

**FINAL ENVIRONMENTAL ASSESSMENT**

**Deering Airport and Access Road Improvements**

**Deering, Alaska**

**May 2022**

**State/Federal Project Numbers: NFAPT00249/AIP TBA**



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*Prepared for:*

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

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Responsible FAA Official

Date

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## ACRONYMS

AAC	Alaska Administrative Code
AASP	Alaska Aviation System Plan
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AHRS	Alaska Heritage Resources Survey
APDES	Alaska Pollutant Discharge Elimination System
APE	Area of Potential Effect
ASTP	Alaska Statewide Transportation Plan
BIA	Bureau of Indian Affairs
BIA-EA	Bureau of Indian Affairs – Environmental Assessment
BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH	Critical Habitat
DCCED	Department of Commerce, Community, and Economic Development
DOT&PF	Alaska Department of Transportation and Public Facilities
DPS	Distinct Population Segment
EA	Environmental Assessment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FR	Federal Register
ft	foot or feet
GHG	Greenhouse Gas
IPaC	Information for Planning and Consultation
IRA	Indian Reorganization Act
LEDPA	Least Environmentally Damaging Practicable Alternative
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act
NAB	Northwest Arctic Borough
NANA	NANA Regional Corporation
NEPA	National Environmental Policy Act
NLURA	Norther Land Use Research Alaska
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Registry of Historic Places
OHA	Office of History and Archaeology
OHWM	Ordinary High Water Mark
RW	Runway
SHPO	State Historic Preservation Officer
SPCC	Spill Prevention Control and Countermeasure
SWCA	SWCA Environmental Consultants
SWPPP	Stormwater Pollution Prevention Plan
TNSDS	True North Sustainable Development Solutions
U.S.	United States
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WACH	Western Arctic Caribou Herd

The Deering Airport is owned by the Alaska Department of Transportation and Public Facilities (DOT&PF) and is located on the Seward Peninsula about 4,000 feet (ft.) inland from the south shore of Kotzebue Sound near the mouth of the Inmachuk River (Appendix A, Figure 1). It is approximately 55 miles south of Kotzebue, Alaska, 135 miles northeast of Nome, Alaska, and 35 miles south of the Arctic circle.

## 1.0 PROPOSED ACTION

The Proposed Action would address existing airport deficiencies, bring the Deering Airport into compliance with current Alaska Statewide Transportation Plan (ASTP), the Alaska Aviation System Plan (AASP), and Federal Aviation Administration (FAA) design standards, and include the following elements (Appendix A, Figures 2-8):

### Airport

- Rehabilitate and resurface airport surfaces.
- Repair runway embankments.
- Apply dust palliative to airport ground traffic surfaces.
- Replace the airport lighting system.
- Improve or re-establish sufficient airport drainage.

### Access Road

- Construct a new airport access road, including several cross-drainage culverts and a new bridge over Smith Creek. Overhead utilities will be adjusted for proper clearance, which may include installation of two new power poles adjacent to the new roadway corridor.

### Material Sources

- Utilize existing gravel bar(s) within the Inmachuk River floodplain for a material source and mobilize these materials and other equipment to the airport construction area using the combined existing community barge landing and developed roads. Potential material sources and/or staging areas include those listed below and depicted on Appendix A and Figure 7. To further minimize impacts, when the project entered permitting, the US Army Corp of Engineers permitting only included those in ***BOLD ITALIC***.
  - ***Inmachuk River Bars #1***
  - ***Inmachuk River Bars #2***
  - 2020\_03
  - 2020\_06
  - 2020\_07
  - 5-Mile Pit
  - ***Gravel Site 8***
  - ***RMS #2***
  - RMS #3
  - ***2020\_09***
  - Gravel Site 6
  - ***9-Mile Pit***

## **1.1 Potential Construction Methods**

### **1.1.1 Contractor Staging and Haul Route Development**

Large equipment, bulk supplies, and some geotechnical materials necessary for construction would be barged to the project area. The remainder of supplies would arrive by cargo aircraft. The project would use the established community Kotzebue Sound barge landing zone adjacent to the community to import equipment and a portion of required material needs. Gravel, sands, and related embankment materials would be contractor furnished, and likely obtained from material sites along the Inmachuk River. The haul route from these potential river sites would be along the existing Deering Road. The contractor would be required to maintain the road for project use and return it to conditions similar or better than its existing condition prior to the project.

Initial staging of equipment, fuel, and materials has been anticipated to take place at identified staging areas located within two miles of the project location. No local disposal sites are anticipated for this project. All construction-related waste would be hauled off site and exported via barge by the contractor at the end of the project.

### **1.1.2 Local Material Site Development**

Multiple local material sites were identified as having the potential to provide partial material quantities for the airport and road construction. Most of these sites have been previously used for improvements within the Deering community, while others are similarly exposed gravel bars with an unknown history of use.

Material source development methods at these sites would be determined by the selected construction contractor but would likely involve the surface excavation of gravels and sand from existing, unvegetated alluvial deposits while avoiding excavation in vegetated portions of riverbanks along the riparian corridor. For some material sites, excavation is anticipated to remain above the water table, and generally occur between 1 and 8 feet above the river surface water elevation. Ponding is anticipated to be minimal, and excavated areas would be graded to provide drainage to the river channels.

One or more material sites may be excavated to deeper depths. When mining is completed at these sites, side slopes of the excavation would be tapered inward and a channel built to connect the excavated area to the Inmachuk River in order to prevent fish entrapment during high water events.

Access to one or more of the selected material sources would require crossing the Inmachuk River. Most crossings would be conducted in winter while the river is frozen. However, some material sources may need to be developed during ice-free months and, in these cases, the use of temporary bridge(s), fill, or temporary culvert(s) may be required to cross river channels or divert flow. These would occur during construction windows and duration established to minimize impacts to fish, birds, and wildlife (Section 1.1.3).

### **1.1.3 Road and Airport Construction**

For evaluating potential project impacts, the following assumptions are made:

- Contractor would implement arctic road construction methods in areas with continuous and discontinuous permafrost. These methods are a combination of summer and winter construction activities.
- DOT&PF would require the contractor to follow construction windows and durations to minimize impacts when fish, birds and wildlife are more abundant.
  - Where possible, DOT&PF would require the construction contractor follow the USFWS recommended time-period to avoid vegetation clearing (May 1 – July 15 for Forest/Woodland habitat, and May 10 – July 20 for Shrub/Open habitats).
  - If Bald Eagle nests are sighted within the project area during or prior to construction, DOT&PF would seek guidance from the USFWS on how to proceed.
  - When not possible, and vegetation clearing, site preparation, or construction is planned within these periods, pre-construction nest surveys would be conducted by qualified personnel and appropriate mitigation developed in consultation with the USFWS.
- Vegetative clearing would be limited to woody shrub removal within the project footprint; the existing organic vegetative mat would not be removed.
- Pump intakes shall be designed to prevent intake, impingement, or entrapment of fish. Each intake structure shall be enclosed in a screened enclosure. The effective screen opening may not exceed ¼ inch. To reduce fish impingement on the screened surface, water velocity at the screen/water interface may not exceed 0.5 feet per second when the pump is operating.
- Road and bridge drainage structure construction would continue during summer months and may require temporary structures to provide for seasonal drainage.
- Water crossings would include placement of appropriately sized drainage structures, with additional cross culverts installed along the roadway as needed to equalize drainage.
- Essential Fish Habitat:



- In water road construction activities should take place when salmon populations are not present (fall, winter, or spring).
- Bridge abutments minimize disturbances to stream banks. If possible, the project will avoid culverts. If avoiding culverts is not possible, NMFS states that they should be sized, constructed, and maintained to match the gradient and width of the stream to accommodate design flood flows, and they should be large enough to provide for migratory passage of adult and juvenile fishes (Appendix C, NMFS EA Comments).
- Conservation recommendations include conducting in water activity outside of spawning seasons (winter).
- ADF&G Fish Habitat Permitting will be completed after this document is finalized and is likely to have additional permit conditions which must be followed.
- Ice or Snow Bridges:
  - Equipment must not enter open water areas of a watercourse during winter. Ice or snow bridges and approach ramps must be substantially free of extraneous material (i.e., soil, rock, wood, or vegetation). Ice or snow bridges will be constructed to not alter the banks of a watercourse, so that when they melt the original topography will be maintained.
  - At the end of each season of use, the crossing shall be slotted, breached, or weakened prior to spring break-up to facilitate break-up and to minimize potential adverse impacts to stream banks.
- Should unidentified archaeological resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR 60.4) and in consultation with SHPO. Please note that some sites can be deeply buried and that fossils are considered cultural resources subject to the Alaska Historic Preservation Act.
  - An archaeological monitor will be used on site, as described in Appendix D.
- To negate dust during construction BMPs such as watering or application of a dust palliative would be used. ADEC also stated in comments on the EA that the project should follow all reasonable precautions in accordance with 18 AAC 50.045(d) to prevent particulate matter from being emitted into the ambient air.
- Excavation would be minimized to limit thermal degradation of subgrade permafrost.
- Disturbed areas outside the roadway footprint would be repaired. A 25-foot work area has been incorporated into the footprint, to allow for construction deviations with equipment beyond the toe-to-toe layout of the road and bridge embankments. The buffer areas will be reseeded, if needed when construction is complete.

- To minimize the introduction of invasive species to the area, DOT&PF would comply with Executive Order 13112 to mitigate invasive species by; 1) ensuring that ground disturbing activities are minimized, and disturbed areas are re-vegetated with seed recommended for the region by the Alaska Department of Natural Resources' Revegetation Manual for Alaska; 2) construction equipment would be inspected and cleaned prior to entering and exiting the work site to minimize spread of vegetative materials; and 3) erosion and sediment control materials would be locally produced products to minimize potential importation of new propagules from outside Alaska.
- Prior to construction, the contractor would develop a BMP-based Solid Waste and Hazardous Material Control Plan to address hazardous materials management, including storage, handling and clean-up of potential fuel and lubricant spills.

