

## Preliminary Environmental Research

### St. Mary's Airport Improvements

Project Number: Z605630000

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Preliminary research has been conducted using the most current available data from state and federal agencies to identify environmental resources within the proposed project study area. The purpose of the preliminary research was to assist in identifying permitting and regulatory requirements and to ensure all environmental considerations were used in developing the proposed project.

Environmental resources were identified using Federal Aviation Administration's (FAA) Environmental Impacts: Policies and Procedures Order 1050.1F and FAA's National Environmental Policy Act Implementing Instructions for Airport Actions Order 5050.4b. Environmental resources within the project vicinity are identified on Figure 1.

#### **Air Quality**

According to Alaska Administrative Code (AAC) 18 AAC 50, St. Mary's is considered a Class II area. As such, there are designated maximum allowable increases for particulate matter 10 (PM<sub>10</sub>) micrometers or less in size, 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 (Alaska Department of Environmental Conservation [ADEC] 2018a).

The study 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 community of St. Mary's was included on the list of communities reporting people are highly affected by dust (PM<sub>10</sub>) on the 2010 Rural Dust Survey (ADEC 2018a).

#### **Biological Resources**

##### ***Fish***

A review of the Alaska Department of Fish and Game (ADF&G) Catalog of *Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* identified two rivers, the Yukon River (AWC Code: 334-20-11000) and the Andreafsky River (AWC Code: 334-20-11000-2451) as anadromous. The Yukon River supports all five species of salmon (*Oncorhynchus sp.*) as well as Arctic Char (*Salvelinus alpinus*), Arctic Lamprey (*Lethenteron camtschaticum*), Sheefish (*Stendous leucichthys nelma [Pallas]*), and Whitefish (*Coregonus clupeaformis*) (ADF&G 2018a).

The Andreafsky River is located approximately 2 miles east of the study area and contains the same species as the Yukon River except arctic lamprey (*L. camtschaticum*) (ADF&G 2018a).

##### ***Eagles and Eagle Nests***

According to ADF&G, the range of bald eagles overlaps the project area while the range of golden eagles appears to be adjacent to the project area (ADF&G 2018b). Although the range of golden eagles does not appear to extend as far west as St. Mary's a review of their habitat preferences appears that the presence of golden eagles within the project area is likely. If an eagle or eagle's nest is identified within 660 feet of a project area, consultation with US Fish and Wildlife Service (USFWS), may be required. In addition, the

project may be required to follow guidance, as outlined in the *National Bald Eagle Management Guidelines*.

### ***Threatened and Endangered Species***

According to the USFWS's Information for Planning and Conservation (IPaC) decision support tool, there are no species listed as threatened or endangered under the Endangered Species Act (ESA) that occur within the project area (USFWS 2018a).

### ***Migratory Bird Habitat***

According to USFWS's IPaC decision support tool, no migratory birds of concern are expected to occur within the project area. To avoid adverse impacts to migratory birds, vegetation clearing will follow the USFWS *Recommended Time Periods for Avoiding Vegetation Clearing in Alaska* in order to protect migratory birds unless the USFWS has been consulted to determine the most appropriate clearing methods to avoid impacts to nesting migratory species (USFWS 2018b).

In order to avoid impacts to migratory bird species, USFWS recommends time periods for avoiding vegetation clearing for regions throughout Alaska. For the Yukon-Kuskokwim Delta ecoregion the following avoidance periods apply (USFWS 2018b):

- Forest or Woodland - May 1<sup>st</sup> and July 15<sup>st</sup>
- Shrub or open habitat – May 5<sup>th</sup> and July 25<sup>th</sup>


If working in shrub or open habitat (i.e. marsh, pond, tundra, gravel, or other treeless/shrubless ground habitat) habitat the following time periods to avoid vegetation clearing may be expanded where the following species are present (USFWS 2018b):


- Raptors who may nest two or more months earlier than other birds.
- Canada geese and swans who begin nesting April 20.
- Black scoter who are known to nest through August 10.

### **Climate**

According to Ecoregions of Alaska, the proposed study area is located in the Interior Forested Lowlands and Uplands ecological region (Gallant et al. 1995). This ecoregion is characterized by a patch work of ecological characteristics. Regionwide unifying features include a lack of Pleistocene glaciation, a continental climate, a mantling of undifferentiated alluvium and slope deposits, a predominance of forests dominated by spruce and hardwood species, and a very high frequency of lightning fires. On this backdrop of characteristics is superimposed a finer grained complex of vegetation communities resulting from the interplay of permafrost, surface water, fire, local elevational relief, and hillslope aspect (Gallant et al. 1995).

