August 31st and will primarily occur during set commercial fishing opening times (see Appendix A for the May 29, 2013 and July 8, 2013 public meeting summaries). After August 31st, and before July 10th there would only be temporary, localized, minor impacts to subsistence fishermen during dredging activities; these fishermen customarily fish for other fish species in the immediate project area of the barge channel and landing. Ability to fish within this project area would be limited to periods outside of dredging- and barging-related activities. In addition, fishermen who may have fished from shore in the location of the barge landing would need to temporarily relocate from this area during dredging or barging activities. Impacts to fishermen who fish from boats are less likely as subsistence fishermen have greater site flexibility and can reposition their boats to places where the fish may move to during dredging activities.

- **Access:** Access along the beach and longshore channel may be temporarily interrupted during construction activities. Boat and land traffic would be re-routed around the barge channel and landing area during dredging, barging, and truck hauling activities. Flaggers would be employed to minimize disruptions to road access, but temporary delays may occur. A contracted pilot boat would be deployed to tow boaters who desire assistance around any docked barge. No structural sediment control device that would have an adverse effect on fish passage, marine mammal movement or boat access or transit will be placed in Kotzebue Sound.

- **Wildlife:** Some birds, land mammals, and sea mammals that would otherwise be present in the project vicinity may avoid the area temporarily during construction activities.

- **Marine Habitat:** 1.8 acres of benthic and intertidal marine habitats would be disturbed through dredging of the proposed barge channel. Erosion due to barge operations is anticipated to be minimal.
• Airport Operations: Temporary vehicle and aircraft traffic delays and detours may occur during construction activities, but are expected to be minimal. Notices will be published to inform users in advance to avoid or minimize potential conflicts.
• Socioeconomic: Hiring construction workers would reduce unemployment locally slightly during the construction period.

**Cumulative Impacts:** No cumulative impacts are anticipated as there are no known other construction activities that would overlap the No Action Alternative.

### 4.5 Fish, Wildlife, and Plants

This SEA makes no changes to Section 4.5, Fish, Wildlife, and Plants, of the Final EA, except the following additions.

#### 4.5.1 Affected Environment

**Isaac Lake Material Site**

Although Isaac Lake and areas surrounding it could provide habitat to water birds, its use is limited by disturbance from airport operations and wildlife hazing activity by airport personnel to reduce wildlife hazard risks. The lacustrine habitat of Isaac Lake has been expanded several times and drained due to previous mining activities, according to the 1998 *Ralph Wien Memorial Airport Master Plan Update*. The lake is not designated as Essential Fish Habitat (EFH), nor is there an outlet or an anadromous stream that connect to the lake. There are no fish that inhabit Isaac Lake.

**Temporary Barge Channel and Landing**

The July 2012 Final EA noted that the following species may occur in the project area and are federally listed as threatened or endangered under the Endangered Species Act: Steller’s Eider (*Polysticta stelleri*); Spectacled Eider (*Somateria fischeri*); polar bear (*Ursus maritimus*); and the bowhead (*Balaena mysticetus*), fin (*Balaenoptera physalus*), and humpback (*Megaptera novaeangliae*) whales. No critical habitat is located in the project area for any of the listed species. Critical habitat for the polar bear, which included the sea ice habitat of Kotzebue Sound, was removed by court order in January 2013. It was also stated that a rare plant with a state ranking of imperiled, Barnaby’s milkvetch (*Oxytropis arctica* variant *bamebyana*), can be found in the vicinity, but none is known to be in the project area. However, after the publishing of the Final EA and FONSI for the Kotzebue Airport Project, additional species were listed as threatened by the NMFS in December 2012. These include the bearded seal (*Erignathus barbatus*) and the ringed seal (*Phoca hispida*). These ice seals’ ranges include Kotzebue Sound. As of October 8, 2013, no critical habitat has been designated for these species. In addition, habitats that could support whales are now included in the affected environment. Previously, waters affected by the Proposed Action as published in the Final EA and FONSI only included those nearshore areas 2-3 ft in depth. Construction of the proposed, temporary barge channel would extend the 6-7 ft deep project area waters that could potentially be used by whales as habitat.

The marine environment adjacent to the airport experiences a high level of human activity year-round, and is directly adjacent to areas of commercial and industrial development. The runways of the Kotzebue Airport support an annual, average total of 60,000 flight operations (landings and take-offs). Of that total, 2,000 are by commercial and passenger air carriers; 20,000 by regional air taxi operators; 7,000 by local, general aviation (GA) aircraft; 30,000 by itinerant GA aircraft; and 1,000 by military aircraft. These operations utilize the areas directly east and west of the runway ends as low altitude approach and take-off zones, resulting in aircraft noise and motion that creates significant disturbances to resident and transient wildlife.
The area to the west of the Runway 9-27, including the beach, nearshore and offshore areas, is also a primary land and water transportation corridor connecting both commercially developed areas and subsistence use areas south of the airport to the City of Kotzebue. Local residents and visitors regularly travel this route by all manner of land vehicles, crossing the west end of Runway 9 in order to reach airport facilities, an FAA building complex, a landfill, a power-generation wind-farm, and private lands and camps to the south. During ice-free periods, commercial and subsistence fishermen use set nets and conventional rod-and-reel gear in the nearshore area, and motorized boats frequently travel the nearshore and offshore zones of this corridor. Three barge operators conduct a substantial amount of regularly-scheduled barge activities in Kotzebue Sound: (Crowley—petroleum products, Northland Services—building materials, and Drake Construction—gravel). When ice and water are present, subsistence marine mammal hunters disembark from land to sea ice by boat from the area of the planned boat ramp, and during midwinter snowmachine operators frequently drive this corridor. Consequent to existing commercial development and transportation uses, human disturbance in the marine area adjacent to the airport is frequent and nearly perpetual.