## **2.0 PURPOSE AND NEED**

The Deering Airport and existing access road are subject to seasonal flooding and the airport does not meet current FAA design standards. Airport rehabilitation and new access road construction would ensure safe and reliable year-round air transportation for Deering. The purpose of the project is to provide the community of Deering with safe and efficient airport access and address Deering Airport deficiencies that would bring the airport to current standards and meet criteria identified in the ASTP, the AASP, and current FAA design standards.

***Existing Airport Deficiencies*** - The current aircraft fleet mix serving Deering consists primarily of the Cessna 208B, PA31 Piper Navajo, and Casa C212; with larger deliveries made by DC-6, and medevac services by Beechcraft 200.

The Deering Airport has two gravel surface runways designated as Runway (RW) 3-21 and RW 12-30. Snow removal operations have graded off most of the runway surfacing, resulting in rutting and ponding. Drifting snow collects west of the runway intersection, requiring an extensive annual snow removal effort and creating meltwater ponding against runway embankments in the spring. These elements keep airport maintenance costs high. Additionally, the airfield's surface course and lighting system have exceeded their useful lifespan and need rehabilitation or replacement.

***Inmachuk River Flooding*** - The Deering Airport is subject to flooding due to spring ice jams and strong periodic storm surges from Kotzebue Sound. In 2015 and 2016, ice jams at the Inmachuk River mouth submerged portions of the airport access road (Deering-Inmachuk Road which lies mostly off airport property) between the community and the airport and extending to the runway embankment (Appendix A,

Figure 3). In 2016, these conditions caused the State of Alaska to declare a community disaster at Deering. Historical flood data does not indicate that floods have crested the airport surfaces.

Deering is off the road system, with the only year-round accessibility by air transportation, and barge service limited to summer months. While small boats, all-terrain vehicles, and snowmachines are used for personal inter-village and subsistence travel, Deering relies heavily on year-round air transportation for major commerce, supplies, fuel, access, and medical evacuation needs.

### 3.0 ALTERNATIVES

A Bureau of Indian Affairs (BIA) approved Environmental Assessment (BIA-EA) in 2017 analyzed the West Airport Road Project (BIA 2017, Appendix K) which has a similar alignment to this project. The BIA-EA also analyzed improving the existing bridge and airport access road and found that project had much higher costs and would not take the existing road out of the flood zone – a particular concern during highwater (BIA 2017). This EA is intended to stand on its own, due to the age of the BIA-EA we have not incorporated it by reference, except when specifically cited in this document (BIA 2017).

The Alaska Department of Transportation and Public Facilities (DOT&PF) Northern Region has evaluated the feasibility of various airport improvement alternatives, mobilization routes, and material source locations that would allow for continued safe and reliable air transportation to Deering.

Originally, 30 material source alternatives along the Deering-Inmachuk Road were considered as potentially eligible to be included in the project. These included the following:

- Inmachuk River Bar #3
- Inmachuk River Bar #1
- 2020\_01
- Inmachuk River Bar #2
- Material Site #2
- 2020\_02
- 2020\_03
- 2020\_04
- 2020\_05
- 2020\_06
- MS 206-02-07
- 2020\_07
- 2020\_08
- 5-Mile Pit
- Gravel Site 8
- RMS #2
- RMS #3
- RMS #4
- Gravel Site 7
- 2020\_09
- Gravel Site 6
- 9-Mile Pit
- 10-Mile Pit
- 2020\_10
- Gravel Site 4
- Gravel Site 3
- Gravel Site 2
- 2020\_11
- 16-Mile Pit
- Gravel Site 1

From the potential material sources, locations were then dismissed based on proximity to cultural resources, distance from the project construction site, location within wetlands or habitat areas, or unsuitability of the potential material for this project. After this screening process, 12 of the original 30 remain, and are described in the Proposed Action (Section 1.0). Of these 12, only the ones indicated in Section 1.0 advanced to agency permitting.

### **3.1 Proposed Action Alternative**

The Proposed Action alternative rehabilitates the airport by creating a safe, reliable, and cost-effective facility that provides the community with adequate access, supports the community's long-term development goals, and is consistent with current FAA design standards and safety guidelines.

### **3.2 No Action Alternative**

No airport improvements would occur under this alternative. All the existing deficiencies would remain present at the airport. This alternative would not bring the Deering Airport into compliance with FAA safety guidelines, and the airport and access road would remain vulnerable to flooding and erosion. The BIA-EA found that the flooding and erosion of the access road would continue with its No Action alternative (BIA 2017). This remains valid today, due to the topography of the access road and its vulnerability to flooding and erosion. Continual degradation would impact the road and airport and require airport closure resulting in a loss of commercial, passenger, and cargo service.

## **4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

This section describes the project area existing environment, and environmental impacts to resource categories as identified in FAA Orders 1050.1F and 5050.4B. Direct effects are caused by the action and occur when the action is implemented. Indirect effects of the action occur later in time or farther in distance from the project location. Connected actions are those automatically triggered by another action, that cannot or will not proceed unless another action occurs and are interdependent parts of a larger action. Cumulative impacts result from incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes other actions.

#### 4.1 Past, Present, and Potential Future Actions

The DOT&PF Northwest Alaska Transportation Plan identifies some planning level projects in Deering (Draft plan at <https://dot.alaska.gov/nreg/nwatp/> and personal Communication with DOT&PF's Jennifer Keller, 2020). However, none of the projects are likely to occur.

Past activities include the original airport construction and gravel extraction, and the environmental document and project planning from the BIA-EA (BIA 2017). These have been incorporated into the analysis, and the past construction is not anticipated to impact the selection of an alternative.

There are no other past or present actions in Deering that are relevant to evaluation of impacts from the proposed alternatives.

#### 4.2 Non-Issue Resource Categories

This Environmental Assessment (EA) is issue-based, meaning that only resource or impact categories that identified as a potential issue through project development, and agency and public involvement, are evaluated in detail. Table 1 summarizes non-issue resource categories and notes why they were determined to qualify with the non-issue categories.

**Table 1. Non-issue Resource Categories**

Resource Category	Evaluation
Air Quality	<ul style="list-style-type: none"><li>• The Alaska Department of Environmental Conservation (ADEC) Air Non-Point Mobile Source website (ADEC, 2020a) indicated the proposed project is not in an air quality maintenance or non-attainment area for National Ambient Air Quality Standards.</li><li>• No air quality analysis is needed because forecasted operations are less than 1.3 million passengers and less than 180,000 operations annually (FAA Order 1050.1F).</li><li>• Deering is a community with reported dust problems according to a 2016 Rural Dust Survey (ADEC, 2020b). To negate dust during construction and to comply with the Alaska Pollutant Discharge Elimination System (APDES) Construction General Permit (CGP), Best Management Practices (BMPs) such as watering or application of a dust palliative would be used.</li></ul>
Climate	<ul style="list-style-type: none"><li>• FAA 1050.1F Desk Reference (FAA, 2020), Change 1, Guidance Memo #3, Considering Greenhouse Gases (GHGs) and Climate under the NEPA: Interim Guidance, includes guidance for evaluating greenhouse gas emissions with proposed projects under the National Environmental Policy Act (NEPA). The guidance states GHG emissions resulting from a proposed action should be evaluated qualitatively or quantitatively. There is no GHG emission data available for Deering. The proposed project would not permanently increase aviation traffic; therefore, no net change in GHGs are anticipated and according to the guidance no further consideration of GHGs would be necessary.</li></ul>

Resource Category	Evaluation
Coastal Resources	<ul style="list-style-type: none"> <li>The Alaska Coastal Management Program expired on June 11, 2011 and is no longer in effect. The Northwest Arctic Borough (NAB) Comprehensive Plan (NAB, 1993) and the Northwest Area Plan for State Lands (ADNR, 2008) were evaluated to confirm no adverse coastal impacts would occur and the project is consistent with coastal resource management guidelines in these plans.</li> </ul>
Department of Transportation Act, 4(f)	<ul style="list-style-type: none"> <li>The National Parks Service, United States (U.S.) Fish and Wildlife Service (USFWS), and U.S. Forest Service websites were reviewed for publicly owned lands including public parks, recreation area, wildlife or waterfowl refuges of national, state, or local significance, or land from a historic site of national, state, or local significance within the project area.</li> <li>The project area is located approximately 42 miles east of the Bering Land Bridge National Preserve.</li> <li>FAA has made a draft de Minimis determination for the project. Full analysis is available in Appendix H.</li> </ul>
Farmlands	<ul style="list-style-type: none"> <li>There are no designated soils of local importance, nor prime or unique farmlands, as defined by the Farmland Protection Policy Act of 1981, Public Law 97-98 (USDA 2020).</li> </ul>
Natural Resources and Energy Supply	<ul style="list-style-type: none"> <li>Material extractions are not expected to impact area mineral or community-use gravel mining that is taking place or would take place.</li> <li>Fill material is required for construction. Adequate supplies are expected to be available through local and regional sources.</li> </ul>
Noise and Noise-Compatible Land Use	<ul style="list-style-type: none"> <li>Per the 1050.1F Desk Reference (FAA, 2020), a noise analysis is required if annual operations exceed 90,000 propeller operations or 700 jet operations. The proposed project would not increase operations to exceed those figures; therefore, a noise analysis would not be required.</li> </ul>

**4.3 Fish**

**4.3.1 Affected Environment**

There are two fish bearing streams located within the project area. The Alaska Department of Fish and Game *Alaska Fish Resource Monitor* (ADF&G, 2020) lists the Inmachuk River (Anadromous Waters Catalog Code: 331-00-10750) as an anadromous fish stream (Appendix A, Figure 2). Chum salmon (*Oncorhynchus keta*) and Pink salmon (*O. gorbuscha*) are known to spawn, and Dolly Varden (*Salvelinus malma*) are known to be present, in the Inmachuk River. An ADF&G (1984) report states Deering residents also value a Coho salmon run in the Inmachuk River. The Inmachuk River is considered Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (NOAA, 2020).

