MARSHALL AIRPORT IMPROVEMENTS

STATE PROJECT NUMBER #NFAPT00371

FINAL ENVIRONMENTAL ASSESSMENT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
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JULY 2023

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Draft Environmental Assessment
State Project Number: NFAPT00371

Prepared for:
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This Draft Environmental Assessment becomes a federal document when evaluated, signed, and dated by the responsible Federal Aviation Administration official.

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ACRONYMS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish & Game
ADNR	Alaska Department of Natural Resources
AHRS	Alaska Heritage Resource Survey
APDES	Alaska Pollutant Discharge Elimination System
BMP	best management practices
CEQ	Council on Environmental Quality
CH	Critical Habitat
CWA	Clean Water Act
DOT&PF	Alaska Department of Transportation and Public Facilities
DWPA	Drinking Water Protection Area
EA	Environmental Assessment
EFH	Essential Fish Habitat
EFHA	Essential Fish Habitat Assessment
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
IPaC	Information for Planning and Consultation
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NLRUA	Northern Land Use Research Alaska, LLC
NWR	National Wildlife Refuge
OHW	ordinary high water
PAPI	precision approach path indicators
PM_{10}	particulate matter 10 micrometers or less in diameter
PWS	public water system
RCA	regulatory commission Alaska
REIL	runway end identifier lights
ROI	region of influence
RSA	runway safety area
SHPO	State Historic Preservation Office
USACE	United States Army Corps of Engineers
USFWS	United States Fish & Wildlife Service

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1.0 PURPOSE AND NEEED FOR ACTION

1.1 INTRODUCTION

The community of Marshall, Alaska, is located in southwestern Alaska on the east bank of Poltes Slough, north of Arbor Island, on the right bank of the Yukon River, in the Yukon-Kuskokwim Delta. The City of Marshall is made up of two Yup'ik tribes of Takchak and Ohogmuit and the Inupiaq descendants hailing from Unalakleet. Marshall has a population of 492 total residents (U.S. Environmental Protection Agency [EPA] 021), all of whom maintain a fishing and subsistence lifestyle. Marshall first was known as the unincorporated village of Fortuna Ledge. In 1950, the name was changed to Marshall, but then in the 1970's was listed as Fortuna Ledge again. It was officially incorporated and listed as Marshall on the 1984 census. The Marshall Don Hunter Sr Airport is located approximately two road miles southeast from the community of Marshall. The airport property is located in Sections 25, 26, and 36, Township 21 North, Range 70 West, Section 5 and 6, Township 20 North, Range 70 West, and Section 31, Township 21 North, Range 69 West Seward Meridian (U.S. Geological Survey [USGS] Marshall D–1 SW). The airport reference point is located at 61.8641667N, 162.0261111W. See Appendix A, Figure 1, Project Location and Vicinity Map.

The Alaska Department of Transportation and Public Facilities (DOT&PF) owns and operates the Marshall Don Hunter Sr Airport, and in cooperation with the Federal Aviation Administration (FAA), proposes to rehabilitate the runway, taxiway, apron, airport access road, snow removal equipment building (SREB), replace airport lighting and segmented circle and apply dust palliative. Marshall is not on the road system and is served by river access in the summer and snowmachine access in the winter, with no reliable surface transport in the shoulder seasons. The airport provides the only year-round access to the community. This project will provide the community with adequate access for good, services and passenger transport while meeting FAA airport design standards per FAA Advisory Circular (AC) 150/5300-13B.

ADOT&PF is requesting federal funding through the FAA Airport Improvement Program for this project. As a result, the improvements to the Marshall Don Hunter Sr Airport require FAA Alaskan Airports Division approval and federal funding of the Proposed Action (a federal nexus as defined under the National Environmental Policy Act [NEPA]), requires an Environmental Assessment (EA). This document serves to evaluate the environmental effects of the Proposed Action, which is discussed further in Chapter 3.0. DOT&PF anticipates that construction of this project would begin in 2023 and is expected to last two years.

1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The identification of the purpose and need for a proposed project is the primary basis for developing the range of reasonable alternatives. The proposed project will rehabilitate the Marshall Don Hunter Sr Airport to meet FAA design standards. The following provides a description of the deficiencies and needs that the proposed project would address.

1.2.1 Purpose of the Proposed Action

The purpose of the proposed project is to rehabilitate the airport infrastructure to meet FAA standards, reduce maintenance requirements, and reestablish safe and efficient airport operations. The runway has minimal gravel surfacing remaining, exposing the subbase, which increases safety concerns related to uneven surfacing and damage to aircraft tires. Shoulders have significant slope failures, which reduces the runway safety area below standard 150-foot width per FAA AC 150/5300-13B. The airport lighting system is beyond its useful life and has experienced prolonged outages due to system failures, requiring

increasing levels of maintenance to remain operable. The airport access road has failing culverts and sections which become soft during wet season that can limit vehicle access to the airport. Road rehabilitation will re-establish reliable vehicle access to the airport. The existing SREB does not meet current building codes for the fuel storage, has a gravel floor, and other components require increasing levels of maintenance. Upgrading the fuel tanks to current standards and installing a concrete floor reduces contamination potential. Upgrading electrical heating and repainting siding extends the useful life and reduces maintenance costs. The overall need for the proposed action is to restore the airport to current safety standards and maintain reliable year-round air access to the community of Marshall.

1.2.2 Need for the Proposed Action

Marshall is not connected to the Alaska State Highway System. Freight is barged to the Marshall in the summer months or flown into Marshall's airport year-round. The continued safe operation of Marshall Don Hunter Sr Airport is critical for residents, visitors, bypass mail, freight, and medical emergencies/needs.

Graphic 1: Current Taxiway Embankment (2022 AKDOT&PF photo taken by Chris Johnston)

Graphic 2: Current lighting (2022 AKDOT&PF photo taken by Chris Johnston)

1.3 SCOPE OF ENVIRONMENTAL ANALYSIS

This EA considers relevant environmental resource areas in the context of valued environmental components (VECs) which are the resources, ecosystems, and human communities of concern that could be affected by the Proposed Action. The VECs evaluated in this EA are identified in Chapter 3. The scope of this EA includes the geographic area potentially influenced by the Proposed Action as well as the area of potential environmental effect, which varies by resource. The main study area encompasses the Marshall Don Hunter Sr airport and the airport access road. For some VECs, however, such as for climate change, air quality, and socioeconomic impacts, the study area expands to a regional area. The geographic scope for each resource area is identified in Chapter 3 within the discussion for each resource topic.

1.4 PUBLIC/AGENCY INVOLVEMENT

In accordance with FAA Order 1050.1F and Order 5050.4B, the FAA provides opportunities for the public to participate in the NEPA process to promote open communication and to improve the decision-making process. All persons and organizations having potential interest in the Proposed Action are encouraged to participate in the environmental analysis process. The formal opportunity to comment involves a 30-day period of public review of the Draft EA. A Notice of Availability of the Draft EA was be published at https://dot.alaska.gov/nreg/marshall-airport/, and copies of the documents was distributed

at the City Office in Marshall, and to individuals who expressed interest in the project. The Draft EA was made available on the https://dot.alaska.gov/nreg/marshall-airport/, and was published in the State of Alaska online Public Notices on June 2, 2023. In addition, an email was sent to all agencies previously engaged during project scoping or engaged during consultations. The FAA and DOT&PF reviewed and considered all comments received during the public comment period that closed on July 2, 2023. At the conclusion of the public comment period, after comments were considered and resolved, the FAA proceeded with the finalization of the EA and development of the FONSI.

Agency scoping letters were sent out on March 18, 2022. Consulting letters and comments received can be found in Chapter 7. There was also a public meeting held in Marshall on May 10, 2022. No objections were expressed concerning this project. All documents can be found in Appendix D.

1.5 REGULATORY FRAMEWORK

The FAA is guided by relevant statues (and their implementing regulations) and executive orders (EOs) that establish standards and provide guidance on environmental compliance, including natural and cultural resources management and planning in support of their mission to provide the safest, most efficient aerospace system in the world. The FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, provides FAA's agency-wide policies and procedures to ensure agency compliance with the requirements set forth in the CEQ Regulations for implementing NEPA. In addition to FAA Order 1050.1F, there are other NEPA-implementing policies and procedures that may be applicable to your proposal, including FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions. Other major statues and EOs that apply to the Proposed Action are as follows:

- Archaeological Resources Protection Act of 1979 (16 U.S.C. §§ 470aa–470mm)
- Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668–668c) • CAA (42 U.S.C. §§ 7401–7671q)
- Clean Water Act (CWA), Sections 401,402, and 404 (33 U.S.C. §§ 1251-1387)
- Endangered Species Act (16 U.S.C. §§ 1531–1544)
- EO 11514 as amended by EO 11991, Protection and Enhancement of Environmental Quality
- EO 11593, Protection and Enhancement of the Cultural Environment
- EO 11988, Floodplain Protection
- EO 11990, Protection of Wetlands
- EO 12088, Federal Compliance with Pollution Control Standards
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risks
- EO 13175, Consultation and Coordination with Indian Tribal Governments
- EO 13834, Efficient Federal Operations

- Migratory Bird Treaty Act (16 U.S.C. §§ 703–712)
- National Historic Preservation Act of 1966 (54 U.S.C. § 300101
- Pollution Prevention Act of 1990 (42 U.S.C. §§ 13101–13109)

1.6 DECISION TO BE MADE

The Federal Action requested of the FAA by the DOT&PF is to approve the proposed improvements to Marshall Don Hunter Sr Airport and fund it under FAA's Airport Improvement Program. There are no proposed modifications to FAA Design Standards included in this project.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

DOT&PF, in cooperation with the FAA, proposes to rehabilitate existing facilities at the Marshall Don Hunter Sr Airport (Proposed Action) including the following elements (bulleted below) that are shown (Figures 1 through 17; Appendix A). These elements are further described in detail in Section 3.1:

- Rehabilitate the existing runway, taxiway, and apron.
- Reconstruct failing embankment shoulders and flatten slopes. Re-establish as-built drainage and re-grade ditch on the south side of the runway.
- Rehabilitate and widen the airport access road. The existing road varies from 14-feet to 18-feet wide and will be widened to a consistent 18 feet wide.
- Replace existing culverts along the airport access road in approximately the same location and depth (see Figure 2, culvert locations are in blue).
- Replace FAA runway end identifier lights (REILs) (in the same locations.)
- Replace airport lighting, segmented circle, and navigational aids.
- Rehabilitate the existing SREB and pad.
- Materials for this project are anticipated to be contractor furnished. All required clearances and permits for material sites will be secured before construction begins.