4.5.2 No Action Alternative

Threatened, Endangered, and Rare Species: Project elements located in Kotzebue Sound include placement of fill for the planned west embankment extension, access road, dredging of the longshore channel, and construction of the planned boat ramp. These elements are not anticipated to contribute significant, additional noise or disturbance to the already busy and disturbed environment. Typically, both ice seal species currently tend to avoid this area at present due to its high level of human use and disturbance. The project action elements are not anticipated to effect additional impacts that would additionally alter ice seals’ movement, distribution or access to prey. There would be no impacts to any critical habitats, as none are designated in the project area. The FAA has determined that the project action elements would not affect ice seals, whales, or their habitats. NMFS was consulted on this determination on June 21 and July 1, 2013 (see Appendix B of this SEA). The effects from the project action elements to the Steller’s Eider, Spectacled Eider, polar bear, and the protected whales were assessed in the Final EA. A June 6, 2011, consultation response letter from the USFWS concurred that these species and their critical habitats or lack thereof would not likely be adversely affected by the proposed Kotzebue Airport Project (see Appendix A of the Final EA).

4.5.3 Proposed Action

Isaac Lake Material Site

Direct and Indirect Impacts:

Fish: The Proposed Action would have no adverse effect on EFH, EFH species, or an anadromous stream. No impacts to resident fish species are anticipated.

Threatened, Endangered, and Rare Species: In a September 16, 2013 communication, the USFWS concurred with the FAA’s determination that the Proposed Action would not likely adversely affect Alaska-breeding Steller's eiders, spectacled eiders, polar bears, or their respective critical habitats (see Appendix B). In addition, the USFWS’s Conservation Planning Department stated that they had no objections to development of the proposed material site as described in an April 18, 2013 scoping letter (see Appendix B).

Habitat: A net increase of approximately 8.6 acres of lacustrine habitat for wildlife would result from the conversion of palustrine wetland habitats and uplands. However, the airport has a no-tolerance policy for wildlife in this area and conducts regular hazing operations, which negates gains or losses to wildlife depending on which habitat is favored. Impacts from the loss of palustrine habitat or the gain in lacustrine habitat are therefore considered negligible.
**Cumulative Impacts:** The cumulative effects to fish, wildlife, and habitat in this busy airport environment, when added to past and future projects in the area, are insignificant and/or minor.

**Temporary Barge Channel and Landing**

**Direct and Indirect Impacts:**

*Fish:* The Proposed Action would have no adverse effect on EFH or EFH species, according to DOT&PF analysis and consultations with NMFS (see Appendix B for record of communications). Infaunal species, non-EFH organisms that burrow and live in the 1.8 acres of marine benthic and intertidal habitats, would be lost. However, these habitats would naturally recover, and its infaunal species would reestablish themselves, within 1 to 3 years. Barge channel dredging would not displace juvenile, out-migrating salmon from their preferred route over shallow water shoals into cooler, deeper waters they are sensitive to. During construction and maintenance dredging, adult and juvenile salmon are anticipated to maneuver as necessary to the seaward or landward side of the immediate construction disturbance area to suit their thermal and other habitat needs, and adult salmon are anticipated to easily bypass docked barges after channel construction is completed. However, juvenile salmon are anticipated to aggregate beside docked barges until the barges exit the nearshore docking area. During the periods that a barge is docked for unloading, it is anticipated that obstructed juvenile salmon may be subject to some increased avian or other predation pressure; however this potential mortality is not anticipated to result in stock or population level effects. Crab migration primarily occurs farther offshore than the limits the project area; however, some crab mortality may occur in the project area during the short dredging period. This potential mortality is not anticipated to be significant to the crab population. Temporary impacts to wildlife during construction are addressed in Section 4.4.

*Threatened, Endangered, and Rare Species:* The proposed barge channel and landing are not anticipated to affect ice seals or protected whales, their access to prey, or their critical habitats. Typically, these species currently avoid this area due to its high level of human use and disturbance and there would be no impacts to their critical habitats as none are designated in the project area. The FAA has determined that the proposed barge channel and landing project elements would not affect ice seals, whales, or their habitats. NMFS was consulted on this determination on June 21 and July 1, 2013 (see Appendix B of this SEA). For species under the jurisdiction of the USFWS (Steller’s Eider, Spectacled Eider, and the polar bear), the USFWS concurred with this determination on June 19, 2013. See Appendix B for documentation of these informal consultations.

**Cumulative Impacts:** The cumulative effects to fish, wildlife, and habitat from the temporary barge channel and landing when added to past and future projects in the area are insignificant and/or minor.

### 4.6 Floodplains

This SEA makes no changes to Section 4.6, Floodplains, of the Final EA, except the following additions.

#### 4.6.1 Affected Environment

**Isaac Lake Material Site**

The Federal Emergency Management Agency (FEMA) has determined that the portion of the Baldwin Peninsula in which the proposed Isaac Lake Material Site is located is not within the 100-year floodplain. The FEMA identifies the area as within Zone C, an area with minimal flooding. Several sewage lagoon cells built and maintained by the City of Kotzebue are within the vicinity of this area.
4.6.2 No Action Alternative

Direct, Indirect, and Cumulative Impacts: The 24,500 truckloads hauled through the City of Kotzebue are within the 100-year floodplain. This would have no effect on the floodplain. See the Final EA for analysis of the effect of fill placement for the Kotzebue Airport Project in which a “no effect” determination was made.

4.6.3 Proposed Action

Isaac Lake Material Site

Direct and Indirect Impacts: The Proposed Action would result in a net increase of 8.6 acres of lacustrine wetlands by the enlargement of Isaac Lake, which would increase the flood capacity of this area.