Smith Creek (Appendix A, Figure 2) is not listed as an anadromous water and has not been surveyed by ADF&G. Smith Creek is not known EFH or anadromous fish habitat, however, due to its direct

connection to Inmachuk River, it is presumed to contain resident fish (M. Wessel, ADF&G, personal communication, January 4, 2021).

The portion of Kotzebue Sound adjacent to Deering is listed as EFH by National Marine Fisheries Service for:

- Arctic cod (*Boreogadus saida*) (egg, larva, early juvenile, late juvenile, adult)
- Saffron cod (*Eleginus gracilis*) (late juvenile, adult)
- Snow crab (*Chionoecetes opilio*) (egg, adult, late juvenile)
- Chinook salmon (*O. tshawytscha*) (immature)
- Chum salmon (immature, juvenile, mature)
- Coho salmon (*O. kisutch*) (juvenile, mature)
- Pink salmon (juvenile, mature)
- Sockeye salmon (*O. nerka*) (juvenile, immature, mature)

No EFH, habitat areas of particular concern, or EFH areas protected from fishing are in the area.

#### **4.3.2 Environmental Consequences**

For purposes of this evaluation, the following assumptions are made:

- Compliance with the APDES, CGP, and implementation of the required Stormwater Pollution Prevention Plan (SWPPP) and BMPs during airport and access road construction would reduce the potential for sediment laden storm water runoff during construction. Stabilization of side slopes with vegetation or non-erodible material would also be implemented as part of CGP compliance to further reduce the potential for sedimentation of nearby streams.
- Construction of all crossing and drainage structures would adhere to appropriate BMPs for in-stream work to minimize potential effects to fishes and fish habitats from sediment mobilization and transport, and accidental contaminant spills.
- Fuel operations would be conducted under a Spill Prevention Control and Countermeasure (SPCC) plan to prevent impacts to surface water quality.

#### **4.3.2.1 Proposed Action**

##### *Direct and Indirect Impacts*

##### Material Sites

The proposed project would mine any of several identified gravel bars within the Inmachuk River to provide material for construction (Appendix A, Figures 7-7d). Development of material sources and their access roads has the potential to impact freshwater anadromous fish and fish habitats. Material extraction sites studied in arctic and subarctic floodplains in Alaska have demonstrated both adverse and beneficial effects on fish and fish habitats depending on the type and size of the river, type of material extraction employed, and the amount of material extracted (Joyce et al. 1980; Ott et al. 2014). Material source development can lead to destabilization of river channels, river channel capture, floodplain widening, increased erosion and sedimentation, increased water velocities, reduced water quality, aquatic habitat shifts, and in some instances, has been documented to cause subsurface flows, creating a barrier to fish passage (Joyce et al. 1980).

Material source development for this project is anticipated to follow the construction methods outlined in this EA. Through appropriate planning and adherence to site specific construction timing windows, EFH consultation recommendations, ADF&G consultation recommendations, material excavation impacts are expected to be temporary and have minimal effects on freshwater and anadromous fish and fish habitat. Material source development will occur in the active floodplain, below the Ordinary High-Water Mark (OHWM) of the Inmachuk River. Habitat will be converted from one type of habitat to another, and no loss of habitat is anticipated.

##### Stream Crossing

Smith Creek would be crossed by a single span bridge. No permanent structures (pilings, piers, etc.) would be placed in the stream, but rock armoring would be placed below ordinary high water to protect against substrate scour at each abutment. A temporary pier may support erection of the permanent bridge structure during winter. Any requirements from Section 404 or any other permitting would be followed.

Once the proposed road is constructed, rainfall or melting events may also result in mobilization of runoff from previously frozen ice/snow infrastructure, ice-rich sediments or temporary waterway crossing used for road construction, which could discharge into nearby freshwater resources. Temporary effects of sediment-laden runoff from the road, following construction, are anticipated to be temporary and of short



duration. With the implementation of a SWPPP, sediment-laden runoff is anticipated to be limited, and have limited potential to adversely affect freshwater anadromous fish and fish habitat.

### Water and Ice Use

During project construction, water withdrawals would be required for dust control, to support road compaction, and to create temporary ice/snow roads. Water to support these activities would likely be sourced from surface waterbodies along the final selected route alignment, including Smith Creek (Appendix A, Figure 2). Water withdrawal activities can affect fish directly through entrainment or trapping within the pumping system itself or impingement on the intake structure at the point of withdrawal. Excessive withdrawal and excess volume removal would be prevented by complying with permit specifications.

Screened intake and volume withdrawal criteria would be complied with to mitigate potential effects to fish and fish habitat. Volume limitations and use of ADF&G-compliant screened intakes would reduce the potential for effects associated with fish impingement and entrapment. Through compliance with permits, minimal effects to freshwater and anadromous fish and fish habitat are anticipated due to water withdrawal activities during construction.

### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

#### **4.3.2.2 No Action Alternative**

The No Action Alternative would continue to put the airport at erosion risk, and erosion degradation would continue. As such, the No Action would have a negative impact on the resource.

## **4.4 Wildlife**

### **4.4.1 Affected Environment**

Species of terrestrial mammals that periodically occur in the vicinity include caribou (*Rangifer tarandus*), moose (*Alces alces*), muskox (*Ovibos moschatus*), wolverine (*Gulo gulo*), wolf (*Canis lupus*), and brown bear (*Ursus arctos*). These and other small mammals and common furbearers are important to hunters/trappers in the region for subsistence.

The Western Arctic Caribou Herd (WACH) roams throughout an area of 190,000 square miles, including within the area of interest, and is the largest caribou herd in Alaska. Deering intersects with the WACH's winter range, and caribou are an important subsistence resource for Deering (Braem 2011).

Moose populations have increased in size throughout the past 70 years and have become well established in the area of interest (ADF&G 2012). In the winter, moose are confined to riparian habitat along river corridors. In the summer, moose relocate to small tributaries and hills surrounding riparian habitat though some disperse as far as the foothills of the Brooks Range and across the coastal. Surveys in the game management unit focus on the lower Kobuk system, which have 0.4 moose per square mile (ADF&G 2012).

Muskoxen disappeared from Alaska by the 1920s and were re-introduced to Alaska's Seward Peninsula in 1970 (ADF&G 2021a). By 2007 the census count for the Seward Peninsula was 2,688 muskoxen (ADF&G 2021a). Muskoxen are large animals with mature bulls weighing 600-800 pounds and cows weighing 400-500 pounds (ADF&G 2021a). Muskoxen have been a nuisance to the Deering community by trampling cemetery graves as well as other private property in the community (personal communication 2020, Calvin Moto II, IRA President). In addition, muskoxen continually destroy airport lighting (personal communication 2020, Alvin Werneke, DOT&PF Airport Manager).

Wolverines are present across Alaska at low densities and require large expanses of wilderness (ADF&G 2021b). A cooperative study to evaluate wolverine density in South-central Alaska found 4.5 to 5.0 wolverines per 1,000 square kilometers (ADF&G 2021b). For the area of interest there is no density study, and since there is a large expanse of wilderness, it is difficult to estimate the local population.

Wolves are present throughout Alaska and it is estimated the entire Alaska population is 7,000-11,000 (ADF&G 2021c). Wolf densities are lowest in the coastal portions of western and northern Alaska (ADF&G 2021c) which includes Deering.

Densities of brown bears (also referred to as grizzly bears) vary widely within the area of interest. ADF&G did not publish a management report for the region including Deering. The report for the region immediately south of Deering does not have a current population estimate (Harper and McCarthy 2015). Informal observations indicate that bear numbers have steadily increased since the early 1990's (Harper and McCarthy 2015).

## **4.4.2 Environmental Consequences**

### **4.4.2.1 Proposed Action**

#### *Direct and Indirect Impacts*

The Proposed Action would result in wildlife habitat alteration (Appendix A, Figure 2, 7). Vegetation alteration would result in potential vegetated wildlife foraging habitat being converted to gravel embankment, and some open gravel bar bird nesting habitat along the Inmachuk River would be permanently lost during material site excavation. Impacts would be up to 18.8 acres of permanent fill, and 22.5 acres of temporary material site impacts which will be converted from one type of habitat into another. These impacts are not anticipated to be significant given the abundance of neighboring, intact habitat types surrounding Deering, such as a multitude of other available open gravel bars on the Inmachuk River and the Bering Land Bridge National Preserve (nearly 4,215 square miles). There are similar vegetation community types widespread throughout the region.

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

### **4.4.2.2 No Action Alternative**

The No Action Alternative would continue to put the airport at erosion risk, and erosion degradation would continue. As such, the No Action would have a negative impact on the resource.