2.1.1 Airport Improvements

2.1.1.1 Runway, Taxiway, and Apron Rehabilitation

The failing shoulders of the runway, taxiway, apron, and SREB pad will be rebuilt. Embankment slopes will be flattened up to 5:1. The top two feet of runway safety area from the light line out to the edge of the embankment will be reconstructed.

The runway, taxiway, and apron will be resurfaced with approximately 9 inches of surface course and a subbase leveling course. The taxiway edge geometry will be updated to current standards per FAA AC 150/5300-13B, resulting in minor realignment of edge lighting. The segmented circle and SREB pads will also be resurfaced with approximately 9 inches surface course. A dust palliative will be applied on resurfaced areas.

The existing airport has a diversion berm along the south side of the runway which is not performing the intended purpose of keeping water away from the runway embankment. This project would re-grade the berm and fill the ditch, creating continuous runoff from the runway to the north edge of the diversion berm.

Graphic 4: Current Runway (2022 AKDOT&PF photo taken by Chris Johnston)

2.1.1.2 Airport Access Road Improvements

Twelve culverts along the airport access road will be replaced. Of these, nine 24-inch diameter culverts will be replaced with 36-inch diameter culverts, two 36-inch diameter culverts will be replaced in kind, one 48-inch diameter culvert will be replaced in kind, and one 36-inch diameter culvert will be replaced with a 48-inch diameter culvert in a different location. The 36-inch diameter culverts will be replaced at the same location as the existing culverts. The 48-inch diameter culverts will be realigned to better match current drainage patterns.

Several sections of road be excavated up to 4 feet and replaced with new material. The remainder of the road will be resurfaced with crushed aggregate surface course, resulting in approximately a one-foot grade raise. The grade raise and reconstructing of as built 3:1 shoulders will result in a widened road footprint. Dust palliative will be applied to the road surface.

Graphic 3: Current Access Road (2022 AKDOT&PF photo taken by Chris Johnston)

2.1.1.3 Navigational Aids and Lighting Improvements

All airport runway, taxiway, and apron lighting components will be replaced. The segmented circle, lighted wind cone, and rotating beacon will also be replaced.

The project will include replacement of the FAA-owned runway end identifier light (REIL) on Runway 7. The foundations for the Runway 7 precision approach path indicator (PAPI), abandoned by FAA in 2006, will be removed along with other existing electrical systems to be replaced.

2.1.1.4 SREB Improvements

The existing gravel floor in the SREB will be replaced with a concrete floor. The exterior of the SREB will be refinished, the man door and bollards replaced, and roof repaired.

A new fuel tank will be installed for the SREB. An existing fuel tank will be reinstalled for equipment fueling. A security fence will be added around the fuel tank area, per current building code. Mechanical and Electrical systems on the SREB will also be upgraded to extend the life of the facility.

2.2 SCREENING CRITERIA

In compliance with the FAA and CEQ regulations implementing NEPA, the FAA must consider reasonable alternatives to the Proposed Action. Only those alternatives determined to be reasonable relative to their ability to fulfill the purpose and need for the Proposed Action warrant detailed analysis. To be considered reasonable, an alternative must fulfill the purpose and need for the action, as well as be technically and fiscally feasible. This section presents the criteria used to determine whether alternatives were reasonable and, therefore, should be carried forward for analysis.

The FAA and DOT&PF established four screening criteria to identify appropriate alternatives to meet the purpose and need of the Proposed Action:

Screening Criterion 1: Airport improvements that meet FAA standards per AC 150/5300-13B. Use of these standards and guidelines are practices the FAA recommends for establishing an acceptable level of safety, efficiency, and capacity when designing and implementing airport development projects at civil airports.

Screening Criterion 2: Meeting maintenance and operations needs for the useful life of each project component per FAA Order 5100.38D.

Screening Criterion 3: Minimization of wetland disturbance.

Screening Criterion 4: Requiring construction techniques and phasing commonly available in the region.

2.3 ALTERNATIVES CONSIDERED

This section identifies the proposed alternatives that address the deficiencies stated in Section 1.2, *Purpose and Need of the Proposed Action*. The analysis has been prepared in accordance with the Council on Environmental Quality's (CEQ) regulations (40 CFR 1502.14) for implementing NEPA, as well as FAA's NEPA guidelines (FAA Orders 5050.4b and 1050.1F).

2.3.1 Alternatives Carried Forward for Analysis

Alternative 1 – Proposed Action

The Proposed Action will rehabilitate the runway, taxiway, apron, airport access road, and the snow removal equipment building, replace airport lighting and segmented circle and apply dust palliative. The Proposed Action will restore the airport to FAA standards while minimizing environmental impacts and keeping the project's cost within available funding limits.

Additional Proposed Action elements were described further in Section 2.1, *Proposed Action*. The Proposed Action will also require related actions as discussed below.

Permits and Authorizations

Permits required to construct the Proposed Action include:

- United States Army Corps of Engineers (USACE), Section 404 Clean Water Act (CWA) Individual Permit

- Alaska Department of Environmental Conservation (ADEC), Section 401 CWA Certificate of Reasonable Assurance; Alaska Pollutant Discharge Elimination System (APDES) General Permit for Discharges from Large and Small Construction Activities

Approvals through consultation with:

- The Alaska State Historic Preservation Office (SHPO) and local Indian Tribes, and Alaskan Native Villages, under the National Historic Preservation Act
- United States Fish and Wildlife Service Section 7 Consultation
- Department of Transportation Act Section 4(f) Consultation

2.3.2 No-Action Alternative

NEPA requires agencies to consider a "no action" alternative in their NEPA analyses and to compare the effects of the No Action Alternative with the effects of the Proposed Action. Under the No Action Alternative, no airport improvements would occur, and the existing deficiencies would remain and the condition of the airport would continue to deteriorate. The No Action Alternative would not improve operational surfaces.

2.4 ALTERNATIVES DISMISSED FOR FURTHER CONSIDERATION

This section describes other alternatives considered and eliminated from further environmental analysis. FAA Order 1050.1F, Change 1, paragraph 506.e states that alternatives "… must be reasonable, feasible, and achieve the project's purpose." Potential alternatives that would not meet these criteria are eliminated from further consideration. DOT&PF investigated several alternatives to address deficiencies and material site development to support reconstruction of the Marshall Don Hunter Sr Airport facilities. Table 3 outlines the alternatives that were considered but dismissed.

Table 1: Viability Analysis Table

Screening Criteria	Alternative 1: Proposed Action	No Action Alternative
Criterion 1: Airport improvements that meet FAA standards per AC 150/5300-13B	The proposed action would provide an airport meeting RSA standard of 150' width and taxiway edge geometry meeting current standards.	The RSA would remain below the 150' standard for this classification of airport. The taxiway edge geometry would remain as a non-standard condition.
Criterion 2: Meeting maintenance and operations needs for the useful life of each project component per FAA Order 5100.38D	The airport and access road surfaces would be resurfaced with sufficient surfacing and the airport lighting reconstructed to meet a 20-year useful life. The SREB would be rehabilitated to extend the useful life at least an additional 10 year.	The airport embankments would have minimal surfacing, presenting an increasing maintenance challenge to keep the surfaces safe for operations. The airport lighting would continue to degrade and create lighting outages, which present safety concerns. The SREB would continue to degrade,

		presenting increasing maintenance challenges over time.
Screening Criterion 3: Minimization of wetland disturbance.	This alternative requires approximately 9.7 acres of wetlands impact. This alternative is the least impact to meet the required standards and minimum useful life.	No action would not directly impact additional wetlands. Continued erosion of embankment slopes may cause sediment to runoff into wetlands.
Screening Criterion 4: Requiring construction techniques and phasing commonly available in the region.	The proposed action is similar to other DOT&PF projects.	N/A

2.5 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 4 provides a summary of the environmental media areas identified for analysis and the potential environmental impacts from the Action Alternative and No Action Alternative.

Wildlife habitat would be affected; however, the project is not anticipated to have an effect on bald or golden eagles.

Table 2: Summary of Environmental Impacts Table

Metric	Proposed Action	No Action
Environmental Impacts[1]		
Air quality	Less than significant. Minor impacts from material transport. Applying dust palliative will reduce in the immediate vicinity of the airport.	None
Biological resources	Less than significant. Wildlife habitat would be affected; however. The project is not anticipated to have a long-term effect.	None. Would not affect biological resources beyond existing effects.
Hazardous materials, solid waste, and pollution prevention	None. The Proposed Action does not involve a property on the National Priorities List and hazardous waste generation is not anticipated Construction generated solid waste is not expected to exceed available landfill capacities. Installing a new concrete floor in the SREB will reduce the potential of hazardous materials contamination to underlying soils.	None. The No Action Alternative would not result in a change from existing conditions.
Historical, architectural, archaeological, and cultural resources	None. The Proposed Action Alternative would not affect any significant historical, architectural, archaeological, or cultural resources.	None. The No Action Alternative would not affect historical, architectural, archaeological, or cultural resources.