Cumulative Impacts: The proposed material site along with the past construction of the City of Kotzebue sewage lagoon cells would increase the flood capacity of this area.

Temporary Barge Channel and Landing

Direct, Indirect, and Cumulative Impacts: The temporary barge channel and landing would be constructed within Kotzebue’s 100-year floodplain. However, no impacts to floodplains are anticipated.

4.7 Hazardous Materials, Pollution Prevention, and Solid Waste

This SEA makes no changes to Section 4.7; Hazardous Materials, Pollution Prevention, and Solid Waste; of the Final EA, except the following additions.

4.7.1 Affected Environment

Isaac Lake Material Site

The proposed material site encompasses one contaminated site listed on ADEC’s database, the Kotzebue Airport – Sewage Lagoon Drum Dump (Hazard ID #3251), which is an active site. Approximately 107 drums in various stages of degradation are located to the south of Isaac Lake and west of the northern most City sewage lagoon cell. No drums contained any liquids, but areas under some drums were stained with petroleum products. It is estimated that approximately 30 cubic yards of soil are contaminated above the ADEC soil cleanup levels. In July of 2013, Brice numbered and gathered the drums into a lined containment area on the site for future disposal. The ADEC stated that cleanup of the site would be required before the proposed excavation of this area for material could begin. The relatively new Class 2 Kotzebue landfill has the capacity to receive the drums and the contaminated soil, if they do not exceed the ADEC’s allowable contaminant levels for landfills.

Adjacent to the proposed material site are two sewage lagoon cells which are maintained by the City. Brice contracted Shannon & Wilson, Inc. to conduct a geotechnical study to assist in the appropriate development of the Isaac Lake Material Site. Shannon & Wilson, Inc. recommended that a 30-ft berm with a 3:1 slope should be left between the material site excavation area and the sewage lagoon to protect the sewage lagoon’s integrity. Shannon & Wilson’s report can be found in Appendix D.

Temporary Barge Channel and Landing

No new contaminated sites were identified as a result of a search of the ADEC contaminated sites database on May 14, 2013. However, a review of existing information noted that pore water samples taken immediately west of the Kotzebue Airport - DOT&PF Maintenance Station (Hazardous ID #25111), which is near the proposed barge channel and landing, indicated that petroleum from contaminated subsurface soils and groundwater is migrating to surface waters of Kotzebue Sound. It is
unclear what the sources, or extents, of this contamination are (James Fish, ADEC, personal communication, May 9, 2013).

4.7.2 No Action Alternative

Direct, Indirect, and Cumulative Impacts: The 24,500 truckloads hauled through the City of Kotzebue would generate very little solid waste requiring disposal at the Kotzebue landfill. The Kotzebue Landfill would continue to have capacity to receive solid wastes generated from other projects in the future.

4.7.3 Proposed Action

Isaac Lake Material Site

Direct and Indirect Impacts: Before mining within the identified contaminated area, Brice would excavate all contaminated soils, as required by the ADEC, and place them within a lined containment area for disposal. Contaminated soil and drums within the proposed material site area would be removed and disposed of in an ADEC-approved manner. Therefore, impacts from the existing contamination would be reduced in this area. It is not anticipated that the Proposed Action would generate additional hazardous wastes or contaminated water.

Should additional contaminated soils or waters be encountered during construction, all work in the discovered contaminated zone would be stopped and the ADEC would be consulted to coordinate appropriate cleanup actions. Cleanup would be conducted in an ADEC-approved manner; therefore, adverse impacts due to potential contamination would decrease. The project would be conducted in accordance with state and federal laws regarding handling, disposal, and spill response for hazardous materials, waste, and substances.

No impacts to the City’s sewage lagoon cells are anticipated as long as the planned 30-ft berm with a 3:1 slope remains between the material site and the sewage lagoon.

Cumulative Impacts: Cumulative impacts due to existing and potential contamination would be decreased from the cleanup of the drum dump site or other potentially discovered sites. The Kotzebue Landfill would continue to have capacity to receive solid wastes generated from other projects in the future.

Temporary Barge Channel and Landing

Direct, Indirect, Cumulative Impacts: It is not known whether contaminated soil or water is present within the project area; therefore sampling of the soil in the area of excavation was requested by ADEC prior to disposal using the recommended ADEC Draft Field Sampling Guidance (http://dec.alaska.gov/spar/csp/guidance/Draft%20Field%20Sampling%20Guidance.pdf). Sampling of dredged sediments in the area of the barge channel excavation would take place prior to disposal and the approved ADEC Dredged Material Guidance would be followed when applicable (http://www.dec.alaska.gov/spar/csp/docs/Final%20Dredge%20Material%20Guidance%20June%202013.pdf). In the event that contaminated soil or water is encountered, all work in the contaminated zone would be stopped and the ADEC would be consulted to coordinate appropriate cleanup actions. The contractor would be required to dispose of these soils and water in an ADEC-approved manner; therefore, adverse impacts would decrease. The project would be conducted in accordance with state and federal laws regarding handling, disposal, and spill response for hazardous materials, waste, and substances.
4.8  Historic, Architectural, Archaeological, and Cultural Resources

This SEA makes no changes to Section 4.7, Historic, Architectural, Archaeological, and Cultural Resources, of the Final EA, except the following additions.