## **4.5 Marine Mammals and NMFS Endangered Species**

### **4.5.1 Affected Environment**

Marine mammal species that can occur in the coastal waters near Deering include bearded seal (*Erignathus barbatus*), ringed seal (*Phoca hispida*), western distinct population segment (DPS) Steller sea lion (*Eumetopias jubatus*), North Pacific right whale (*Eubalaena japonica*), Mexico DPS humpback whale (*Megaptera novaeangliae*), western North Pacific DPS humpback whale, fin whale (*Balaenoptera physalus*), sperm whale (*Physeter macrocephalus*), and bowhead whale (*Balaena mysticetus*). All are listed as endangered species (Table 2). To reduce redundancies, life histories of the species can be found in the consultation letter with NMFS (Appendix E and at the NOAA Species Accounts <https://www.fisheries.noaa.gov/species/>).

**Table 2. National Marine Fisheries Service Endangered Species Act-Listed Species and Critical Habitat expected in the Action Area**

Species	Stock	ESA listing	Critical Habitat	MMPA listing
Bearded seal	Alaska (Beringia DPS)	Threatened	None	Depleted
Ringed seal	Alaska	Threatened	None	Depleted
Steller Sea Lions	Western DPS	Threatened	Designated	Depleted
North Pacific Right Whale	Eastern North Pacific	Endangered	Designated	Depleted
Humpback Whale	Western North Pacific DPS	Endangered	Designated	Depleted
Humpback Whale	Mexico DPS	Threatened	Designated	Depleted
Fin Whale	Northeast Pacific Stock	Endangered	None	Depleted
Sperm Whale	North Pacific Stock	Endangered	None	Depleted
Bowhead whale	Western Arctic	Endangered	None	Depleted

## 4.5.2 Environmental Consequences

### 4.5.2.1 Proposed Action

#### *Direct and Indirect Impacts*

To reduce redundancies, direct and indirect impacts to species are described in detail in the consultation letter with NMFS (Appendix E).

If project specific barges or small vessels are used to carry out the Proposed Action, mitigation measures would be implemented to avoid, minimize, and mitigate adverse effects to marine mammals. Mitigation measures are listed in Appendix E. Informal consultation under Section 7(a)(2) Endangered Species Act (ESA) was requested with NMFS on December 10, 2020 and concluded that by implementing appropriate mitigation measures as outlined in their concurrence that the project may affect, but is “not likely to adversely affect” any species or critical habitat under NMFS’s jurisdiction.

On 4/21/2021, new Critical Habitat (CH) designations for Central America DPS, Mexico DPS, and Western North Pacific DPS humpback whales were published by NMFS in the federal register (86 FR 21082), thereby adding two new areas of potential project ESA impacts. Subsequent to these CH designations, DOT&PF on behalf of FAA conducted a detailed review of the Final Rule to Designate Critical Habitat for the Central America, Mexico, and Western North Pacific Distinct Population Segments of Humpback Whales. Based on additional discovery, review, and analyses of available relevant information, on June 14, 2021, FAA found that project - specific barge use for the Deering

Airport and Access Road Improvements Project would have No Effect on Designated Mexico DPS and Western North Pacific DPS humpback whale Critical Habitats (86 FR 21082) (Appendix E).

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

#### **4.5.2.2 No Action Alternative**

The No Action Alternative would have no effect on marine mammals.

### **4.6 USFWS Threatened and Endangered Species**

#### **4.6.1 Affected Environment**

The USFWS *Information for Planning and Consultation* (IPaC) website (USFWS, 2020a) lists the polar bear (*Ursus maritimus*; a threatened species), and two threatened birds; Spectacled Eider (*Somateria fischeri*), and Steller's Eider (*Polysticta stelleri*) as potentially occurring in the project area.

Polar Bear: Polar bear distribution is circumpolar, varying with sea-ice extents and prey availability (Schliebe et al. 2006). Two polar bear populations occur in Alaska: the Beaufort Sea population and the Chukchi Sea population (Schliebe et al. 2006). The Chukchi Sea population typically moves into the southern Chukchi Sea with the pack ice in fall and winter and migrates north with the pack ice in spring and summer (Garner et al. 1990). Traditional knowledge indicates that polar bear tracks are found along the coast and on barrier islands in late fall and winter in the south-eastern Chukchi Sea, when bears first arrive in the region (Voorhees et al. 2014). Although polar bears in the Chukchi Sea are typically closely associated with sea ice, recent increases in terrestrial land use (primarily on Wrangel Island rather than the Alaskan mainland coast) have been detected (Rode et al. 2015). Habitat selection modeling predicts a lower probability for habitat selection by polar bears along the coast, compared to offshore regions in the Chukchi Sea in winter and spring (Wilson et al. 2016).

Polar bear feeding critical habitat is the only critical habitat that overlaps with the project (75 FR 76086 76137).

Spectacled Eider: Spectacled Eider occur throughout marine habitats in Alaska and are typically found within coastal waters 1 to 28 miles from shore. Molting eiders are found in eastern Norton Sound and Ledyard Bay mid-July through December and wintering birds congregate in small groups near St.

Lawrence Island. In western Alaska, core breeding habitat extends from Nelson Island to the Askinuk Mountains (Petersen et al. 2000). The Spectacled Eider is listed under the ESA as threatened. Population declines are primarily attributed to alteration or destruction of habitat, contaminant exposure, and predation (USFWS 2010).

Critical habitat for Spectacled Eider has been designated for molting sites in Norton Sound and Ledyard Bay, for breeding on the Yukon-Kuskokwim Delta, and for wintering south of St. Lawrence Island (USFWS 2010). The project does not overlap with any designated critical habitat for this species.

Steller's Eider: The Steller's Eider is listed under the ESA as threatened. Reasons for population declines are poorly understood but potential threats include oil or contaminant exposure, predation, and hunting pressures (USFWS 2002). Steller's Eider breed primarily along the Arctic Coastal Plain, but also have a small population that nests on the Yukon-Kuskokwim Delta. Eiders molt throughout southwest Alaska mid-July through December, primarily along the north side of the Alaska Peninsula, Izembek Lagoon, Nelson Lagoon, Port Heiden, and Seal Islands (Frederickson, L.H 2001; USFWS 2002). Wintering birds congregate in shallow, sheltered waters along the south side of the Alaska Peninsula.

Critical habitat for Steller's Eider has been designated for breeding habitat on the Yukon- Kuskokwim Delta, and molting sites in Kuskokwim Bay, Izembek Lagoon, Nelson Lagoon, and Seal Islands (USFWS 2002). The project does not overlap with any designated critical habitat for this species.

#### **4.6.2 Environmental Consequences**

For purposes of this evaluation, the following assumptions are made:

- A polar bear interaction plan would be developed as required by USFWS.
- Where possible, vegetation clearing, site preparation, and construction activities would adhere to the recommended periods to avoid vegetation clearing (USFWS 2020b):
  - Forest/Woodland: 1 May – 15 July
  - Shrub/Open: 10 May – 20 July
  - Raptors may nest 2+ months earlier than other birds.
  - Black scoter is known to nest through August 10.
  - Seabird Colonies: 20 May – 15 September
  - Eagles: 1 March – 31 August

- When not possible, and vegetation clearing, site preparation, and construction is planned within these periods, pre-construction nest surveys would be conducted by qualified personnel and appropriate mitigation developed in consultation with the USFWS.

#### **4.6.2.1 Proposed Action**

##### *Direct and Indirect Impacts*

Polar Bear: Project effects are not anticipated to negatively impact polar bears or their barrier island or feeding critical habitats. There is no barrier island habitat at Deering. Current disturbance in the region include community presence and associated traffic, hunting activities, and presence of low flying aircraft. Construction and/or activity at the community barge landing would create noise that may disturb polar bears if present, although existing noise disturbances are currently present within the project area. A polar bear interaction plan would be developed to avoid, minimize, or mitigate disturbance to polar bear and their critical habitat.

Spectacled Eider: Spectacled Eider breed along peninsulas, pond shorelines, or wet meadows dominated by sedges (Petersen et al. 2000). Construction of the Proposed Action may result in some loss or alteration of riverine shoreline or wetland habitats potentially suitable for spectacled eider breeding. However, material site extraction, by utilizing solely vegetation-free exposed gravel areas, by default, would then position additional vegetated shoreline nesting habitat nearer to open water channels. This would allow eiders to safely access these habitats from open water without crossing open gravel bar areas where they would be more exposed to avian and terrestrial predators. The noise associated with construction would cause an increase in disturbance for only a relatively short period of time, resulting in temporary, localized displacement of aquatic birds. The project's proposed nest surveys would avoid potential residual adverse effects of the project.

Steller's Eider: Steller's Eider breed in open tundra or within shrubby willow or birch stands near coastal areas (Frederickson, L.H. 2001; USFWS 2002). Construction of the project would result in some loss or alteration of tundra or shrub habitats or wetlands, as described above for spectacled eider. However, material site extraction would create additional shoreline habitat by creating permanent open water adjacent to the existing vegetated perimeter. By limiting removal to exposed gravel areas only, adjacent channel habitat would be created, allowing eiders to access nearby waters without crossing open gravel bars where they and their young would experience a greater risk of predation by avian and terrestrial predators. Noise impacts, as described above for Spectacled Eider, could also potentially impact Steller's eider. The project's proposed nest surveys would limit potential residual adverse effects of the project.

### *Secondary (Induced) and Cumulative Impacts*

The Deering solid waste facility is located 4,000 ft north of the airport. No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

#### **4.6.2.2 No Action Alternative**

The No Action Alternative would have no effect on threatened and endangered species.

## **4.7 Migratory Birds**

### **4.7.1 Affected Environment**

More than 100 species of birds migrate along the intercontinental flyways from southern latitudes to breed in Northern Alaska (Audubon 2016). Terrestrial and aquatic birds, and their nests and eggs, are protected under the Migratory Bird Treaty Act (MBTA).

IPaC (USFWS, 2020a) did not list any potential migratory bird species of conservation concern for the Deering area.

Favored eagle nesting habitat does not exist in the area, and there are no known eagle nests in the immediate project vicinity.