[1] *Only includes resource categories with impacts and doe adds not include Non-Applicable/non-Issue Categories*

Natural resources and energy supply	Less than significant. Minor temporary effects	None. The No Action Alternative would not result in a change to current energy consumption levels or material needs.
Noise and noise-compatible land use	Less than significant. Minor temporary effects	None. The No Action Alternative would not change noise levels from current conditions.
Socioeconomics	Less than significant. Minor temporary effects	None.
Children's health and safety risks	Less than significant. Minor or insignificant temporary effects	None. The No Action Alternative would potentially affect children's health or safety risks that would increase over time related to airport deficiencies such as soft spots and degrading pavement.
Visual effects	Less than significant. Minor effects	None. The No Action Alternative would not affect visual resources.
Wetlands	Less than significant. Proposed improvements associated with Marshall Don Hunter Sr Airport would result in the fill of 9.7 acres of terrestrial wetlands. A Clean Water Act Section 404 wetland fill permit has been acquired for impacts to 9.7 acres.	None. The No Action Alternative would not affect wetlands.
Floodplains	Less than significant. Minor effects	None. The No Action Alternative would not affect floodplains.
Surface waters	Less than significant. Minor effects	None. The No Action Alternative would not affect surface waters.
Climate Change	Less than significant. Minor effects	None. The No Action Alternative would not affect climate change.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This chapter provides a description of the existing environmental, social, and economic setting for the area that would be affected by the Proposed Action. It provides information to serve as a baseline from which to identify and evaluate environmental changes associated with the implementation of the Proposed Action. The environmental components addressed include relevant natural or human environments likely to be affected by the Proposed Action and alternatives.

The affected environment consists of baseline conditions that are used for analysis of the environmental effects from the alternatives described in Chapter 2. A region of influence (ROI) is described for each resource area. The ROI varies among resources and defines the geographic extent of potential effects from the alternatives on the important elements of that resource. Each section in this chapter delineates its ROI and identifies the topics and resources addressed by that section.

Following the affected environment discussion for each resource is the presentation of environmental consequences or effects of each alternative. Changes to the natural and human environments that may result from the Proposed Action and No-Action Alternative were evaluated relative to the existing environment. FAA Order 1050.1F (2015) and FAA 1050.1F Environmental Desk Reference for Airport Actions (2020) provide guidance on FAA NEPA documentation and provide direction for the evaluation of potential impacts of a proposed federal airport project on specific environmental categories. Any mitigation measures identified to reduce or eliminate the impact of an alternative on a resource are identified within the analysis for that resource area. This organization is intended to allow the reader to focus their review on the existing condition and impacts to a particular resource area of concern.

Environmental effects are defined in the CEQ NEPA implementing regulations (40 CFR 1500-1508) as changes to the human environment from the Proposed Action or actions that are reasonably foreseeable and have a reasonably close causal relationship to the Proposed Action. In addition to the Proposed Action, the project would require acquisition and transport of materials for resurfacing, embankment construction, and other activities.

The qualitative terms used to assess the anticipated impacts associated with each of the alternatives are defined as:

- **None**-No measurable impacts are expected to occur.
- Less than Significant-Adverse impacts are expected to occur; impacts would be noticeable and would have a less than significant effect on the resource.
- Significant-Adverse impacts are expected to occur; impacts would be obvious and would have serious consequences on the resource.

3.2 PRESENTATION OF RESOURCE AREAS

3.2.1 Resource Areas Carried Forward for Analysis

After consideration of the anticipated impacts associated with the Proposed Action and public and agency input provided during scoping, the following resources were identified as having potential impacts in association with the implementation of the Proposed Action and carried forward for detailed analysis in

this EA:

- Biological Resources - Migratory Birds, Invasive Species
- Floodplains
- Natural Resources and Energy Supply
- Air Quality
- Noise and Noise Compatible Land Use
- Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Resources
- Surface Water
- Hazardous Materials, Pollution Prevention, and Solid Waste
- Historic, Architectural, Archaeological, and Cultural Resources
- Wetlands
- Climate Change

3.2.2 Resource Areas Dismissed for Analysis

After consideration of the anticipated impacts of the Proposed Action and alternatives, the following resources were identified as not having potential impacts and are dismissed from further consideration:

- **Biological Resources**

  Mammals – The project is located within the current known range of the wood bison *(Bison bison athabascae)*), no critical habitat (CH) has been designated for this species. USFWS listed the wood bison as a threatened in 1970 and experimental population, non-essential in 2014 under the ESA (73 FR 28212).

  Under the ESA, USFWS established an experimental population, allowing for reintroduction of a species to its former range with special rules that allow for some of the management requirements of the ESA to be relaxed to local landowners and managers. The Alaska Department of Fish and Game (ADF&G) introduced wood bison *(Bison bison athabascae)* to the Innoko/Yukon River area in 2014. Wood bison were largely extirpated from much of their original range in Alaska and Canada by about 1900. At the time, only a few hundred animals existed in northeastern Alberta. The goal of the Alaska wood bison restoration project is to reestablish one to three free-ranging populations followed by a long-term monitoring and evaluation process to determine feasibility of establishing additional populations in the future.

  The proposed project area contains is not in critical habitat for wood bison as there has been none designated for the species in Alaska. While wood bison may occasionally traverse through Marshall, their density is low, and encounters are expected to be infrequent. Wood bison are unlikely to use the project area as feeding ground as it is within the village boundary, with a high frequency of human activity. Wood bison CH is not found frequently in the project area. Due to low densities of the species and the presence of existing infrastructure, impacts to the wood bison population will be of a low significance. Consultation with USFWS concluded that no ESA-listed species or designated critical habitat occur near Marshall; therefore, the proposed project would have no effect on listed species or critical habitat. Preparation of a Biological Assessment or further consultation under section 7 of the ESA regarding this project is not necessary.

Bald and Golden Eagles – According to ADF&G, the range of bald eagles extends over the project area, but there is no documented information about eagles in the area. The area is not favorable for eagle nesting as it does not provide the proper tree coverage for an eagle to inhabit. Consultation was completed with USFWS and ADFG regarding eagles nesting the project area. There is no potential to impact eagles as a result of this project.

- **Coastal Resources –** Alaska's participation with the national Coastal Zone Management Act (known as the Alaska Coastal Management Program) ended on June 30, 2011. There are no coastal barriers within the State of Alaska and the project is not located within marine waters (USFWS 2021).

- **Farmland –** There is no prime or unique farmland, nor farmland of state or local importance in the vicinity of the project (NRCS 2021).

- **Land Use** – The proposed project improvements are located within the existing airport propertyboundaries, owned by DOT&PF. Designated land use adjacent to the airport boundary is undeveloped land.

  The Statewide Comprehensive Economic Development Strategic Plan (2022-2027) was drafted to assist the Village of Marshall decision-makers by providing guidelines to address questions and concerns related to future growth and development. The State of Alaska is finalizing a new 5-year plan funded by the Economic Development Administration, this economic development strategy leverages a locally based, regionally driven, state connected planning process. This draft identifies the current state of the economy, addresses strategies to improve Alaska's economic resilience, and provides a roadmap for future economic growth. It is a policy plan and was last updated in 2022 and is under review now.

  Land uses in Marshall are primarily residential, commercial, light industrial, and public. Institutional uses include the airport, a fire station, school, post office, health care, cemetery, and other public buildings and utilities.

  The primary transportation links to Marshall are by air and water, via barge and air transport services. Air service is the only connection between other communities in the region on a year-round basis. The primary air routes to Marshall are from Bethel.

  The Proposed Action would not change land uses as the Marshall Don Hunter Sr Airport Layout Plan identifies all undeveloped land as an aviation use. The rehabilitation of the airport is consistent with the Marshall Community Economic Development Strategy economic goals and objectives.

- **Wild and Scenic Rivers –** The Yukon River is not considered Wild and Scenic Rivers (National Park Service, 2022b). There will not be impacts to the rivers themselves.

- **Section 4(f) –** Publicly owned wildlife refuges, parks and recreation areas, and historic sites eligible for the NRHP are protected from transportation impacts by Section 4(f) of the Department of Transportation Act.

  Review of the U.S. Bureau of Land Management, U.S. Forest Service, National Park Service, and the Alaska Department of Natural Resources (ADNR) websites indicate there are no state Recreation Areas, Critical Habitat Areas, or public parks in the vicinity of the proposed project.

A review of the USFWS's National Wildlife Refuges System identified the Yukon Delta National Wildlife Refuge (NWR) boundaries overlapping the project.

As discussed in Section 3.13 there are no previously documented cultural resources or properties within the Marshall project area.

The Andreafsky Wilderness area is located about 29 miles north of the proposed project in Marshall and will not be impacted as a result of this project (USFWS 2021c).

Consultation was made regarding the Yukon Delta National Wildlife Refuge. The project work will be limited to existing airport access road and airport property, with no additional ROW access required. The Marshall Airport lies within the Yukon Delta NWR administrative boundaries; however, project work will not convert or work on or within Yukon Delta NWR property. This project would therefore be considered adjacent to the NWR, with no substantial impairments (noise, esthetics, access, vibration, or ecological intrusions) that would result in a constructive use to the NWR. As a result, there will be no Section 4(f) use of the Yukon Delta NWR by the proposed project, confirmed by FAA on February 23, 2023.