4.8.1  Affected Environment

Isaac Lake Material Site

The Isaac Lake Material Site and haul road are located within the Kotzebue Archaeological District (KTZ-036), which has been deemed eligible for listing on the National Register of Historic Places. In addition, there are other known historic properties in the vicinity that are contributing elements to the eligibility of KTZ-036. A small portion of the haul road lies within the Area of Potential Effect (APE) in the Final EA and the 2012 MOA for the Kotzebue Airport Project. Development of the Isaac Lake Material Site proposal was initiated after the project contract was awarded, and thus was neither considered nor addressed in the initial Section 106 consultation for the Kotzebue Airport Project. The APE includes the Kotzebue Archaeological District, and the additional known historic properties. Territory Heritage Resource Consulting and SWCA Environmental Consultants conducted field investigations in 2013 to search for undiscovered historic resources within the project area and to understand the potential effects to KTZ-036 and the other known historic properties in the vicinity. Archeologists did not find any human graves, intact archaeological deposits, or archaeological features within the boundaries of the Isaac Lake Material Site or haul road, but could not conclusively rule out the potential for existence of such resources. Subsurface testing revealed that buried soil horizons are present in portions of the Isaac Lake Material Site material source area, which previous archaeological investigations suggests that there is an increased potential for encountering archaeological resources in association with these buried soil horizons. Overall results of the surveys suggest that there is a low probability of encountering archaeological deposits in the project area.

Consultation Efforts: The FAA sent a letter to the SHPO, NVK, KIC, NANA Corporation, NAB, and the City on December 10, 2013 describing the proposed material site and haul route project and proposed a finding of adverse effect on the Kotzebue Archaeological District. Consultations are currently in process.

Temporary Barge Channel and Landing

The barge landing area is partially within the existing APE in the Final EA and the 2012 MOA for the Kotzebue Airport project. The temporary barge landing is within the same area where the west RSA and access road embankment would be constructed. However, the construction of the barge channel and landing was not addressed in the Section 106 consultation process, requiring an additional consultation with the SHPO and interested parties. A review of Alaska shipwreck data compiled by the Bureau of Ocean Energy Management indicated no shipwrecks in the vicinity of the barge channel and landing. Archaeological survey in 2012 by the Alaska Office of History and Archaeology including the active beach included three subsurface shovel tests within the RSA APE adjacent to the proposed barge landing. That field effort found that the testing clearly indicated the lack of intact cultural deposits in that part of the ROW that occurs on the active beach.

Consultation Efforts: In June 2013, the FAA sent a letter to the SHPO, NVK, KIC, NANA Corporation, NAB, and the City of Kotzebue describing the proposed barge channel and landing and proposed a finding of no adverse effect on historic properties. The SHPO concurred with a finding of no adverse effect on June 16, 2013. The NVK, NAB, and KIC also concurred with FAA’s finding of no adverse effect. To date, no response has been received from the City or the NANA Corporation.
4.8.2 No Action Alternative

Direct, Indirect, and Cumulative Impacts: The approved Kotzebue Airport Project would have an adverse effect on the Kotzebue Archaeological District. A MOA was established and signed by the FAA, DOT&PF, SHPO, NVK, and NAB that identifies mitigation measures to address adverse effects. See the Final EA for details.

4.8.3 Proposed Action

Isaac Lake Material Site
Direct and Indirect Impacts: The Proposed Action would have an adverse effect on historic properties eligible for inclusion in the Kotzebue Archaeological District because the historic physical nature of the district would be altered by the excavation regardless of whether or not historic resources are present in the project site. The potential for erosion within the district would be minimized by reclamping the material site in phases as the excavation progresses, grading all slopes to 3:1 ratio, seeding, and the spreading of overburden on slopes. In addition, a 30-ft berm left between the excavation area and the adjacent sewage lagoon cells to protect the sewage lagoon’s integrity. No blasting will be used in the mining of the material site.

An MOA will be established and signed between the FAA, DOT&PF, SHPO with consulting parties being invited as signatories that identifies mitigation measures to offset any potentially adverse effects. The MOA will appear in Appendix C. Completion of the MOA will precede the approval of the EA and FONSI.

Cumulative Impacts: Cumulative past and future airport development projects may result in impacts to cultural resources. Mitigation measures identified in the 2012 MOA and the new MOA addresses measures to offset cumulative impacts.

Temporary Barge Channel and Landing
Direct, Indirect, and Cumulative Impacts: The FAA determined that the proposed barge channel and landing would have no adverse effect on historic properties. SHPO concurred with this finding of no adverse effect on June 16, 2013 (see Appendix C). The NVK, NAB, and KIC also concurred with FAA’s finding of no adverse effect. To date, no response has been received from the City or the NANA Corporation.

4.9 Wetlands and Waters of the U.S.

This SEA makes no changes to Section 4.8, Wetlands, of the Final EA, except the following additions.

4.9.1 Affected Environment

Isaac Lake Material Site
Previous wetland summary reports discussed in the Final EA do not cover the Isaac Lake Material Site and haul routes. USKH completed a desktop wetland delineation to map wetland and upland boundaries not previously defined. The expanded mapping includes the proposed limits of materials extraction and where existing roads may require widening to accommodate proposed haul routes. The desktop wetland delineation was completed using high resolution 2010 aerial orthophotography, available ground photography, and geotechnical reports. The memo and figures summarizing the results of the desktop wetland delineation are included in Appendix D. Wetlands within the Isaac Lake Material Site are composed of a mix of palustrine emergent/scrub-shrub, palustrine pond, and lacustrine habitats. Wetlands adjacent to the proposed haul routes are composed of a mix of palustrine emergent/scrub-shrub, palustrine
emergent, palustrine pond, and lacustrine habitats. Palustrine emergent/scrub-shrub habitat is generally dominated by low shrubs (e.g., black crowberry (*Empetrum nigrum*), dwarf blueberry (*Vaccinium caespitosum*), Alaska bog willow (*Salix fuscescens*), and swamp birch (*Betula nana*)), areas of emergent vegetation (e.g., marsh horsetail (*Equisetum palustre*) and sedges sp.), moderately thick organics, and areas of standing water. Palustrine emergent habitat is generally dominated by emergent vegetation (e.g., marsh horsetail (*Equisetum palustre*) and sedges sp.), moderately thick organics, and areas of standing water. Palustrine pond habitat is generally dominated by shallow (less than 6 ft deep) standing water with some emergent vegetation on the fringes. Lacustrine habitat is generally dominated by deep (more than 2 meters deep) standing water and significantly greater surface area than palustrine pond habitat. The lacustrine habitat of Isaac Lake was enlarged by several permitted gravel pit mining operations over the history of the airport. The functional values of wetlands and waters of the U.S. within the project area follow that which is depicted in Table 5 of the Final EA.