### **4.7.2 Environmental Consequences**

#### **4.7.2.1 Proposed Action**

##### *Direct and Indirect Impacts*

A permanent loss or alteration of bird habitat would result from project construction (Appendix A, Figure 2, 7). The placement of fill and extraction of gravel would result in the loss of existing habitat to both resident and seasonal species. Impacts would be up to 18.8 acres of permanent fill, and 22.5 acres of temporary material site impacts which will be converted from one type of habitat into another. Impacts are not anticipated to be significant given neighboring intact habitat surrounding Deering, such as numerous additional open gravel bars along the Inmachuk River, and the Bering Land Bridge National Preserve (nearly 4,215 square miles). There are similar vegetation community types widespread throughout the region.

Migratory bird species may travel through the Proposed Action area and may be disturbed by project activity. Construction activities may result in injury or mortality of birds or their nests. Birds, and their



nests and eggs, are protected under the MBTA. The DOT&PF would require the construction contractor follow the USFWS guidelines.

If bald eagle nests are sighted within the project area during construction, relevant work would be stopped, and DOT&PF would initiate consultation with USFWS.

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

#### **4.7.2.2 No Action Alternative**

The No Action Alternative would have no effect on migratory birds. The airport's erosion risk and continued degradation would continue, with the potential to detrimentally impact the community over time.

## **4.8 Plants**

### **4.8.1 Affected Environment**

The undeveloped areas of the proposed projects footprint are dominated by wetland plant habitats, including sedge meadows, polygonal ground with ericaceous shrubs and low willows, shallow ponds, and the Inmachuk riverine system of pioneering plants on gravel bars and low to tall shrubs (Table 3, and Appendix G). Plant communities are more fully described in the wetland analysis.

**Table 3. Vegetation in the Study Area\***

Vegetation Class	Vegetation Type	Upland	Wetland	Water	Total	Percent Study Area*
<b>Shrub Types</b>	Closed Willow Shrub	-	16.9	-	16.9	1.2
	Open Willow Shrub	14.3	77.0	-	91.3	6.7
	Low Shrub Tundra	1.6	135.4	-	137.0	10.1
	Open Mixed Shrub-Sedge Tundra	-	473.2	-	473.2	34.8
	<b>Shrub Total</b>	<b>15.8</b>	<b>702.5</b>	<b>-</b>	<b>718.3</b>	<b>52.8</b>
<b>Herbaceous Types</b>	Tussock Sedge	-	349.9	-	349.9	25.7
	Mesic Herbaceous	1.4	-	-	1.4	0.1
	Wet Herbaceous	-	85.1	-	85.1	6.2
	Emergent Aquatic	-	2.1	-	2.1	0.2
	<b>Herbaceous Total</b>	<b>1.4</b>	<b>437.0</b>	<b>-</b>	<b>438.4</b>	<b>32.2</b>
<b>Other Types</b>	Partially Vegetated	0.6	-	-	0.6	0.0
	Barren	71.9	-	28.7	100.6	7.4
	Open Water	-	-	103.3	103.3	7.6
	<b>Other Total</b>	<b>72.6</b>	<b>-</b>	<b>132.0</b>	<b>204.6</b>	<b>15.0</b>
<b>Study Area Total</b>		<b>89.8</b>	<b>1139.5</b>	<b>132.0</b>	<b>1361.3</b>	<b>100.0</b>

\*Study Area is defined in the Wetlands Memo (Appendix G)

Note: Apparent inconsistencies in sums are the results of rounding.

## 4.8.2 Environmental Consequences

### 4.8.2.1 Proposed Action

#### *Direct and Indirect Impacts*

The Proposed Action would result in impacts to approximately 18.7 acres of land for permanent project construction, plus up to 22.5 additional acres for temporary impacts to materials sites which will be converted from one habitat to another (Appendix A, Figure 2, 7). The Proposed Action is bounded by a landscape of intact habitats, such as additional open gravel bars along the Inmachuk River and the Bering Land Bridge National Preserve (nearly 4,215 square miles). There are similar vegetation community types widespread throughout the region. Vegetation loss represents only a minor portion of the total habitat.

While there are no documented occurrences of invasive species in and around disturbed areas in Deering (AKEPIC, 2020), it is likely that some exist. To minimize the introduction of invasive species to the area, DOT&PF would comply with Executive Order 13112 to mitigate invasive species by:

- Ensuring that ground disturbing activities are minimized, and disturbed areas are re-vegetated according to the specification in the ADEC Alaska Construction General Permit (2021 CGP,

AKR100000) with seed recommended for the region by Alaska Department of Natural Resources' (ADNR) "A Revegetation Manual for Alaska;" and

- Construction equipment would be inspected and cleaned prior to being barged to Deering to minimize spread of vegetative materials.

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

#### **4.8.2.2 No Action Alternative**

The No Action Alternative would have a negative effect on plants. The river's erosion would continue to impact plant habitat, although the plant habitat impacts from the Proposed Action would not occur. The airport's erosion risk and continued degradation would continue, with the potential to detrimentally impact the community over time.

### **4.9 Hazardous Materials, Solid Waste, and Pollution Prevention**

#### **4.9.1 Affected Environment**

The ADEC's Contaminated Sites Program database did not identify any contaminated sites within the project. One cleanup complete site (Hazard ID 1141-Deering Old Bulk Fuel Tank Farm) is located approximately one mile east of the project near the community of Deering. Deering Airport is not known or suspected to be contaminated by PFAS chemicals.

The water supply of Deering, the Inmachuk River, was sampled for PFAS chemical contamination in 2019 by Maniilaq Association. Samples taken from the raw-water sample tap at the local water treatment plant showed PFNA and PFBS contamination. Through consultation with DEC and the individuals that performed the water sampling, it has been determined that if there is indeed PFAS contamination in the Inmachuk River the extracted materials from proposed sites along the river are unlikely to contain PFAS contamination. Should materials extracted from the Inmachuk River be considered contaminated in the future, Alaska DOT&PF will provide funding for reclamation. Further documentation is provided in Appendix C.

One active site (Hazard ID 4141-Former Utica Mine) is located approximately 13 miles south of the project area (ADEC, 2020c). The active site is an abandoned gold mine (the Former Utica Mine)

contaminated with petroleum, benzene, arsenic, cadmium, barium, total chromium, mercury, silver, selenium, and lead (ADEC, 2020c).

The Deering solid waste facility is located 4,000 ft north of the airport.

## **4.9.2 Environmental Consequences**

### **4.9.2.1 Proposed Action**

#### *Direct and Indirect Impacts*

Prior to construction, the contractor would develop a BMP-based Solid Waste and Hazardous Material Control Plan to address solid waste management, hazardous materials management, including storage, handing, and cleanup of potential fuel and lubricant spills. No wastes are anticipated to be disposed of in the solid waste facility.

Given the distance of the Former Utica Mine and Deering Old Bulk Fuel Tank Farm from the project, contamination from these sites is not anticipated to impact the Proposed Action.

There is potential for accidental release of fuel or other contaminants used in heavy equipment associated with the project. Fueling operations would be conducted under a SPCC plan to prevent impacts to water quality. These plans specify that refueling of heavy equipment takes place a minimum distance, typically 100 ft, away from any surface waters.

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

### **4.9.2.2 No Action Alternative**

The No Action Alternative would not impact Deering's hazardous waste sites or solid waste facilities.

## **4.10 Historical, Architectural, Archaeological and Cultural Resources**

### **4.10.1 Affected Environment**

Stantec Archaeologist Tamara Holman, M.A. conducted a review of the Alaska Heritage Resource Survey (AHRS) in June 2020. There is one archeological site (Deering Archaeological District KTZ-00169) within the area of potential effect (APE). The Deering Archaeological District (KTZ-00169) is eligible for the National Registry of Historic Places (NRHP). The Inmachukmiut Burials (KTZ-00024) are outside

but directly adjacent to the APE and has not been evaluated for the NRHP. This site was previously mislocated in the AHRS database and the present location was estimated in 2020 from 1972 aerial photos and 1974 Deering airport plans (Holman 2020).

There are no reports of cultural resource investigations at the Deering airport since an archaeological resources field investigation was conducted at the present location of the airport in 1986 (Wiersum 1986). This report is not available at the Alaska Office of History and Archaeology; it is assumed the investigation was negative because there are no AHRS resources noted at the runway location.

At least three cultural resource investigations have been conducted along access roads near the Deering Airport.

In 2001, Bureau of Indian Affairs (BIA) completed an archaeological survey for road improvements between Deering and Utica (Allison 2001). While no cultural resources were identified, the report does not illustrate the location of the survey corridor in relation to the existing road.

Bowers (2009) summarized 10 years of various projects and fieldwork conducted by Northern Land Use Research Alaska (NLURA) in the vicinity of Deering, including a 2007 archaeological survey of proposed road construction alignments and material sources to support road improvements. No new cultural resources were observed during the archaeological survey and testing (Bowers 2009).

In 2013, True North Sustainable Development Solutions (TNSDS 2013) conducted a cultural resource investigation for the proposed West Airport Road (Meinhardt et al. 2013). The historic Inmachuk-Deering Trail (KTZ-0034) is located within city boundaries, and the road is still in use to access the Utica Mine claim area. No artifacts or features were identified in association with the trail during reconnaissance survey or testing (Meinhardt et al. 2013).

Additional information available in the vicinity of the APE include literature reviews, reconnaissance level survey, and discretionary testing for home construction and sewer projects in the community of Deering. Two investigations for projects subject to the provisions of the Programmatic Agreement Regarding Actions Affecting the Deering Archaeological District (KTZ-00169) were conducted by SWCA Environmental Consultants (SWCA) in 2015 and UIC in 2016. To mitigate adverse effects of the project, a UIC archaeological monitor observed and documented construction activities. SWCA observed, and UIC affirmed the presence of intact buried soil horizons within the district (Jensen and Ericson 2016; Smith and Heppner 2015).