- **Groundwater –** Data and scoping efforts show that there are community wells located near the project area. These wells are located in the community of Marshall, however the airport access road falls within Zone A and Zone B of the Alaska DEC water protection areas. ADEC recommended guidelines will be followed and a PWS contact will be consulted as the project moves forward.
- **Threatened or Endangered Species** – According to the USFWS's Information for Planning and Consultation (IPaC) decision support tool, there is only one threatened species, the Wood Bison (Bison bison athabascae), listed as threatened or endangered under the ESA that occur within the project area (USFWS 2021b) (see Appendix C, US Fish and Wildlife Service – Information for Planning and Consultation Results). There are no migratory birds or refuge lands in or adjacent to the project location. Consultation was conducted with USFWS on May 24, 2022. Concurrence was received on May 24, 2022 stating that no negative impacts will be made on any threatened or endangered species as a result of this project.
- **Essential Fish Habitat** – Although temporary increased barging is expected in the Yukon River to deliver materials needed for construction, it is not an unusual activity for the river. The proposed project would not include any new in-water work in any anadromous or non-anadromous river system; Essential Fish Habitat will not be affected by the proposed project. The proposed project does not require any in water work.

  A review of the Alaska Department of Fish and Game (ADF&G) Fish Resource Monitor (ADF&G, 2022) and the National Oceanic and Atmospheric Administration (NOAA) Essential Fish Habitat (EFH) mapper (NOAA, 2022) did identify anadromous waters within the project area. The town of Marshall is located on the banks of the Poltes Slough of the Yukon River, an anadromous stream (334-20-11000-2375). Chum salmon, coho salmon, king salmon are present and pink salmon, sockeye salmon, arctic char, arctic lamprey, inconnu, and whitefish are present at the mouth of the river. The Bering Sea is EFH for chum, pink, coho, sockeye, and chinook salmon, and is that is where the Yukon River eventually flows into. There will be no adverse impacts on Poltes Slough as a result of this project.

3.3 BIOLOGICAL RESOURCES

Biological Resources are considered throughout the project area. The project area consists of the Marshall Don Hunter Sr. airport and the existing airport access road.

3.3.1 Significance threshold

The significance thresholds as defined by FAA Order 1050.1F Desk Reference for biological resources (e.g., fish, wildlife, vegetation) are:

The US Fish and Wildlife Service or the National Marine Fisheries Service determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat.

The FAA has not established a significance threshold for non-listed species, however factors to consider include if the action would have the potential for:

- A long-term or permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area (e.g., a new commercial service airport).
- Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats.
- Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations.
- Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance.

3.3.2 Migratory Birds

IpaC also lists no migratory birds of conservation concern expected to occur at project site. Favored eagle nesting habitat does not exist, and there are no known eagle nests, in the immediate project vicinity.

3.3.3 Applicable Regulations

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) is intended to ensure the sustainability of populations of all protected migratory bird species. The regulations governing migratory bird and eagle permits can be found in 50 CFR part 13, 50 CFR part 21 and 50 CFR part 22.

3.3.4 Applicable Environmental Commitments

Vegetation clearing would follow the USFWS *Recommended Time Periods for Avoiding Vegetation Clearing in Alaska* in order to protect migratory birds, as well as use the most appropriate clearing methods to avoid impacts to nesting migratory species (USFWS 2020). For the Yukon-Kuskokwim Delta ecoregion, the following vegetation clearing avoidance periods would apply (USFWS 2021c):

- Forest or woodland – May 1 through July 15
- Shrub or open habitat – May 5 through July 25

If working in shrub or open habitat (e.g., marsh, pond, tundra, gravel, or other treeless/shrubless ground habitat), the following time periods to avoid vegetation clearing may be expanded where the following species are present (USFWS 2020b):

- Raptors, which may nest two or more months earlier than other birds
- Canada geese (*Branta canadensis*) and swans (*Cygnus spp*.), which begin nesting April 20
- Black scoters (*Melanitta americana*), which are known to nest through August 10

3.3.5 Affected Environment

The project is adjacent to the nearly 20-million-acre Yukon-Kuskokwim NWR, which is comprised of the Yukon and Kuskokwim River deltas (DOT&PF 2007; ADF&G 2006). This area has bird species more in common with Eurasia than the rest of Alaska, with yellow and white wagtails (*Motacilla flava* and M. *alba*), bluethroats (*Luscinia svecica*), and red-throated pipits (*Anthus cervinus*) overlapping with high densities of nesting tundra swan (*Cygnus columbianus*), common eider (*Somateria mollissima*) and other waterfowl. Additionally, shorebirds such as the bristle-thighed curlew (*Numenius tahitiensis*), dunlin (*Calidris alpina*), and black-bellied plover (*Pluvialis squatarola*) are found in abundance, particularly in sedge flats.

According to USFWS's IpaC decision support tool, there are no migratory birds of concern expected to occur within the project area.

3.3.6 Environmental Consequences

3.3.6.1 No-Action Alternative

The No Action Alternative would have no effect on fish, wildlife, and plants. Deficiencies to the airport would remain, with the potential to detrimentally impact the community over time.

3.3.6.2 Action Alternative – Proposed Action

Wildlife habitat would be affected; however. The project is not anticipated to have an effect on bald or golden eagles. If the proposed project was to proceed, impacts would be of a low significance.

3.3.7 Mitigation

No mitigation is required to avoid a significant impact to migratory birds.

3.4 INVASIVE SPECIES

3.4.1 Applicable Regulations

Plant species used in the project area should comply with E.O. 13112. Any listed species found at the project site will require that appropriate measures be implemented to stop the spread of these species.

3.4.2 Applicable Environmental Commitments

Measures to minimize or eliminate the potential for introduction, establishment, and spread of invasive species would be implemented during construction. Construction equipment would be pressure washed to remove soil, seed, and plant material prior to moving onto or off the project site. Clean fill material, native plants, and certified native seed mix would be used, removing the risk of seeding exposed areas with invasive species. Stabilization of disturbed areas would occur as soon as practicable, reducing the risk of invasive species establishing themselves in the exposed soils. Stabilization can include paving,

laying down a gravel layer, and/or seeding and vegetating. Certified native seed or locally produced seed mix would be used when seeding is the selected stabilization method.

3.4.3 Affected Environment

Executive Order 13112, Safeguarding the Nation from the Impacts of Invasive Species, as amended on December 5, 2016, requires federal agencies to prevent and control the introduction of invasive species to minimize the economic, ecological, and human health effects that invasive species may cause. The Alaska Exotic Plant Information Clearinghouse database, administered by the Alaska Center for Conservation Science at the University of Alaska Anchorage, was used to identify any invasive terrestrial, marine, and aquatic plant species that could do harm to native habitats on or adjacent to the project. No invasive species have been recorded within the project area.

3.4.4 Environmental Consequences

3.4.4.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.4.4.2 Action Alternative – Proposed Action

Construction, operation, and maintenance activities could increase opportunities for invasive species introduction and dissemination through vehicle/airplane traffic, although would be of low significance.

3.4.5 Mitigation Measures

No mitigation measures are proposed or would be required.

3.5 FLOODPLAINS

The Federal Emergency Management Agency has not published regulatory flood maps for the community of Marshall. It lies along the banks of the Poltes Slough. Poltes Slough is a stream in Alaska. The nearest community to Poltes Slough is Marshall. Poltes Slough is a channel of the Yukon River, extends north and west of Moonlight Point and Arbro Island, northwest of Marshall, Yukon-Kuskokwim Delta.

3.5.1 Significance Threshold

As defined by FAA Order 1050.1F Desk Reference, the FAA has determined that a significant impact would occur if the proposed action causes notable adverse impacts on natural and beneficial floodplain values.

3.5.2 Applicable Regulations

Floodplain regulations are by municipal only. There are no floodplain regulation or a floodplain hazard map in Marshall The program's authority stems from Section 206 of the 1960 Flood Control Act (PL 86-645), as Flood hazard information for communities in Alaska is available through the Floodplain Management Services Program of the U.S. Army Corps of Engineers – Alaska District.

By identifying flood hazard areas (both coastal and riverine) and recording flood histories, we hope to help reduce the threat to life from flooding in Alaska and minimize flood-caused economic losses. Regulatory floodway is a floodplain area that is reserved in an open manner by federal, state or local requirements, i.e., unconfined or unobstructed either horizontally or vertically, to provide for the discharge of the base flood so that the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as established by FEMA for administering the NFIP) [.

3.5.3 Applicable Environmental Commitments

No Standard Operating Procedures apply to impacts to floodplains for the Proposed Action.

3.5.4 Affected Environment

The proposed project is located in an unmapped floodplain area. Federal Emergency Management Agency (FEMA) has not completed a study to determine flood hazards in Marshall; therefore, a flood map has not been published (FEMA 2021). Recorded flooding events are due to ice jams and Yukon River stream overflows, with the last flood event occurring in 1989 from a Yukon River ice jam (USGS 1994; AECOM 2018). Additionally, a 2016 Disaster Cost Index states that a spring flood (declared by Governor Palin on May 6, 2009; FEMA declared under DR-1843 on June 11, 2009) had extensive widespread flooding due to snow melt and destructive river ice jams caused by rapid spring warming combined with ex snowpack and river ice thickness. The airport is not subject to Yukon River flooding, and the Yukon River 100-year floodplain is estimated at 32 feet (USGS 1994).

3.5.5 Environmental Consequences

3.5.5.1 No-Action Alternative

No Action Alternative would have no construction impacts.

3.5.5.2 Action Alternative – Proposed Action

Although portions of the project would occur within the Yukon River 100-year floodplain, no local flood hazard permit would be obtained as a regulatory program does not require one. Further, no buildings or permanent infrastructure would be built within the floodplain. Impacts expected due to project construction is expected to be of low significance.