**Temporary Barge Channel and Landing**

There are no wetlands within the footprint of the proposed barge channel and landing as this area is not vegetated. The project area consists of a sandy and gravelly beach and benthic and intertidal marine sediments within the nearshore and offshore coastal zone. The location of the barge channel is within the navigable waters of U.S. and therefore under the jurisdiction of the USACE.

**4.9.2 No Action Alternative**

Truck hauling operations through the City would have no effect on wetlands or waters of the U.S. See section 4.9, Wetlands, of the Final EA for the impact analysis regarding placing fill within wetlands.

**4.9.3 Proposed Action**

**Isaac Lake Material Site**

*Direct and Indirect Impacts:* The Proposed Action would result in permanent loss of 1.1 acres of wetlands and waters of the U.S. due to the placement of fill for widening the haul route. However, approximately 7.8 acres of palustrine pond and palustrine emergent/scrub shrub mix wetlands and 1.9 acres of non-wetlands would be converted to higher value lacustrine wetlands or a larger palustrine pond wetland. Wetland functional values are based on Table 5 of the Final EA and Appendix B of the Alaska District Regulatory Guidance Letter No. 09-01.

*Cumulative Impacts:* Proposed Action impacts to wetlands and waters of the U.S. would be cumulative with impacts from the Kotzebue Airport Project and necessary to complete construction of the Kotzebue Airport Project.

**Temporary Barge Channel and Landing**

*Direct and Indirect Impacts:* No affects to navigation are anticipated because the dredged marine sediments would be removed rather than permanently side casted along the barge channel, which would have created sediment mounds that would have impacted access by boaters. Construction of the barge channel and landing would require that the existing Section 10/404 permit from the USACE be modified to include the proposed barge channel and landing. The USACE approved this permit modification on July 15, 2013 (see Appendix D).

*Cumulative Impacts:* No cumulative impacts are anticipated for wetlands or navigability as a result of the barge channel and landing.
4.9.4 **Wetlands Avoidance, Minimization, and Mitigation Measures**

**Isaac Lake Material Site**
Suitable material necessary for construction of the Kotzebue Airport Project lies almost entirely in and is surrounded by wetlands. Few upland habitats with suitable material exist in the vicinity of the Kotzebue Airport Project. The Proposed Action was sited to avoid and minimize wetlands and waters of the U.S. to the maximum extent practicable. BMPs will be followed with slopes being cut to a maximum steepness of a 3:1 ratio and seeded to minimize sedimentation to adjacent wetlands and waters. There would be a net increase in wetlands at the end of the project, with the conversion of 8.6 acres of low value wetlands and uplands to higher value lacustrine wetlands or palustrine pond wetlands. Additional avoidance, minimization, and mitigation measures are also listed in the Section 404 Department of the Army Permit Application found in Appendix D.

**Temporary Barge Channel and Landing**
No proposed project actions or approved project action would have any additional effects to wetlands or navigation in the waters of the U.S.

Impacts to navigation would be avoided by not side casting dredged material alongside of the proposed barge channel (see section 4.11, Summary of Environmental Commitments).

### 4.10 Socioeconomic Impacts and Environmental Justice

This SEA makes no changes to section 4.10, Socioeconomic and Environmental Justice, of the Final EA, except the following additions.

#### 4.10.1 Affected Environment

Environmental justice is defined by effects that have a disproportionately high and adverse effect on minority and low-income populations (Executive Order 12898).

#### 4.10.2 No Action Alternative

*Direct, Indirect, and Cumulative Impacts*: Trucking 24,500 truckloads through the City of Kotzebue would have no adverse socioeconomic or environmental justice impacts.

#### 4.10.3 Proposed Action

**Isaac Lake Material Site**
*Direct, Indirect, and Cumulative Impacts*: No environmental justice impacts are anticipated. Use of the proposed Isaac Lake Material Site compared to using a material site that is offsite would provide an estimated $10 million savings to the Kotzebue Airport Project.

**Temporary Barge Channel and Landing**
*Direct and Indirect Impacts*: Construction of the temporary barge channel would remove marine sediments from a small area within and adjacent to the existing longshore channel, which would be replaced by the planned longshore channel. The planned longshore channel, as discussed in the Final EA, would be dredged in alignment with the streamlines of the new longshore equilibrium condition, which was predicted by numeric modeling of post-construction conditions. Dredged material would be removed rather than side casted. Removal of the dredged material would allow boaters to navigate freely as before; whereas side casting dredged material would have mounded up material along both sides of the barge channel, creating a navigational hazard to boaters and preventing access to the longshore channel.
Without side casting and creating these resulting mounds, longshore currents would neither be impeded nor its course altered. With the improved design, it is highly unlikely that longshore currents would be deflected along or entrained down the barge channel. Therefore, no long-term adverse impacts to the longshore channel, or access to or through the longshore channel, are anticipated.