The proposed project includes the use of existing gravel bar(s) within the Inmachuk River floodplain for material sources and mobilize these material and other equipment to the airport construction using the combined existing community barge landing and developed roads. There are no AHRS sites within the APE for these potential material sources. Stantec has not identified any previous cultural resources surveys within the APE.

#### **4.10.2 Environmental Consequences**

##### **4.10.2.1 Proposed Action**

###### *Direct and Indirect Impacts:*

Section 106 consultation was initiated on January 4, 2021 to the SHPO, BIA, City of Deering, NANA Regional Corporation, Native Village of Deering, NAB, and the Maniilaq Association (Appendix D), and no comments or concerns regarding historic or cultural resources were raised.

Based on a review of past archaeological investigations, AHRS data, consultation efforts, and the prevalence of wetlands, the DOT&PF, on behalf of the FAA, determined that the project would not adversely affect historic properties. On April 2, 2021, the SHPO concurred with a finding of no adverse effect by the Proposed Action (File No. 3130-IRFAA) (Appendix D).

With the incorporation of an Inadvertent Discovery Plan, and a commitment to stop work if unidentified archeological resources are discovered during the course of the project, no significant impact is anticipated to Historical, Architectural, Archaeological and Cultural Resources.

###### *Secondary (Induced) and Cumulative Impacts:*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

##### **4.10.2.2 No Action Alternative**

The No Action alternative would not affect historic, archaeological, or cultural resources.

## **4.11 Land Use**

### **4.11.1 Affected Environment**

The community of Deering lies along the south shore of Kotzebue Sound, at the mouth of the Inmachuk River (Appendix A, Figure 8). The shoreline provides an area for a seasonal community barge landing, and the airport provides the only year-round transportation to other communities.

The Deering-Inmachuk Road follows the Inmachuk River for about 25 miles to abandoned, historic mining sites along the river. The road is used to access the airport and a series of material sites upriver.

The NAB provides land use planning for the region (NAB 2011). The Borough designates the City of Deering as a “Village” district (Appendix A, Figure 8). Outside of the City of Deering, the borough designates the lands as “Subsistence Conservation.” This Subsistence Conservation district is specifically named as the ‘Inmachuk River Subsistence Conservation District’. The airport and Proposed Action overlap both the Village and Subsistence Conservation districts.

The Northwest Arctic Borough Comprehensive Plan (NAB 1993) contains language specifying that the NAB needs to develop a system of managing lands in the best interest of borough residents and assist communities and regional organizations with identifying and solving problems with infrastructure development. Additionally, the Comprehensive Plan states that the NAB would work with villages to identify transportation priorities for the region.

The Deering Community Comprehensive Development Plan 2006-2016 (NAB 2006) emphasizes land use planning, including zoning areas for industrial uses and housing expansion options. The plan’s Objective 3.2 is to: “...expand and modernize community infrastructure for creating future employment and providing public services.” The plan’s Objective 4.2 is to: “...improve and maintain accessibility and transportation infrastructure for year-round subsistence, economic, and community growth activities.”

The City of Deering boundary surrounds the local community. NANA Regional Corporation owns much of the land inside and outside of the city boundary (DCCED, 2013).

Two 17(b) easements are present in Deering, and both are outside of the Proposed Action (DCCED, 2013; BLM, 2020).

## **4.11.2 Environmental Consequences**

### **4.11.2.1 Proposed Action**

#### *Direct and Indirect Impacts*

The Proposed Action is not anticipated to increase traffic. No congestion related issues have been identified, and the contractor would prepare a traffic control plan to maintain public access as practicable.

The Proposed Action is consistent with local land use and transportation plans and would meet high priority community needs. The Proposed Action is in the Village District and Inmachuk River Subsistence Conservation District (Appendix A, Figure 8). A NAB Title 9 Land Use Permit would be required.

The Proposed Action would acquire new right of way under the new access road from NANA Regional Corporation Inc (Appendix A, Figure 8). The airport would remain under the current ownership of DOT&PF. Each material site would be permitted for use through the landowner (e.g., NANA Regional Corporation), with review by the ADNR Division of Mining Land & Water. DOT&PF would submit a Mining and Reclamation Guideline document to the landowner and ADNR for each of the material sites. The construction contractor would use the guidelines to create a Project Mining and Reclamation Plan for each site to be submitted to DOT&PF, landowner, and ADNR for approval.

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative land use impacts.

### **4.11.2.2 No Action Alternative**

The No Action Alternative would not impact land ownership.

## **4.11.3 Socioeconomics, Environmental Justice, Children’s Health and Safety Risks, Subsistence**

### **4.11.3.1 Affected Environment**

#### Socioeconomics

Historically, many Inupiat families in Northwest Alaska moved around between subsistence use areas during the year. However for thousands of years, one of the largest groups on the Seward Peninsula lived for most of the year upriver of the spit where Deering is currently located, southeast of Cape Deceit. The arrival of western explorers in the 1800’s, and both missionary and mining efforts in the early 1900s,



resulted in the more contemporary community of Deering being established in 1901 as a supply station for nearby gold mining activities. As most of these mining operations ceased with the start of World War II, the economy became and remains primarily subsistence based along with a supporting cash base centered on the community school, various municipal and public works entities, tribal and regional corporation offices, and a community health clinic.

The median household income of Deering is \$43,750. Twenty (20) of the 120 residents live below the poverty line (DCCED 2020).

### Environmental Justice

Environmental Justice addresses impacts from Federal Actions to minority and low-income populations. Deering is primarily Inupiat, and 98.7 percent of the population is Alaska Native or part Native (DCEED 2020).

### Children's Health and Safety Risks

Deering has 43 of 120 residents under the age of 19 (DCCED 2020). There is one school and one healthcare clinic.

### Subsistence

Subsistence activities are an integral part of Deering residents' lives, and the Northwest Arctic Borough identifies the area outside of Deering as a Subsistence Conservation District (Appendix A, Figure 8). A 2002 Subsistence Use report identified that 100 percent of households surveyed using subsistence resources, with the harvest split between land mammals, marine mammals, and fish (ADF&G, 2002).

The latest community subsistence data available for Deering (2013) describe the majority of subsistence foods harvest as caribou (65%) and bearded seal (10%) (ADF&G 2013). Caribou provide 54,978 pounds out of 56,309 total pounds of wildlife harvested (ADF&G, 2013). The WACH is the primary herd in northwestern Alaska. Caribou from this herd have been using the Seward Peninsula for winter range since the 1990's (ADF&G 2011).

The hunting of marine mammals remains a culturally significant portion of subsistence practices. Almost all the 9,323 pounds of marine mammals harvested in 2013 were bearded seal (ADF&G 2013).

Inmachuk River salmon have been and continue to be utilized as a subsistence resource in Deering. An ADF&G (1984) report provides that residents recognize three major salmon runs: pink salmon in July,

followed by chum salmon, followed by Coho salmon in mid-August to mid-September. A commercial salmon fishery was tested in 1974-75 but was discontinued due to ADF&G concerns about sustainability in salmon stocks (ADF&G 1984).

Migratory birds and their eggs are harvested by the community. Species hunted include geese, ducks, cranes, swans, loons, and resident ptarmigan (ADF&G, 2000). Deering residents harvest eggs from common murre and gulls from seabird colonies on nearby bluffs (ADF&G, 2000).

There are important blueberry producing areas south of Deering along the hillside and around the airport runway (Deering IRA Council, 2011).

#### **4.11.4 Environmental Consequences**

##### **4.11.4.1 Proposed Action**

###### *Direct and Indirect Impacts*

###### Socioeconomics

There may be a temporary increase in local employment opportunities for construction-based activities, but long-term employment effects are not expected. DOT&PF has committed to providing the community of Deering a list of resume requirements/qualifications likely required by the proposed action contractor after the EA has been approved. The purpose of this effort would be to help residents prepare for potential project related job opportunities.

Hauling or driving construction equipment and materials through the community may cause noise, pedestrian hazards and increase dust. The contractor would be required to work with the City of Deering and other local entities to implement effective BMPs and a traffic control plan that would minimize these impacts to the community.

###### Environmental Justice

The project is specifically designed to benefit minority and low-income populations by providing Deering with a safe airport that would be able to operate and be safely accessed by road more reliably year-round. The Proposed Action would not cause adverse effects to minority or low-income populations.

###### Children's Health and Safety Risks

Construction related noise is anticipated but is not projected to pose significant impacts to children's health and safety. Children's health and safety risks would decrease with an airport that meets safety and maintenance standards.

### Subsistence

The entire area around Deering is used for subsistence activities. For this reason, the Proposed Action minimizes the footprint of proposed facilities as much as possible and maximizes use of already developed facilities and fill pads. This project has been designed to avoid potential impacts to subsistence resources and activities to the extent practicable.

### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative land use impacts.

#### **4.11.4.2 No Action Alternative**

The No Action Alternative would potentially negatively impact community socioeconomics and increase children's health and safety risks. The airport provides the only year-round transportation to more developed communities, resources, and medical care available in Kotzebue. Degraded airport facilities make regional transportation more hazardous.

## **4.12 Visual Effects**

### **4.12.1 Affected Environment**

The airport currently has runway lights and other associated lighting. Other light sources in the area come from the community and from all-terrain vehicles participating in subsistence activities. All light emissions are typical of rural Alaska.