3.5.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.6 NATURAL RESOURCES AND ENERGY SUPPLY

Water, sewer, electricity, telephone, and solid waste disposal utilities are provided at the Marshall Airport. The proposed action would not change the energy requirements for the airport.

3.6.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the FAA has not established a significance threshold for natural resources and energy supply, however, a factor to consider is whether or not the

action's construction, operation, or maintenance would cause demands that would exceed available or future natural resources or energy supplies.

3.6.2 Applicable Regulations

Regulatory Commission of Alaska (RCA) regulates utilities and pipeline carriers throughout the State of Alaska. The RCA is an independent agency within the Department of Commerce, Community, and Economic Development. It was created pursuant to Alaska Stat. § 42.04.010. The Division of Mining, Land and Water is responsible for the administration of the Alaska Coal Mining Control and Reclamation Act. It also implements regulations for mining on private, municipal, state and federal land.

3.6.3 Applicable Environmental Commitments

No Standard Operating Procedures apply to impacts to natural resources and energy supply for the Proposed Action.

3.6.4 Affected Environment

Electrical power: The City of Marshall and Marshall's airport receives electrical power from the Alaska Village Electric Cooperative.

Water system: The City of Marshall is responsible for potable water service.

Sewer system. The City of Marshall is responsible for sanitary sewer service. Sewer effluent flows to a local sewage lagoon.

Fill materials for the Proposed Action construction would be obtained from a contractor furnished material site.

The Proposed Action, and the No Action Alternative will not change the long-term energy requirements at the airport. Construction of the airport improvements may increase airport operations over current levels, which could increase electrical and fuel demand; however, the increase in energy usage from the project would likely be negligible. The Proposed Action will have minimal effects on local utility systems and city water and sewer systems will have sufficient capacity to accommodate any resulting changes in usage.

The Proposed Action could result in a temporary increase in fuel demands during construction, though additional fuel would likely be barged in to support the project.

Fill material and construction materials are required for construction. Adequate fill material supplies are expected to be available from a contractor furnished material site. The Proposed Action and No Action Alternative would not cause demands exceeding available or future natural resource or energy supplies.

3.6.5 Environmental Consequences

3.6.5.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.6.5.2 Action Alternative – Proposed Action

There would be no long-term changes to energy supply requirements or increases in fuel demands as a result of the Proposed Action and impacts would be of low significance.

The Proposed Action would use natural resource fill material from a contractor furnished material site.

3.6.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.7 AIR QUALITY

3.7.1 Significance Thresholds

In accordance with FAA Order 1050.1F Desk Reference, the significance threshold for air quality is:

The action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the Environmental Protection Agency under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.

3.7.2 Applicable Regulations

The Clean Air Act (CAA) requires that, in areas experiencing air quality problems, transportation planning must be consistent with air quality goals. This is determined through the transportation conformity process.

3.7.3 Applicable Environmental Commitments

The Erosion and Sediment Control Plan for the project would address minor impacts to air quality from construction (e.g., dust) dust palliative reducing dust at airport.

3.7.4 Affected Environment

According to Alaska Administrative Code (AAC) 18 AAC 50, Marshall is considered a Class II area. As such, there are designated maximum allowable increases for particulate matter 10 micrometers or less in diameter (PM10), nitrogen dioxide, and sulfur dioxide. Activities in these areas must operate in such a way that they do not exceed listed air quality controls for these compounds (ADEC 2021a). The project area is not located within or near an area defined by ADEC as a Nonattainment or Maintenance Area, or within an area that regularly exceeds or is near violating the health-based National Ambient Air Quality Standards. The Project would not be considered a “major source of air pollutants” and would not require an operating permit under Title V of the Clean Air Act. The Marshall Don Hunter Sr Airport is a General Aviation airport with fewer than 180,000 annual operations; therefore, air quality analysis is not required.

3.7.5 Environmental Consequences

3.7.5.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.7.5.2 Action Alternative – Proposed Action

Marshall is a community with reported dust complaints. Dust during construction would be regulated using Best Management Practices (BMPs) and compliance with the Alaska Pollutant Discharge Elimination System Construction General Permit; therefore, no adverse air quality impacts associated with the proposed project are anticipated. The operation of heavy equipment and hauling 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. This project will result in a low significance of impacts.

3.7.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.8 NOISE AND NOISE COMPATIBLE LAND USE

Construction machinery and vehicle activity would temporarily increase noise along the haul routes.

3.8.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the FAA has determined that a significant impact would occur if the proposed action causes noise sensitive areas located at or above day-night average sound level (DNL) 65 decibels (dB) to experience a noise increase of at least DNL 1.5 dB. For example, an increase from DNL 65.5 dB to 67 dB is considered a significant impact, as is an increase from DNL 63.5 dB to 65 dB.

3.8.2 Applicable Regulations

Noise Standard at Title 23 Code of Federal Regulations (CFR) Part 772.

3.8.3 Applicable Environmental Commitments

No Standard Operating Procedures apply to impacts to noise and noise compatible land use for the Proposed Action.

3.8.4 Affected Environment

Existing noise sources in the area are primarily associated with the airport. The airport is primarily used by small aircraft less than 12,500 pounds and occasionally sees larger aircraft. The proposed project would not increase or decrease aircraft noise as the project does not change the runway dimensions. Existing land use surrounding the Marshall Don Hunter Sr Airport is undeveloped and minimal conflict between construction noise and compatible land use is anticipated. The community is in the vicinity of the airport and is approximately 2 miles away via an existing road, a distance that would result in no noise conflicts with the airport rehabilitation and operation.

No community concerns regarding noise were identified during public scoping for this EA.

3.8.5 Environmental Consequences

3.8.5.1 No-Action Alternative

No Action Alternative would have no construction impacts.

3.8.5.2 Action Alternatives – Proposed Action

The Proposed Action would not result in permanent noise impacts. Temporary noise impacts in the immediate vicinity of the Airport and material sites would occur during construction, but these impacts are anticipated to be minimal and short-term and have a low significance.

The Proposed Action would not disrupt current or planned development and the community of Marshall has no zoning laws. The Proposed Action would be compatible with existing land uses and airport improvements would be located within the existing Marshall Don Hunter Sr Airport property boundary. The Proposed Action would not result in any incompatible changes from existing land use designations.

3.8.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.9 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Socioeconomics: The Village of Marshall was first known as the Inuit village of "Ooglovia." It was also known as Uglovaia. Marshall first appeared on the 1940 U.S. Census as the unincorporated village of Fortuna Ledge. In 1950, the name was changed to Marshall. Residents continue to rely on caribou, moose, reindeer, whale, seal, waterfowl, berries, greens, and chum salmon.

Environmental Justice: Executive Order 12898: Environmental Justice addresses impacts from Federal Actions to minority and low-income populations. Marshall is primarily Inuit, and 95 percent of the population is Alaska Native or part Native (DCRA, 2010). The proposed project is not anticipated to cause adverse effects on minority or low-income populations.

Children's Health and Safety Risks: Children's health and safety are not currently at risk due to noise, aviation generated dust and proximity of aircraft. The U.S. Census Bureau data for Marshall (2015) estimates 58 children ages newborn-5 years, and 174 children ages 0-17 years. (DCCED, 2017).

Subsistence: Subsistence activities are an integral part in Marshall residents' lives through hunting, fishing and berry picking.

3.9.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the FAA has not established a significance threshold for socioeconomics, environmental justice, or children's environmental health and safety risks, however, factors to consider include if the action would have the potential to:

- Induce substantial economic growth in an area, either directly or indirectly, (e.g., through establishing projects in an undeveloped area).
- Disrupt or divide the physical arrangement of an established community.
- Cause extensive relocation when sufficient replacement housing is unavailable.
- Cause extensive relocation of community business that would cause severe economic hardship for affected communities.
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities.

- Produce a substantial change in the community tax base.
- Lead to a disproportionately high and adverse impact to an environmental justice population, i.e., a low-income or minority population, due to significant impacts in other environmental impact categories; or impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA determines are unique to the environmental justice population and significant to that population.
- Lead to a disproportionate health or safety risk to children.

3.9.2 Applicable Regulations

Regulations fall under Executive Order 12898 which are federal actions to address environmental justice in minority populations and low-income populations.

3.9.3 Applicable Environmental Commitments

No Standard Operating Procedures apply to impacts to socioeconomic impacts, environmental justice, and children's environmental health and safety risks.

3.9.4 Affected Environment

Marshall is located on the east bank of Poltes Slough, north of Arbor Island, on the right bank of the Yukon River, Yukon-Kuskokwim Delta. The City of Marshall is made up of two Yup'ik tribes of Takchak and Ohogmuit and the Inupiaq descendants hailing from Unalakleet. Marshall has a population of 492 total residents (U.S. Environmental Protection Agency [EPA] 021), all of whom maintain a fishing and subsistence lifestyle. The racial makeup of the City was 3.0% White, 2.0% Black, 95.0% Alaska Native, 0.0% Hispanic, and 2.0% reporting 2 or more races. The age distribution of the population shows 14.0% were 4 years and under, 43.0% were under the age of 18, 57.0% were over the age of 18, and 3.0% were 65 years or older. The per capita income was $35,369 (U.S. Census Bureau, American Community Survey (ACS) 2014-2018).

3.9.5 Environmental Consequences

3.9.5.1 No-Action Alternative

The No Action Alternative would impact community socioeconomics and maintain existing populations and minority's environmental health and safety risks. Continued deterioration of the airport would only compromise the airport, closing the only reliable, year-round transportation option to this minority and low-income community.