Dredging operations would occur after August 31, 2013 but before July 10, 2014. Potential maintenance dredging would not occur until after the 2014 fishing season has closed or would not occur without additional coordination with the KSFA. Brice will coordinate with the designated construction liaison/fish monitor elected by the KSFA and alter construction methods as necessary to avoid and minimize impacts to fish and fishermen. Barge docking will not occur during daily permitted fishing windows. No structural sediment control device would be placed in Kotzebue Sound that would have an adverse effect on fish, marine mammals, or boating access. Therefore no long term adverse effects to commercial or subsistence fishermen are anticipated. See Section 4.5 for impacts to fish and marine mammals.

**Cumulative Impacts:** No impacts to access and commercial and subsistence fishing actives are anticipated. Therefore, no socioeconomic or environmental justice cumulative impacts to commercial or subsistence fishermen are anticipated.

### 4.11 Summary of Environmental Commitments

The following commitments have been added to those published in the Final EA to reduce environmental impacts:

**Isaac Lake Material Site**
- Equipment staging and stockpiling of the overburden will be temporarily placed not more than 20 ft above the existing grade within the boundaries of the material site to avoid airspace incursions.
- A 30-ft wide berm with a 3:1 slope will be maintained along the cut slope next to the sewage lagoon to protect the sewage lagoon’s hydraulic integrity.
- The Isaac Lake Material Site will be reclaimed by cutting back all other slopes to a maximum steepness of 3:1 ratio and reseeding all disturbed areas not submerged by water.
- Drums and contaminated soil from the Drums and contaminated soil from the Sewage Lagoon Drum Dump site will be disposed of in the Kotzebue Landfill, if they do not exceed the ADEC’s allowable contaminant levels for landfills, and the site will be cleaned up according to the ADEC’s requirements.
- A new MOA will be established and signed between the FAA, DOT&PF, and SHPO with consulting parties being invited as signatories that identifies mitigation measures to offset adverse effects to historic resources.
- All avoidance and mitigation measures established in the new MOA will be followed, including archaeological monitoring for ground-disturbing activities and publication of a report that compiles existing research and investigations with those that may occur during the development of the Isaac Lake Material Site.

**Temporary Barge Channel and Landing**
- Brice will coordinate with the designated construction liaison/fish monitor elected by the KSFA and alter construction methods as necessary to avoid and minimize impacts to fish and fishermen.
- Brice will conduct dredging of the barge channel after August 31, 2013 but before July 10, 2014 to avoid adverse impacts to fishermen.
• Potential maintenance dredging would not occur without further coordination with the KSFA to avoid fishing windows, or otherwise would occur after the fishing season (after August 31st but before July 10th of the following year).
• Barge docking will not occur during daily permitted fishing windows.
• A contracted pilot boat will be deployed to tow boaters who desire assistance to navigate around a docked barge and continue on their way along the longshore channel.
• Sampling of dredged sediments in the area of the barge channel excavation would take place prior to disposal and the approved ADEC Field Sampling Guidance would be followed when applicable (http://www.dec.alaska.gov/spar/csp/docs/Final%20Dredge%20Material%20Guidance%20June%202013.pdf).
• No structural sediment control device will be placed in Kotzebue Sound that would have an adverse effect on fish, marine mammals, or boating access. Only operational BMPs would be utilized in Kotzebue Sound.
• The barge channel will not be allowed to extend above MLLW to reduce the chance of erosion of the beach.
• Barge anchors will be used to moor landed barges instead of running engines to hold barges in docked position. This will avoid erosion of the shoal through prop wash.
• Barge anchor placement will be coordinated to avoid conflicts with utilities, nearby property owners, construction of the boat ramp, and placement of fill for the west embankment.
• Dredged material from the barge channel will not be permanently side casted to avoid creating a navigational hazard to boaters and preventing access to the longshore channel.
• The barge channel will be oriented across the direction of the dominant southwest wave propagation and follow the natural flowlines of the longshore channel to the extent that the natural flow lines have been identified by local, knowledgeable individuals, survey data, and the fisherman's association.
• The barge landing will not run the full distance from the water to the upper beach to avoid blocking the northward flow of sediment along the beach above water level.
• Construction equipment will avoid obstructing airspace.
• Reflective cones will be placed on top of the temporarily bermed ice to prevent pedestrian or vehicle traffic from entering the work area.
• Any safety lights and signals required by the United States Coast Guard for the temporary barge channel will be installed and maintained by the contractor.
• Only street-legal, state-licensed trucks with loads contained and confined will be used to haul material through the city streets of Kotzebue.
• Survey and Reclamation of the barge channel and active beach area to natural conditions as outlined in USACE permit POA-1986-768-M6.
• Ground-disturbing activities will be monitored by an archaeologist consistent with the requirements established in the 2012 MOA.
5 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

Public involvement, agency coordination, tribal, and Section 106 consulting party requirements for the proposed barge channel and landing were fulfilled. Tables 1, 2, and 3 outline task and activities undertaken. Public comment greatly influenced how the proposed project would be conducted.