Deering is a small community surrounded by the ocean, rolling tundra and shrub/sparsely forested riverbanks of the Inmachuk River. The visual, or aesthetic, resources of the project area are currently dominated by the existing developed airport. Also visible are the buildings and features of the subsistence community of Deering. Surrounding the airport and community are tundra, rivers, lakes, and ocean.

## **4.12.2 Environmental Consequences**

### **4.12.2.1 Proposed Action**

#### *Direct and Indirect Impacts*

The Proposed Action would improve the airport lighting. The improved lighting would be similar to the current lights, but more efficient. No significant differences in light impacts to the community are anticipated.

The airport would maintain the same visual impact as the current facility. The only new visual feature would be the new access road, which would be a minor alteration. No significant impacts to visual resources are anticipated.

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative land use impacts.

### **4.12.2.2 No Action Alternative**

The No Action Alternative would maintain existing visual conditions, including airport lighting, close to the community.

## **4.13 Water Resources**

### **4.13.1 Affected Environment**

#### Wetlands

Deering is located within the Kotzebue Sound Subregion, which is classified by moist tundra (a mixture of grasses, sedges, forbs, and lichens) (Bristol 2017) and the undeveloped project area contains some wetlands. A Wetland Delineation Report was completed for the West Airport Road Project in July 2014 which covers the area of the road between Deering and the airport. However, there is no recent wetland mapping completed for the project area and the material site(s) and haul route(s) are currently unknown.

DOT&PF requested Stantec to conduct a desktop delineation for the project. The desktop wetland delineation for the project was completed using the following sources: aerial imagery from 2008, 2015, 2017 and 2019, 1-ft LiDAR-derived elevation data collected in 2015, and ground photographs from a 2013 land survey. A full description of the methods and results is in Appendix G.

**Table 4. Wetlands, Waters of the U.S., and Uplands in the Study Area\***

Type	Cowardin Classification	Acres	Percent Study Area
<b>Emergent Wetlands</b>	PEM1	425.8	31.3
<b>Shrub Wetlands</b>	PSS1	17.1	1.3
	PSS1/EM1	696.5	51.2
<b>Ponds</b>	PUB	37.2	2.7
<b>Rivers and Streams</b>	R1	17.1	1.3
	R3	30.3	2.2
	PUS	28.7	2.1
<b>Marine</b>	M1	11.0	0.8
	M2	7.8	0.6
<b>Total Wetlands and Waters</b>		<b>1271.5</b>	<b>93.4</b>
<b>Uplands</b>		<b>89.8</b>	<b>6.6</b>
<b>Study Area Total</b>		<b>1361.3</b>	<b>100.0</b>

\*Study Area is defined in the Wetlands Memo (Appendix G)

Note: Apparent inconsistencies in sums are the results of rounding.

### Floodplains

Executive Order 11988 Floodplain Management requires federal agencies to avoid adverse impacts associated with the occupancy and modification of floodplains. The Federal Emergency Management Agency administers the National Flood Insurance Program which aims to reduce the impacts of flooding on private and public structures. Deering does not participate in the National Flood Insurance Program.

The “Erosion Information Paper – Deering, Alaska” (USACE, 2007) states that one erosion area occurs along the road that passes by the airport, and another is located along the road beyond the airport but does not specify the exact locations. The erosion information paper also reports winter flooding behind the city.

### Surface Waters

The Inmachuk River is located approximately 298 ft away from the nearest airport runway threshold. Smith Creek is located approximately 1,377 ft away from the nearest airport runway threshold.

Neither the Inmachuk River nor Smith Creek is listed as an impaired waterbody on the ADEC 303(d) List of Impaired Waterbodies (ADEC, 2020d). Additionally, there are no known water quality impairments to the surface waters surrounding the Deering Airport.

## Groundwater

The community's water source is surface water from the Inmachuk River. The Alaska Well Log Tracking System has a record of three wells drilled in 1966 (ADNR 1966). Well 1 was 25.5 ft, Well 2 was 84 ft, and Well 3 was 13 ft. All were abandoned due to saltwater intrusion.

## Wild and Scenic Rivers

There are no designated wild or scenic rivers in the vicinity of the proposed project (NPS, 2020).

### **4.13.2 Environmental Consequences**

#### **4.13.2.1 Proposed Action**

##### *Direct and Indirect Impacts*

## Wetlands

The Proposed Action would be located in wetlands, which are common throughout the area. It is not practicable to avoid wetland impacts. The project was designed to avoid and minimize impacts to wetlands and waters of the U.S. to the maximum extent practicable. Some of the measures included:

- During the preliminary and final design planning process, DOT&PF evaluated airport rehabilitation options, numerous material sites, and the access road route to identify the Least Environmentally Damaging Practicable Alternative (LEDPA). During the process, DOT&PF made efforts to reduce and avoid impacts to higher-value wetlands and intact wetlands in the area. These avoidance and minimization measures were incorporated in the preferred alternative (i.e., the design presented in this application).
- Wetland mapping was completed on 1,361 acres and uplands only totaled 90 acres (6.7 percent upland) in the area using high resolution aerial photography and elevation data. The Deering road network, airport, supporting infrastructure, portions of material sites, and the village are on uplands. Additionally, several small upland areas were mapped on berms and cut banks adjacent to rivers and streams. The rest of the area is considered Waters of the United States. Total avoidance of wetland impacts during any type of development in the Deering airport will neither be practicable nor possible.
- Airport Alternatives

- Airport relocation was not deemed a practicable alternative. The existing airport is within one mile of Deering. The current location is not subject to coastal erosion. The existing location allows for the shortest access road to the airport.
- With rehabilitation and repair the existing airport can continue to service the community. A new airport would require a road and site that would impact additional undisturbed wetlands and require fill material to be mined and placed for the project. The impacts to wetlands by constructing a new airport would be far greater than maintaining and operating the existing facility.
- Material Sources
  - Material for the project can be found locally on river bars within the Inmachuk River channel. In channel material sites avoid new roads and new construction impacts in wetland complexes.
  - The material site selection criteria compared material availability (access, type, and volume), existing land use, and reclamation for the sites. Mineral material must be available in the site in quantity and quality during the construction season to justify the costs of mining.
- The mobilization of equipment will be during the summer. Barges will move heavy equipment to Deering using the existing barge landing in town. No improvements to the barge landing are required, and it has existing road access. No impacts to wetlands or waters are expected from the transport of equipment to Deering. Staging areas near town have been identified for the temporary storage of equipment.

Project construction would result in unavoidable wetlands impacts listed in Table 5. Some or all the material sites listed in Table 6 have the potential to be developed. Impacts associated with the material sources would be temporary. DOT&PF anticipates work within wetlands and waters of the U.S. would be covered under a USACE Individual Permit.

**Table 5. Wetlands and Waters of the U.S. Permanent Impacts from the Runway and Roadway**

Type	Cowardin Classification	Impact		Temp. Impact	
		Acres	% Study Area*	Acres	% Study Area*
<b>Emergent Wetlands</b>	PEM1	2.4	0.2%	0.8	0.1%
<b>Shrub Wetlands</b>	PSS1	0	0.0%	0	0.0%
	PSS1/EM1	16	1.2%	3.9	0.3%
<b>Ponds</b>	PUB	0.2	0.0%	0.1	0.0%
<b>Rivers and Streams</b>	R1	0.1	0.0%	0	0.0%
	R3	0	0.0%	0	0.0%
	PUS	0	0.0%	0	0.0%
<b>Marine</b>	M1	0	0.0%	0	0.0%
	M2	0	0.0%	0	0.0%
<b>Total</b>		<b>18.7</b>	<b>1.4%</b>	<b>4.8</b>	<b>0.4%</b>

\*Study Area is defined in the Wetlands Memo (Appendix G) (1361.3 acres)

Note: Apparent inconsistencies in sums are the results of rounding.

**Table 6. Wetlands and Waters of the U.S. Temporary Impacts from Material Sites**

Material Site Name	Temp. Impact Cowardin Classification (Acreage)					% Study Area*
	PEM1	PSS1	PSS1/EM1	R3UB	Total	Total
Inmachuk River Bars #1	0.7	-	0.1	2.1	<b>2.9</b>	<b>0.2%</b>
Inmachuk River Bars #2	2.6	-	0.1	3.4	<b>6.1</b>	<b>0.4%</b>
2020_03	-	-	-	0.7	<b>0.7</b>	<b>0.1%</b>
2020_06	-	0.1	-	2.7	<b>2.8</b>	<b>0.2%</b>
2020_07	-	-	0.5	2.4	<b>2.9</b>	<b>0.2%</b>
5-Mile Pit	0.1	-	0.1	-	<b>0.2</b>	<b>0%</b>
Gravel Site 8	0.3	-	0.2	1.6	<b>2.1</b>	<b>0.2%</b>
RMS #2	-	-	0.1	1.6	<b>1.7</b>	<b>0.1%</b>
RMS #3	-	-	0.6	4.9	<b>5.5</b>	<b>0.4%</b>
2020_09	-	-	0.2	5.1	<b>5.3</b>	<b>0.4%</b>
Gravel Site 6	-	-	-	2.5	<b>2.5</b>	<b>0.2%</b>
9-Mile Pit	0.1	-	-	4.6	<b>4.7</b>	<b>0.3%</b>
<b>Total</b>	<b>3.8</b>	<b>0.1</b>	<b>1.9</b>	<b>31.6</b>	<b>37</b>	<b>2.7%</b>

\*Study Area is defined in the Wetlands Memo (Appendix G) (1361.3 acres)

Note: Apparent inconsistencies in sums are the results of rounding.