3.9.5.2 Action Alternative – Proposed Action

The Proposed Action would have positive socioeconomic impacts on Marshall. Economic advantages would likely arise from a short-term increase in construction employment opportunities (i.e., local hire) and additional revenue for service businesses that support directly or indirectly support the project's construction and would have a low significance.

The Proposed Action would not require relocations and the community tax bases would not be affected. No disproportionately high or adverse negative effects to low-income or minority populations are expected. The Proposed Action would have a beneficial effect on Marshall's residents, who are primarily a minority race (approximately 95% Alaska Native). The Proposed Action would provide a safer and more reliable air

travel and access, including medical evacuation, for all residents, including children and low-income minorities. The airport would remain open during construction, but minor airport delays could occur as a result of construction activities.

The Proposed Action would not result in risks to children's environmental health and safety. Noise levels at the school and clinical facilities would remain within land use compatibility standards. Vehicle traffic may increase during construction, particularly along haul routes to material sites, or to the barge landing site, but it is unlikely to result in any substantial increase in safety risks.

3.9.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.10 VISUAL RESOURCES

Marshall is a small community of the banks of the Poltes Slough, which flows into the Yukon River. The village is north of Arbor Island in the Yukon-Kuskokwim Delta.

3.10.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the FAA has not established a significance threshold or light emissions or visual resources/character, however factors to consider include if the action would have the potential to:

- Create annoyance or interfere with normal activities from light emissions.
- Affect the visual character of the area due to the light emissions,uniqueness, and aesthetic value of the affected visual resources. including the importance,
- Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources.
- Contrast with the visual resources and/or visual character in the study area and block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

3.10.2 Applicable Regulations

There are no applicable regulations for visual resources.

3.10.3 Applicable Environmental Commitments

No Standard Operating Procedures apply to impacts to visual resources.

3.10.4 Affected Environment

The Marshall Don Hunter Sr Airport is located 2 miles from the city of Marshall, and it is surrounded by undeveloped land. The proposed airport improvement areas are located on or immediately adjacent to existing runway, apron, access road, and drainage areas within the airport's boundaries. There are limited views of the airport since the surrounding property is undeveloped. Views would be primarily from vehicles on the airport access road. Impacts from the proposed project would result in a low significance.

3.10.5 Environmental Consequences

3.10.5.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.10.5.2 Action Alternative – Proposed Action

Existing views of the airport from adjacent roadways would change insignificantly with the proposed improvements. Any impacts that may result from this project are expected to be of low significance.

3.10.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.11 SURFACE WATER

The Marshall Airport is located 1.7 miles from the town of Marshall that lies on the banks of Poltes Slough that flows into the Yukon River. The Yukon River is a navigable river under the Army Corps of Engineers. No impaired waterbodies on the ADEC 303(d) List of Impaired Waterbodies are located within Marshall or the project area. Drainage patterns at the airport would not be altered as part of the proposed project.

3.11.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the significance threshold for surface water are:

- Exceed water quality standards established by Federal, state, local and tribal agencies.
- Contaminate public drinking water supply such that public health may be adversely affected.

3.11.2 Applicable Regulations

The Clean Water Act (CWA) is the primary federal law in the United States governing water pollution. Its objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters; recognizing the responsibilities of the states in addressing pollution and providing assistance to states to do so, including funding for publicly owned treatment works for the improvement of wastewater treatment; and maintaining the integrity of wetlands. Water Quality (WQ) works to improve and protect Alaskan waters in numerous ways. We develop water quality standards, address nonpoint source pollution, assess surface water quality, provide quality assurance assistance, develop regulations and review onsite wastewater systems. (18 AAC 70.020.)

3.11.3 Applicable Environmental Commitments

Best management practices (BMP) will be implemented during construction to minimize erosion and sedimentation.

3.11.4 Affected Environment

According to the ADNR Alaska Mapper - Navigable Waters website, USACE, and the U.S. Coast Guard, the Yukon River is listed as navigable for its entire length (ADNR 2021, USACE 1995, USCG 2012). Wilson Creek is not listed as navigable.

3.11.5 Environmental Consequences

3.11.5.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.11.5.2 Action Alternative – Proposed Action

The Proposed Action may result in some construction-related sedimentation and runoff during excavation and fill activities from the proposed airport improvements. Run off will not be directly in the Yukon River, but will be directly into Wilson Creek. Other runoff will be into surrounding wetlands which eventually drain into the Yukon River. Project impacts area expected to be of low significance.

3.11.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.12 HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

The project area encompasses the airport access road from the town of Marshall to the airport. Improvements will be made on the existing airport, apron, runway, taxiway and SREB. Buildings and previous construction are within the project limits.

3.12.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the FAA has not established a significance threshold for hazardous materials, solid waste, and pollution prevention, however factors to consider include if the action would have the potential to:

- Violate applicable Federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management.
- Involve a contaminated site (including but not limited to a site listed on the National Priorities List). Contaminated sites may encompass relatively large areas. However, not all the grounds within the boundaries of a contaminated site are contaminated, which leaves space for siting a facility on non-contaminated land within the boundaries of a contaminated site.
- Produce an appreciably different quantity or type of hazardous waste.
- Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity.
- Adversely affect human health and the environment.

3.12.2 Applicable Regulations

18 AAC 62.020. Identification of hazardous waste. (a) Regulations of the federal government for identification and listing of hazardous wastes, promulgated and published as 40 C.F.R. Part 261, as revised as of July 1, 2002, are adopted by reference. Standards Applicable to Specific Hazardous Wastes and Facilities (18 AAC 62.500 – 18 AAC 62.511).

3.12.3 Applicable Environmental Commitments

A Hazardous Materials Response Plan and Spill Prevention, Control, and Countermeasures Plan would be required from the construction contractor to address appropriate storage, use, and disposal of any hazardous

materials present during construction. All construction waste would be managed and disposed of in accordance with all state and federal solid-waste-management laws and regulations. On-going consultation with ADEC would be conducted during the design phase to determine if contamination may be present in the environment surrounding the project area and whether mitigation measures would need to be implemented during construction. If contaminated soil or groundwater is encountered during construction, the contractor would immediately notify DOT&PF and stop work until coordination on the appropriate response occurs with ADEC. The new concrete floor in the SREB would reduce potential for future contamination from spills.

3.12.4 Affected Environment

According to ADEC's contaminated sites database, there are four known active contaminated sites located within the Marshall community, but not in the project area. The community is over two miles from the project area. The first site located on 3rd Street and Yukon Avenue and is known as Marshall Maserculiq/City Tank. (Hazard ID 1040), involved the remediation of contaminated soils. Soil sampling near the site indicate high levels of benzene contamination along various locations along fuel distribution lines but identified this tank farm as the source of the groundwater contamination impacting the community wells. A Site Characterization Plan was drafted in 2019 and approved by ADEC.

The second site, located on the east side of Poltes Avenue, between 6th and 8th Streets and is known as Marshall Hunter Store (Hazard ID 3353). Soil was stockpiled near 6th Street and Poltes Avenue initially. It was moved to a lined, fenced and bermed landfarm area on the Hunter Store property. ADEC requested a site characterization plan and is this is suspended while a site transfer is being finalized with a new owner.

The third site, located on the N. end of Poltes Avenue, on the east bank of the Yukon River, and known as the Marshall Fish Processing Plant (Hazard ID 3354). Soil samples taken at the site found DRO and GRO contamination. Production wells that supply the Marshall drinking water system are upgradient from this contaminated site. A Site Characterization Plan was requested.

The fourth site, located at 89 School Road, and known as the Marshall Former Day School Tanks and Tank Farm (Hazard ID 25798). The Lower Yukon School District (LYSD) is undertaking some demolition and other activities in preparation for a pending land transfer from LYSD to Maserculiq Inc., the local village corporation. A Phase I and a Phase II were performed and identified soil contamination up to 40,600 mg/kg DRO, 334 mg/kg GRO, and methylnaphthalenes above migration to groundwater cleanup levels Contamination remains on site above established default cleanup levels, however ADEC has determined there is no unacceptable risk to human health or the environment. Therefore, this site will be issued a Cleanup Complete- Ics determination.

3.12.5 Environmental Consequences

3.12.5.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.12.5.2 Action Alternative – Proposed Action

The Proposed Action will not occur within areas that have been previously contaminated and cleaned up near the existing runway and apron. Project design would avoid these previously contaminated sites to the greatest extent possible. However, while impacts to contaminated soils are not anticipated, there is the potential for discovering hazardous materials during construction. Should additional contaminated soils and waters be encountered during construction, all work in the contaminated zone would be stopped and 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. The Proposed Action would be conducted in accordance with state and federal laws regarding handling, disposal, and spill response for hazardous materials, waste, and substances.

The Proposed Action would generate relatively small amounts of solid wastes from construction that would be disposed of at the local landfill, which has the capacity to receive the solid waste and be of low significance.

Hazardous materials used during construction would be limited to minor amounts of fuel, lubricants, hydraulic fluids, cleaning solvents, paint, and marking materials. Project activities would not generate hazardous materials and the project is anticipated to have no hazardous waste impacts.

3.12.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.13 HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

The Preliminary Area of Potential Effect (Preliminary APE) includes the construction area at the Marshall Don Hunter Sr. Airport and the right-of-way (ROW) boundary of the airport access road to the village of Marshall.

3.13.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the FAA has not established a significance threshold for historical, architectural, archeological, and cultural resources, however factors to consider include if the action would result in a finding of Adverse Effect through the Section 106 process.

3.13.2 Applicable Regulations

The National Historic Preservation Act. (NHPA); The NHPA was implemented in 1966 and regulates the preservation of the nation's historic properties, in which this project adheres to.