Table 1: Public Involvement Activity Summary

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/2/13</td>
<td>Elders’ Meeting</td>
</tr>
<tr>
<td></td>
<td>The DOT&amp;PF and Brice presented information about Brice’s material site proposal and barge channel and landing proposal to the Kotzebue Elders’ Council. Discussion focused on potential impacts to historic resources, appropriate mitigation, and the S. 106 process. Discussion also included concerns about the potential for erosion and whether access to the longshore channel would be inhibited by the proposed barge channel.</td>
</tr>
<tr>
<td>5/22/13</td>
<td>Scoping Letter and Public Meeting Invite</td>
</tr>
<tr>
<td></td>
<td>Brice sent, by mass email, a scoping letter regarding the proposed projects and invited the public to the public meeting.</td>
</tr>
<tr>
<td>5/23/13</td>
<td>NVK Scoping letter comment</td>
</tr>
<tr>
<td></td>
<td>The NVK responded to the Brice scoping letter requesting special attention be paid to the longshore channel and maintaining boat access.</td>
</tr>
<tr>
<td></td>
<td>The local radio station, KOTZ-AM, broadcasted a public service announcement that specified the time, date and location of the public meeting.</td>
</tr>
<tr>
<td>5/28/13</td>
<td>Public Meeting</td>
</tr>
<tr>
<td></td>
<td>Under DOT&amp;PF’s sponsorship, Brice presented the barge channel and landing proposal to the public. The public and representatives from City, KIC, NANA, NVK, NAB, KSFA, and the Elders’ Council agreed that hauling all material and equipment through town was undesirable. However, fishermen should not receive the brunt of impacts to avoid impacts to the City. Therefore, the barge channel should be completed by July 14th to avoid adverse impacts to commercial and subsistence fishing. After discussion of the barge channel and landing proposal was complete, Brice presented information on the material site proposal.</td>
</tr>
<tr>
<td>6/4/13</td>
<td>Response to Mr. Greene’s Comment</td>
</tr>
<tr>
<td></td>
<td>The State Coastal Engineer respond by email to Mr. Green regarding his concern about the potential of erosion of is beachfront property as</td>
</tr>
<tr>
<td>7/1/13</td>
<td>Response to Ms. Adam’s comment</td>
</tr>
<tr>
<td></td>
<td>Brice responded to Ms. Adam’s concerns about impacts to fish, access, and fisherman from construction and maintenance of the temporary barge channel and landing by outlining some of the environmental commitments that Brice will undertake to minimize impacts to fish and time the activities to avoid sensitive fish and fishing windows.</td>
</tr>
<tr>
<td>7/8/13</td>
<td>Response to Ms. McClellan’s comment</td>
</tr>
<tr>
<td></td>
<td>Brice responded to Ms. McClellan’s comments and concerns about impacts to fish from construction and maintenance of the proposed temporary barge channel and landing by outlining the anticipated fish behavior during dredging operations, and the use of phasing and non-structural BMPs to minimize temporary impacts to fish and fishermen.</td>
</tr>
<tr>
<td>6/6/13</td>
<td>City Council Meeting</td>
</tr>
<tr>
<td></td>
<td>By invitation of the Kotzebue City Council, Brice presented information to the public and the City Council regarding the barge channel and landing proposal and the request for a city building permit.</td>
</tr>
<tr>
<td>6/13/13</td>
<td>Refined Proposal Sent</td>
</tr>
<tr>
<td></td>
<td>As a result of public comment, Brice sent out a refined version of the barge channel and landing proposal to all participants in the 5/28/13 public meeting and requested additional comments. The refined proposal included environmental commitments to avoid and minimize impacts to fishermen and boaters and to work with the KSFA construction liaison/fish monitor.</td>
</tr>
</tbody>
</table>
6/20/13 City Council Meeting The City Council authorized the City Manager to finalize the city building permit with Brice for the temporary barge channel and landing.

6/28/13 KIC KIC sent a letter to FAA in support of the proposed project.

7/2/13 KSFA KSFA sent an email to the USACE complimenting Brice on their coordination and commitment to avoiding negative impacts to fisherman from the proposed project.

7/3/13 Availability of the Drat SEA and Public Meeting Invite Brice sent, by mass email, an announcement of the availability of the SEA for public review and invited the public to a public meeting.

7/4/13-7/8/13 Radio Announcement The local radio station, KOTZ-AM, broadcasted a public service announcement that specified the time, date and location of the public meeting.

7/8/13 Public Meeting Under DOT&PF’s sponsorship, Brice announced the availability of the Draft SEA to the public for review and requested comments. In addition, Brice initiated a discussion about possible alternative timing windows for dredging activity as the previously agreed to July 14th end date was no longer feasible. The community participated in a discussion and resolution of alternative timing windows and methods that would be agreeable to the community and the KSFA.

7/8/13 Mr. Thomas, Kotzebue Resident Mr. Thomas submitted a comment at the public meeting thanking Brice for their efforts to coordinate with the community and the fisherman on the project.

7/11/13 NVK NVK sent a letter to DOT&PF expressing no objection to a separate NEPA approach for the material site and barge channel proposals.