### Floodplains

Material would be excavated within the floodplain of the Inmachuk River and would re-aggrade from the river's natural flooding. Material source excavation would likely have minimal effects. The airport access road and bridge at the Smith Creek crossing would be constructed above the 100-year floodplain (Bristol 2017, Appendix J). Floodplain drainage patterns would not be altered by the Proposed Action.

### Surface Waters

Large-scale drainage patterns surrounding the project area would not be altered; however, localized drainage could be affected. Culverts along roads would maintain cross drainage and hydrologic function. No permanent changes to water quality are expected. The Proposed Action would not adversely affect community water supply and would not affect long-term water quality. Water quality impacts during construction would be minimal and temporary.

Minor, short term impacts to water quality would likely result during development of the material sites. Winter material site development would be preferred, to minimize the potential for runoff generation. Localized effects of sediment-laden runoff during construction are anticipated to be temporary and of short duration with the implementation of required SWPPPs and BMPs.

### Groundwater

The Proposed Action does not anticipate affecting the flow and recharge of groundwater.

### Wild and Scenic Rivers

There are no federally designated wild and scenic rivers near the project.

### *Secondary (Induced) and Cumulative Impacts*

Past, present, and future actions may result in the loss of additional wetlands or water quality impacts, although wetland permitting would reduce or minimize the extent of these impacts through implementation of BMPs.

#### **4.13.2.2 No Action Alternative**

The No Action alternative would not affect wetlands, surface water, ground water, or wild and scenic rivers.

### **4.14 Construction Impacts**

#### **4.14.1 Environmental Consequences**

##### *Direct and Indirect Impacts*

Construction impacts would be local in nature and occur adjacent to the community. The Proposed Action would cause the following temporary construction impacts:

- Noise – Construction machinery and vehicle activity would temporarily increase noise along the haul routes and the project location. The closest residence is approximately 4,000 ft away from the runways, although work on the access road and activity near the barge landing would respectively be directly adjacent to or pass through the community.
- Air Quality – The operation of heavy equipment and the hauling of fill material can create dust during dry conditions, which may cause temporary air quality impacts. This effect would be temporary and would be controlled by BMPs in Section 1.1.3 (e.g. water, dust palliative). The applicant will also follow 18 AAC 50.045(d) to prevent particulate matter from being emitted into the ambient air.
- Water Quality – Water quality impacts during construction would be associated with stormwater runoff before final stabilization is complete. The Proposed Action could result in some sedimentation and turbidity in streams as a result of construction material extraction. Since the project requires more than one acre of ground disturbance, an Erosion and Sediment Control Plan and SWPPP would be completed prior to construction. Post-construction stabilization would include seeding/stabilizing embankment fill and other disturbed areas. A mining and reclamation plan would be prepared for the material site operations. Water withdrawals may be required for winter haul route construction, dust control, road compaction, and temporary construction camps. Water to support these activities would likely be sourced from local surface waterbodies, and appropriate permits would be obtained for these activities.
- Airport Operations –The airport would remain in service during completion of airport improvements.

- Material Sites – Material site development would result in temporary disturbance of the active floodplain and potential fish habitats of the Inmachuk River. Some sedimentation and turbidity may take place, which would be minimized through the implementation of a SWPPP for the project. Fish habitats are expected to be protected by conducting operations in dewatered, winter conditions, away from the mainstem of the Inmachuk River. A reclamation plan would be prepared for all material sites used for the project.

#### *Secondary (Induced) and Cumulative Impacts*

No other past, current, or future projects are known to have secondary or cumulative impacts to the resource.

#### **4.14.1.1 No Action Alternative**

The No Action Alternative would have no construction impacts.

## **5.0 PERMITS AND AUTHORIZATIONS**

The permits and authorizations listed in the following table, unless otherwise noted, would be obtained for the Proposed Action to comply with applicable federal, state, NAB and local regulations.

**Table 7. Permits and Authorizations**

#	Permit/Authorization; Agency	Why Permit/Authorization is Required
Federal Permits and Authorizations		
1	Section 404 Clean Water Act Wetlands Fill Permit; USACE	Project elements were designed to avoid and minimize wetland impacts to the maximum extent practicable. A Section 404 individual permit would be obtained prior to construction for the placement of fill within jurisdictional wetlands and waters of the U.S.
2	Migratory Bird Treaty Act compliance; USFWS	USFWS recommendations would be followed to avoid migratory bird take during vegetation clearing.
3	Magnuson-Stevens Fishery Conservation and Management Act EFH consultation and assessment; NMFS	DOT&PF prepared an EFH Assessment to describe potential EFH impacts and propose conservation measures to reduce impacts (Appendix F).
4	MMPA Consultation; NMFS	DOT&PF prepared a MMPA Consultation to describe potential impacts and propose conservation measures to reduce impacts (Appendix E).
5	ESA Section 7; USFWS, NMFS	DOT&PF prepared ESA Consultations to describe potential impacts and propose conservation measures to reduce impacts (Appendix E).
6	Government to Government Consultation	Consultation in accordance with Executive Order 13175 consultation was conducted with the Native Village of Deering to obtain meaningful and timely input regarding proposed FAA actions and address relevant community concerns/issues.
State Permits and Authorizations		
7	Section 106 Consultation; SHPO, Tribes, and Consulting Parties	DOT&PF prepared a Section 106 Consultation to describe potential impacts and propose conservation measures to reduce impacts (Appendix D).
8	Section 401 Certification – Certificate of Reasonable Assurance; ADEC, Division of Water Quality	A 401 water quality certification would be issued prior to the USACE 404 permit and would notify compliance with state water quality administrative code. ADEC requires a pre-application meeting and application prior to certification. Measures to protect water quality in accordance with permit stipulations would include the use of BMPs to minimize potential for erosion and sedimentation of wetlands and waterbodies.
9	Alaska Pollutant Discharge Elimination System (APDES) Construction General Permit (CGP); ADEC, Division of Water Quality	For projects with disturbance of over 1 acre, compliance with the APDES CGP is required. A SWPPP and notice of intent to seek coverage under the CGP would be required prior to construction. The CGP requires implementation of BMPs to protect water quality during construction.
10	Title 16 Fish Habitat Permit; ADF&G	A Title 16 permit would be required for project activities occurring below ordinary high water of a fish bearing stream. Measures to maintain fish passage, and avoid and minimize impacts to fish and their habitats, within these waters would be implemented in consultation with ADF&G.

Local Permits and Authorizations		
11	Title 9 Land Use Permit; NAB, Planning Department	The Proposed Action is within the NAB and would require a Title 9 Permit.

## 6.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

The public, federal and state agencies, the Native Village of Deering, and various local entities were consulted throughout project planning and design. Table 8 summarizes the tasks and activities undertaken to ensure involvement and coordination. Project scoping correspondence, materials, and available meeting notes are included in Appendix B. Agency coordination is included in Appendix C.

**Table 8. Public Involvement and Agency Consultation Activity**

Date	Activity	Description
6/5/2020	Agency Scoping Letters	DOT&PF issued letters to local governments, tribal entities, federal and state agencies, and staff describing the project and soliciting comments.
6/5/2020	Government to Government Consultation Initiation	DOT&PF issued a letter to the City of Deering, Native Village of Deering, NANA, and Maniilaq Association describing the project and requesting comments and input on future coordination.
9/9/2020	Public Meeting	DOT&PF held a public meeting with Deering to inform and gather comments from residents on the project. Public comments were gathered during the meeting (Appendix B).
12/10/2020	NMFS MMPA	NMFS MMPA Consultation Initiated
12/10/2020	USFWS Section 7	USFWS Section 7 Consultation Initiated
12/10/2020	NMFS Section 7	NMFS Section 7 Consultation Initiated
12/11/2020	USFWS Section 7	USFWS Section 7 Consultation Completed
1/4/2021	Section 106	SHPO Section 106 Consultation Initiated
1/19/2021	Government to Government Consultation	Government to Government Consultation Initiated
1/25/2021	NMFS EFH	NMFS EFH Consultation Initiated
01/29/2021	NMFS EFH	NMFS EFH Consultation Completed
1/25/2021	Section 106	SHPO issues 'No Objection' to Area of Potential Effect
02/22/2021	NMFS MMPA	NMFS MMPA Consultation Completed
02/22/2021	NMFS Section 7	NMFS Section 7 Consultation Initial Concurrence
04/02/2021	Section 106	SHPO Section 106 Consultation Completed
06/14/2021	NMFS Section 7	FAA Concurrence NMFS Section 7 Consultation is Completed

<b>Date</b>	<b>Activity</b>	<b>Description</b>
01/19/2022	Section 4(f)	FAA notifies Tribal Administrator of Section 4(f) de Minimis finding.
01/19/2022	Section 4(f)	FAA notifies SHPO of Section 4(f) de Minimis finding.
01/26/2022	Draft EA Issued	Draft EA Issued for Public Notice and Comment
01/28/2022	Draft EA Comments	USACE replies permit was issued December 8, 2021.
02/01/2022	Draft EA Comments	NMFS EFH recommends conservation measures, incorporated into this EA.
02/08/2022	Draft EA Comments	ADEC Air Quality replies does not need a permit. Reminds to follow open burning, particulate matter regulations, and use BMPs to mitigate dust during construction.
02/28/2022	Draft EA Comments	ADEC Contaminated Sites replies no identified contaminated sites. Reminds Aircraft Firefighting Foam can be a source of contaminants. (DOT&PF does not have records of foam use at Deering.)
02/18/2022	Section 4(f)	SHPO replies that there are not have objections to Section 4(f) determination

## 7.0 LIST OF PREPARERS

The following individuals were primarily responsible for the content of this EA, or for providing senior management leadership during the development and production of this document.

**Table 9. List of Preparers**

<b>Preparer</b>	<b>Title and/or Role</b>
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