3.13.3 Applicable Environmental Commitments

There are no cultural resources found in the project area. Therefore, no minimization and mitigation measures are proposed or would be required.

3.13.4 Affected Environment

According to the Alaska Heritage Resources Survey (AHRS), there are no previously documented cultural resources or properties within the Marshall Project area (Office of History and Archaeology [OHA] 2021). The Kotlik-Marshall Trail (RS 2477 Trail #120) is mapped on the surface of the Yukon River. The trail follows to the west along the northern bank of the Yukon River until it reaches Russian Mission. The trail continues overland until it reaches the banks of the Yukon River again in Marshall Alaska. This trail is not visible on satellite imagery, suggesting it was a winter trail. The AHRS database shows this linear feature crossing the project APE at the Marshall Don Hunter Sr Airport access road. According to the Alaska Department of Natural Resources (ADNR) Division of Mining, Land and Water (ADNR 2021):

> "This trail was improved and maintained by Alaska Road Commission from 1922 to 1947. It was also a winter mail route. A substantial part of the area covered by this trail was reserved as Fort St. Michael in 1897 but returned to general BLM management in 1900. Another substantial part of the area was reserved as Yukon Delta Reservation in 1909, revoked in 1922 and returned to general BLM management until 1968."

A review of the DOT&PF Northern Region Cultural Resources Library revealed that a cultural resources survey was performed on the Marshall Don Hunter Sr Airport that included the entirety of the defined APE. Per 36 CFR 800, a finding of No Historic Properties Effected letter was sent to SHPO and consulting parties including the Alaska State Historic Preservation Officer (SHPO); Calista Corporation; Maserculiq, Incorporated; City of Marshall; and the Native Village of Marshall on December 13, 2022. No concerns were expressed from consulting parties. SHPO concurred that there are No Historic Properties Affected on December 30, 2022.

3.13.5 Environmental Consequences

3.13.5.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.13.5.2 Action Alternative – Proposed Action

No previously identified cultural resources sites are located within the primary project area.

3.13.6 Mitigation Measures

No mitigation measures are proposed or would be required.

3.14 WETLANDS

3.14.1 Significance Threshold

In accordance with FAA Order 1050.1F Desk Reference, the significance thresholds that would result in a significant impact to wetlands are:

- Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers.
- Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected.
- Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected.
- Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety, or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public).
- Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands.
- Promote the development of secondary activities or services that would cause the circumstances listed to occur.
- Be inconsistent with applicable state wetland strategies.

3.14.2 Applicable Regulations

The U.S. Army Corps of Engineers (USACE), Alaska District, and the U.S. Environmental Protection Agency (EPA) administers the Clean Water Act Section 404 Permitting Program. ADEC certifies Section 404 the Corps Dredge and Fill Permits, using the Alaska Water Quality Standards.

3.14.3 Applicable Environmental Commitments

The activity authorized by the USACE within an Individual Permit will be completed in conformance with the terms and conditions of the permit and water quality certification.

3.14.4 Affected Environment

In accordance with the NWI from the USFWS page, the area is surrounded by little area of wetlands. This area is primarily freshwater emergent or freshwater forested/shrub wetlands. From recent field trips and on ground observations, we are assuming that the area surrounding the airport and access road is all wet, not just what is shown on the NWI map. The proposed project area, composing of the airport and the airport access road, was surveyed in September of 2022. Wetlands were found in 61.8 percent of the study area. Most of the wetlands are composed of Deciduous Shrub. Ponds and streams account for 0.3 percent of the study area.

There will be 9.7 acres of wetlands affected by the proposed project. 10.0 acres of wetlands would be affected temporarily by the proposed project. A permit request was submitted with the U.S. Army Corps of Engineers (USACE) on January 04, 2023. The public notice was sent out on March 15, 2023, and an Individual Permit for 9.7 acres of wetland impact was issued on May 26, 2023.

3.14.4.1 No-Action Alternative

The No Action Alternative would have no construction impacts.

3.14.4.2 Action Alternative – Proposed Action

Proposed improvements associated with Marshall Don Hunter Sr Airport would result in the fill of 9.7 acres of terrestrial wetlands. A Clean Water Act Section 404 Individual Permit for 9.7 acres of wetland impact was issued by USACE on May 26, 2023.

3.14.5 Mitigation Measures

A request for a Jurisdictional Determination was submitted to USACE, along with a Section 404 Individual Permit application for 9.7 acres of unavoidable wetland fill as a result of airport access road and airport improvements in December 2022. Concurrent with the Section 404 process, an ADEC Section 401 Water Quality Certification was also requested. All permit stipulations and special conditions would be followed. USACE processed an Individual Permit for the project on June 13, 2023.

Proposed wetland avoidance and minimization measures for the Proposed Action are listed below:

- Due to location of airport property, surrounding wetlands and waters of the U.S., complete avoidance of wetland impacts is not possible. The proposed project will permanently impact 9.7 acres of unavoidable wetlands and Waters of the U.S. It is estimated that construction of

the project will temporarily impact 10.0 acres of wetlands and Waters of the U. S. The proposed temporary wetland impacts include a 25-foot vegetated buffer in places and 10-foot work buffer in others.

- Original design considered extending the Snow Removal Equipment Building (SREB) pad to fit fuel tanks and a fence behind the building. This option to expand the SREB pad was taken out of the consideration in order to reduce wetland impacts in the overall project.
- The project design calls for 5:1 slopes on embankments. These flatter slopes will be more stable than the steeper existing slopes, resulting in less erosion runoff over the life of the facility. After more consideration, slopes on embankments were reduced to 3:1 in order to reduce the overall wetland impacts.
- The existing FAA Navigational Aids (NAVAIDs) power and control conduits are located in wetlands. These conduits will be abandoned in placed and the new conduits will be placed within the airport embankments, resulting in a much smaller overall wetland impact. Removing the Precision Approach Path Indicators (PAPI) pad instead of reconstructing it will minimize wetland impacts as well.
- A wind cone at the east end of the runway will be removed under the project. The foundation of metal and concrete will be removed, and dirt will be left in place. This will reduce wetland impacts as a new wind cone will not be installed. There will be no trenching or additional fill as a result, reducing the overall wetland impacts.
- All culverts replacements will be with larger culverts, providing an overall improvement to hydraulic function. Riprap inlet and outlet protection will be added to reduce erosion. Proper BMPS during construction will ensure no additional impacts. Wetland impacts will be avoided by not construction a staging area in undisturbed wetlands. The project avoided additional impacts to wetlands by maintaining the existing road and airport alignment.
- The airport runway shoulders are sloughing resulting in significant longitudinal cracking and ettling. Inattention to this problem will result in impact to the runway and significant future M&O costs. The overall need for the proposed action is to maintain the existing level of safe, reliable year-round air access to the community of Marshall. The community relies greatly on the air travel for the transport of good and medical services.
- Further wetland impacts will be avoided and minimized as the existing location of the airport is fixed based on the existing layout and its function. The area surrounding the airport has wetlands, thus, the project cannot avoid impacts to wetlands. Project design took into consideration measures to minimize unavoidable permanent wetland impacts, such as hauling in material on an existing road and keeping the clearing and grubbing areas to a minimal footprint.

Mitigation

Given the avoidance and minimization measures incorporated into the project and an Individual Permit for 9.7 acres of wetland impact was issued by USACE, formal compensatory mitigation for the remaining unavoidable impact is not required for this project to be approved.

3.15 CLIMATE

The project area encompasses the airport access road from the town of Marshall to the airport. Improvements will be made on the existing airport, apron, runway, taxiway and SREB. Buildings and previous construction are within the project limits.

3.15.1 Significance Threshold

Significance Threshold: FAA has not established significance thresholds for aviation or commercial space launch GHG emissions, nor has the FAA identified specific factors to consider in making a significance determination for GHG emissions (FAA 2020). However, GHG emissions should follow the basic procedure of considering the potential incremental change in CO_2 emissions that would result from the proposed action and alternative(s) compared to the no action alternative for the same timeframe, and discussing the context for interpreting and understanding the potential changes. Consistent with the National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, 88 Fed. Reg. 1196 (Interim Guidance Jan. 9, 2023),[2] the Agency will try when reasonably possible quantify GHS emissions, compare GHS emission quantities across alternative scenarios, and place emissions in relevant context.

3.15.2 Regulatory Context

The CAA administered by the EPA regulates greenhouse gas (GHG) emissions from surface transportation vehicles and stationary power generation sources. CEQ guidance provided on the consideration of GHG emissions and climate change has recommended that agencies should be guided by a rule of reason, as well as their expertise and experience, in conducting analysis commensurate with the quantity of projected GHG emissions and using GHG quantification tools suitable for the proposed action (Interim Guidance Jan. 9, 2023). The rule of reason and the concept of proportionality caution against providing an in-depth analysis of emissions regardless of the insignificance of the quantity of GHG emissions that the proposed action would cause. As the proposed action does not occur within a regulated air shed, nor will it result in a change of operations or relocated facility type (i.e. SREB), the depth of analysis conducted within this EA consists of a quantitative disclosure of estimated GHG emissions associated with the temporary construction and long-term operation of the relocated airport.