**Table 2: Agency Coordination Activity**

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/18/13</td>
<td>Agency Scoping Letter</td>
<td>Brice sent a scoping letter to all agencies regarding the proposed projects.</td>
</tr>
<tr>
<td>4/19/13</td>
<td>ADEC Comment</td>
<td>The ADEC commented that material site is within the Kotzebue Airport – Sewage Lagoon Drum Dump site. This contaminated site would need to be cleaned up before excavation could begin.</td>
</tr>
<tr>
<td>5/3/13</td>
<td>USACE Comment</td>
<td>The USACE commented that the proposed projects would require a Section 10/404 permit, requested additional plan sheets for the permit application, and that FAA should resolve Section 106 issues.</td>
</tr>
<tr>
<td>5/9/13</td>
<td>ADEC Comment</td>
<td>The ADEC stated that for any material dredged adjacent to the DOT&amp;PF facilities at the western portion of the airport apron, samples should be collected and analyzed for contaminants.</td>
</tr>
<tr>
<td>5/23/13</td>
<td>USFWS CPD</td>
<td>The USFWS CPD stated they had no objections to the proposed barge channel and landing and material site.</td>
</tr>
<tr>
<td>6/12/13 – 7/5/13</td>
<td>Correspondence with USACE</td>
<td>The DOT&amp;PF submitted a permit modification with additional plan sheets to the Corps regarding the barge channel and landing. The DOT&amp;PF and Brice supplied the Corps with documentation of agency and consulting party concurrences and public comment and responses as they came in.</td>
</tr>
<tr>
<td>6/13/13</td>
<td>NMFS EFH Concurrence</td>
<td>The NMFS concurred with the FAA determination that EFH would not be adversely affected by the proposed action.</td>
</tr>
<tr>
<td>6/20/13</td>
<td>USFWS S. 7 Consultation Concurrence</td>
<td>The USFWS Endangered Species Branch concurred with the FAA determination that proposed barge channel and landing would not adversely affect listed species.</td>
</tr>
<tr>
<td>Date/Time</td>
<td>Activity Description</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>6/21/13 and 7/01/13</td>
<td>NMFS consultation by DOT&amp;PF on behalf of FAA regarding proposed barge channel and landing effects on protected marine mammals in Kotzebue Sound; and DOT&amp;PF determination of ‘no affect’ to protected marine mammals as per above.</td>
<td></td>
</tr>
<tr>
<td>7/01/13</td>
<td>DOT&amp;PF Section 7 &amp; MMPA Determination</td>
<td></td>
</tr>
<tr>
<td>6/28/13</td>
<td>The NVK commented to the USACE during the public review period for the proposed permit modification for the barge channel proposal. NVK requested the USACE look at concerns related to erosion, flooding, and potential impacts to the longshore channel.</td>
<td></td>
</tr>
<tr>
<td>7/11/13</td>
<td>DOT&amp;PF responded to the NVK to address the concerns outlined in their 6/28/13 letter to the USACE.</td>
<td></td>
</tr>
<tr>
<td>7/12/13</td>
<td>NVK sent an email to DOT&amp;PF expressing satisfaction with the response to their 6/28/13 USACE comments and that their concerns have been sufficiently addressed.</td>
<td></td>
</tr>
<tr>
<td>9/16/13</td>
<td>The USFWS Endangered Species Branch concurred with the FAA determination that proposed material site and haul road would not adversely affect listed species.</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Section 106 Consultation and Consulting Parties Activity Summary

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/21/13 &amp; 5/24/13</td>
<td>Emailed invitations to the City, KIC, NANA, NVK, NAB, and the Elders’ Council to participate in a discussion in Kotzebue about the proposed barge channel and landing proposal and the material site proposal, the S. 106 process and potential affects to historic resources. Brice’s scoping letter was attached to the emailed invitation.</td>
</tr>
<tr>
<td>5/28/13</td>
<td>Brice presented the proposed projects and information regarding the potential to affect historic resources and the S. 106 process.</td>
</tr>
<tr>
<td>6/16/13 and 6/25/13</td>
<td>FAA sent a letter to the SHPO, City, KIC, NANA, NVK, NAB proposing a finding of no adverse effect to historic resources regarding the proposed barge channel and landing.</td>
</tr>
<tr>
<td>6/26/13</td>
<td>SHPO concurred with the FAA determination of No Historic Properties Affected for the proposed temporary barge channel and landing.</td>
</tr>
<tr>
<td>June – July 2013</td>
<td>The KIC (recvd. 7/3/13), NVK (recvd. 6/28/13), NAB (7/2/13) concurred with the FAA determination of No Historic Properties Affected for the proposed temporary barge channel and landing. To date, the City and NANA have not responded.</td>
</tr>
</tbody>
</table>
## Section 106 Consultations

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/10/13</td>
<td>FAA Findings Letters</td>
<td>The FAA sent a letter to the SHPO, NVK, KIC, NANA Corporation, NAB, and the City on December 10, 2013 describing the proposed material site and haul route project and proposed a finding of adverse effect on the Kotzebue Archaeological District.</td>
</tr>
</tbody>
</table>
# 6 LIST OF PREPARERS

<table>
<thead>
<tr>
<th>Preparer</th>
<th>Title and/or Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryan Anderson, P.E.</td>
<td>DOT&amp;PF Aviation Design Group Chief, reviewer</td>
</tr>
<tr>
<td>Chris Johnston, P.E.</td>
<td>DOT&amp;PF Aviation Project Manager, reviewer</td>
</tr>
<tr>
<td>Paul Karczmarczyk, CWB®</td>
<td>DOT&amp;PF Environmental Impact Analyst, environmental analysis and document review</td>
</tr>
<tr>
<td>Harvey N. Smith, P.E.</td>
<td>DOT&amp;PF State Coastal Engineer, coastal engineering and analysis</td>
</tr>
<tr>
<td>Ruth A. Carter, P.E.</td>
<td>DOT&amp;PF Coastal Engineer, coastal engineering and analysis</td>
</tr>
<tr>
<td>Mike Wheatley</td>
<td>Brice, Inc. Construction Project Manager, reviewer</td>
</tr>
<tr>
<td>Sara Lindberg</td>
<td>USKH Inc. Environmental Manager, author and editor</td>
</tr>
<tr>
<td>Daniel De Bord</td>
<td>USKH Inc. Environmental Analyst, author and environmental analysis</td>
</tr>
<tr>
<td>Kacy D. Hillman, PWS</td>
<td>USKH Inc. Environmental Analyst, contributing author to the wetlands analysis.</td>
</tr>
</tbody>
</table>
7 FIGURES
Figure 1: Location and Vicinity Map
Figure 2: Existing Conditions
Figure 3: Proposed Action from the 2012 Final Environmental Assessment
Figure 4: Plan View of the Material Site and Haul Route
Figure 5:  Typicals off the Material Site and Haul Road
Figure 6: Plan view of the Temporary Barge Channel and Landing
Figure 7: Potential Haul Routes
Figure 8: Typical Sections of the Temporary Barge Channel and Landing
Figure 9: Conceptual Barge Channel and Landing Photos
Appendix A: Public Involvement Records
Appendix B: Agency Consultation and Coordination
Appendix C: Section 106 Consultations and Coordination
Appendix D: Permits