3.15.3 Affected Environment

The FAA 1050.1F Desk Reference, Version 2 (FAA 2020) provides limited guidance for qualitatively or quantitatively evaluating GHGs under the NEPA), though references the FAA Air Quality Handbook (FAA 2015) regarding the establishment of appropriate GHG assessment area boundaries. FAA (2020) notes that for project-level actions, the affected environment for climate is defined as the entire geographic area that could be directly or indirectly affected by the proposed project. While the FAA Air Quality handbook outlines ROI in part based on factors including topography, landscape roughness and vegetation, albedo and values associated with either rural or urban settings, these recommendations are generally applied in assessing pollutants resulting from ongoing airport operations versus construction activities. One model recommended by FAA (2015) for construction project assessment is a former EPA pollutant model, “NONROAD”, now obsolete and replaced by a broader-based model named MOVES3 (USEPA 2023a). One variant of MOVES3 (MOVES-Nonroad) is noted as capable of forecasting emissions inventories for off-road equipment generated pollutants as well as modeling their dispersion, with its smallest (and default) modeled ROI based on ‘county’ units. For an equivalent of that modeling unit, Alaska substitutes political subdivisions referred to as ‘boroughs’, with Marshall Airport located within the NAB. MOVES-Nonroad is designed to estimate potential emissions from multiple off-road equipment use sectors (construction, agriculture, etc.), with outputs based on detailed inventories of known-populations of county-level nonroad equipment fleets and activities (EPA 2023b). This information is not obtainable for the NAB, nor even for the Proposed Action prior to the construction contractor being selected. Additionally, there is no guarantee that equipment sources for the Proposed Action would be resident in the NAB and thus capture by a MOVES-Nonroad assessment, instead likely being imported to the project site from other parts of Alaska in yet unknown quantities and types. However, to remain consistent with the conceptual MOVES-Nonroad model ROI, and potentially allow

[2] *The interim guidance is not binding, but may be considered.*

for indirect incorporation/comparison of Proposed Action GHG emission data into potential future MOVES-Nonroad modeling efforts in the NAB, the Proposed Action ROI for GHG emission assessment for the purposes of this EA will be considered as the NAB.

Consistent with EO 14008, EO 13990, and the 2023 GHG Guidance, this EA examines GHGs as a category of air emissions. The social cost of carbon dioxide (SC- CO_2) is an estimate of the monetized damages associated with incremental increases in GHG emissions. The following social cost value (discount rate 3 percent for carbon dioxide emissions occurring in year 2025) were used in this NEPA review (Interagency Working Group on Social Cost of Greenhouse Gases [IWG-SCGHG] 2023): SC-CO_2: $56 per metric ton.

3.15.4 Environmental Consequences

3.15.4.1 No-Action Alternative

The No Action Alternative would result in no additional impacts to climate over current conditions. However, the airport would not be safe for the community and aircraft that use it.

3.15.4.2 Action Alternative-Proposed Action

Construction/Temporary Impacts: Proposed Action emissions of carbon dioxide (CO_2) and carbon dioxide equivalents (CO_2 e) were modeled for construction of the Proposed Action using several relevant models freely and readily available to the public on the internet (Mathers et al. 2023, USEPA 2023c, Feng Ma et al. 2016, Klanfar et al. 2016). CO_2 is the most prevalent GHG, on average representing more than 95 percent of emissions impacts on climate that come from burning transportation fuels. Available models used and referenced in this EA variously provided outputs for either CO_2 or CO_2 e emissions and are identified accordingly. Methane (CH_4) and nitrous oxide (N_2O) are other GHGs associated with fuel combustion, and models that report only CO_2 emissions slightly underestimate overall GHG emission totals. Model outputs for which emissions calculations included all GHGs associated with fuel combustion are noted as CO_2e – where "e" stands as a CO_2 equivalent including other GHGs that have been factored in (Mathers et al. 2023).

USEPA (2023d) emissions equation calculators impartially allow "CO_2 or CO_2e" as input values to derive associated values for fuel volume burned, etc., and thus for the purposes of this EA, CO_2 and CO_2e outputs are generally accorded equal weighting and reported as "CO_2 and CO_2e" in the combined models' output totals summary. While these summary totals may slightly underestimate total GHG-suite emissions as do the two individual models (Mathers et al 2023 and USEPA 2023d) reporting only CO_2 outputs, the minor unaccounted for CH_4 and N_2O components are insignificant, generally representing only a combined <~5% of total climate impact potential (Mathers et al. 2023).

An estimated proxy construction fleet was developed using project engineers' expertise, and estimated power, weight, operation component and schedule, and fuel use inputs for equipment were approximated using readily internet-available manufacturers data sheets and third-party fuel consumption tables (J.S. Cole 2023). Due to the complex blend of processes for some construction tasks (notably asphalt construction), several models were at times co-employed to yield the most reasonably accurate level of combined CO_2 and CO_2e emissions.

Based on predicted emissions modeling outputs for its anticipated construction process (Appendix D), the Proposed Action would produce total estimated emissions of approximately 3,192 metric tons of combined

CO_2 and CO_2 e over the project construction duration; with a SC- CO_2 of $178,752 (3,192 metric tons multiplied by $56). Across the proposed three-year construction schedule, this total would average an emission loading of approximately 2,128 metric tons of combined CO_2 and CO_2 e per year; with a SC- CO_2 of $119,168 (2,128 metric tons multiplied by $56).

There was a lack of information on conversion factors and other inputs that could be applied to the models to estimate output variance due to Proposed Action constructed in an arctic location, and with some processes scheduled to be conducted during winter months.

Operational/Ongoing Impacts: The primary carbon emissions associated with aircraft operations, maintenance equipment use, and SREB heating. The proposed action will not result in any changes to aircraft operations or maintenance equipment use. The new SREB heating system may result a slight reduction in carbon emissions. No significant changes in long-term carbon emissions are anticipated beyond what are already occurring.

3.15.5 Mitigation Measures

No mitigation measures are proposed or would be required.

3.16 CUMULATIVE IMPACTS ANALYSIS

There are no foreseeable cumulative impacts associated with this project. The Council on Environmental Quality (CEQ) Regulations define a cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (see 40 Code of Federal Regulations [CFR] § 1508.7). Cumulative impacts can be viewed as the total combined impacts on the environment of the proposed action or alternative(s) and other known or reasonably foreseeable actions.

An irreversible or irretrievable commitment of resources refers to impacts on or losses to resources that cannot be recovered or reversed. Per FAA Order 10501F and as stated in 40 Code of Federal Regulations (CFR) § 1502.16 of the Council on Environmental Quality (CEQ) Regulations, the Federal Aviation Administration (FAA) must identify, as part of the environmental consequences discussion in an Environmental Impact Statement (EIS), any irreversible or irretrievable commitments of resources which would be involved in the proposed action or reasonable alternative(s), should they be implemented. Discussion of irreversible or irretrievable commitments of resources is not required in an Environmental Assessment (EA).

3.16.1 Process for Identification of Cumulative Impacts

There are no foreseeable cumulative impacts associated with this project.

3.16.2 Identified Past, Present, and Reasonably Foreseeable Future Actions

There are no foreseeable future actions, or any identified in the past or present with this project.

3.16.2.1 Past Actions

No past actions with this project.

3.16.2.2 Present and Reasonably Foreseeable Future Actions

No present or reasonably foreseeable future actions with this project.

3.16.3 Cumulative Impacts to Resource Areas

No cumulative impacts to resource areas as a result of this project.

4.0 SUMMARY OF MITIGATION MEASURES ADOPTED

Formal compensatory mitigation for the remaining unavoidable impact is not required for this project to be approved.

5.0 PUBLIC/AGENCY COORDINATION

The public, numerous agencies, the Village of Marshall, and various local entities were consulted throughout project planning and design. Table 3 summarizes the tasks and activities undertaken to ensure involvement and coordination. Project scoping correspondence, materials, and available meeting notes are included in Appendix D.

Table 3. Public Involvement and Agency Consultation Activity

Date	Activity	Description
05/10/2022	Public Meeting	DOT&PF held a public meeting in Marshall to discuss airport Improvement options.
3/18/2022	Agency Scoping Letters	DOT&PF issued letters to local governments, Tribal entities, Federal and State agencies, and staff describing the project and soliciting comments. Comments were received from ADEC, ADFG, USACE, SHPO, Calista and GCI.
12/7/2022	Government to Government Consultation Initiation	FAA invited the Native Village of Marshall to initiate government-to-government consultation and sent a letter describing the project and inviting comments and input on future coordination.
06/30/2022	Section 106 Initiation of Consultation Letter	DOT&PF issued an initiation letter to SHPO and consulting parties on 12/13/2022. One comment was received from Calista Corp stating there were 3 ARHS sites in the vicinity of the project area.
12/13/2023	Section 106 Findings Letter	DOT&PF issued a letter to the SHPO requesting concurrence that cultural resources would not be impacted by the project. SHPO concurrence was received on 12/30/23 for No Historic Properties.
02/23/2023	4(f) Consultation	4(f) consultation between DOT&PF and FAA and the Yukon Deltan National Refuge was conducted on 02/23/23 and it was concluded that there will be a no use of resources as a result of this project (appendix D).

5.1 PUBLIC INPUT ON DRAFT EA

The Draft EA was released on June 2, 2023, with a Notice of Availability published in the State of Alaska online Public Notices. The Draft EA was available for review or download on project website: https://dot.alaska.gov/nreg/marshall-airport/. The comment period was open until July 2, 2023. Additionally, an email was sent to all agencies previously engaged during project scoping or engaged during consultations.

Comments on the Draft EA were received during the public comment period and were submitted by only one entity. NOAA commented only to say that they have no conservation recommendations for the proposed action and additional EFH consultation is not necessary (Appendix D).

6.0 CONCLUSION

The Marshall Airport Improvements have been discussed and analyzed throughout this Environmental Assessment and the FAA has determined that there will be no significant impacts as a result of this project. A Finding of No Significant Impact (FONSI) will be prepared. There are no mitigation measures identified herein that are a condition of project approval.

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:

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