### **Department of Transportation Act, Section 4(f)**

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 project as being located within the Yukon Delta National Wildlife Refuge (NWR). Yukon Delta NWR is one of the largest refuges in the nation covering 22 million acres. It encompasses an extensive array of nearly unaltered  tats

including the Andreafsky Wilderness area located approximately 14.5 miles north of the proposed project (USFWS 2018c).

### **Hazardous Material, Solid Waste, and Pollution Prevention**

According to ADEC's contaminated sites database, there are two known contamination sites located within the study area. The first site, located west of the runway and known as FAA St. Mary's Consolidated Bldg (Hazard ID 3052), involved the decommissioning and removal of four non-regulated heating oil tanks in June, 1998. Contaminates, sampled from soils surrounding the tanks showed contamination but met the cleanup levels with the exception of one detection of benzene below the ground surface. Since benzene was not found at shallower depths and there are no other contaminants of concern exceeding the cleanup levels, the ADEC believes that this soil contamination is limited and does not present an unacceptable risk to human health or the environment. Ground water monitoring is ongoing at this site (ADEC 2018b).

The second active contaminated site, located on the existing airport apron, known as MarkAir – St. Mary's Airport (Hazard ID 1878), contains aviation gas contamination on property leased from Alaska Department of Transportation and Public Facilities (ADOT&PF). A 1996 Phase II Environmental Site Assessment found a 1000 gallon Diesel above ground storage tank to be a likely spill source. Adjacent lease lots also show signs of historic avgas and heating oil spills with high levels of diesel range organics and benzene contamination in soil samples taken at depths 3 to 14 inches below the ground surface.

After an ADEC review of the file in 2009, further work was recommended for the site:

- areas of contaminated soil should be removed to the best extent practical and stockpiled land farmed on site; and
- confirmation soil samples should be collected at the depths of the excavation to verify removal of contaminated soil.

As of September 21, 2012, all former tanks and dispensers have been removed. On-going consultation with ADEC will be conducted during the design phase to determine if contamination may be present in the environment surrounding the project area and whether mitigation measures will need to be implemented during construction.

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

According to the National Parks Service's (NPS), there are no historic/cultural resources within the project study area that are listed (or considered eligible for listing) on the National Register of Historic Places (NRHP) (NPS 2018).

A desktop cultural resource study and review of the Alaska Heritage Resources Survey files by a professionally qualified individual (PQI) was completed by Northern Land Use Research Alaska (NLURA) on April 19, 2018. According to the research conducted there is one cultural site located on the Yukon River and adjacent to the project study area. NLURA recommends relocating the site, better defining its boundaries, and mark it so that onsite personnel can avoid disturbing the area. With these measures in place it is the opinion of NLURA's PQI that the proposed actions would have little to no potential to directly or indirectly affect the previously recorded site. Four areas within airport property were previously surveyed. The remainder of the study area include undisturbed ground that has not been systematically surveyed. For this reason, NLURA recommends a Level II (evaluation phase) survey of undisturbed sections of the St. Mary's Airport study area.

Once a cultural analysis is complete any sites listed on eligible or listing the NRHP will be evaluated under Section 4(f) and an applicability determination will be completed.

Consultation with the ADNR's State Historic Preservation Office (SHPO) and other consulting parties per Section 106 of the National Historic Preservation Act (NHPA) will be required during development of the environmental document.

### **Land Use**

The study area is primarily located within existing airport property boundaries and is primarily owned by ADOT&PF. The material site and storage site are also owned by ADOT&PF. Designated land use adjacent to the airport boundary is undeveloped land. In the southwestern portion of the study area, adjacent to the Yukon River, is the Boreal Fisheries St. Mary's commercial seafood processing and discharge plant.

### **Natural Resources and Energy Supply**

In order to complete airport upgrades, gravel from a permitted gravel source will be transported to the site. According to ADOT&PF's Material Site Inventory website there are two active sites; one site is within the study area, east of the airport, while the second site is located approximately 0.30 miles east of the study area (ADOT&PF 2018).

### **Noise and Noise Compatible Land Use**

The existing airport is designated as suitable for use by large aircraft with FAA. Existing noise sources in the area are primarily associated with the airport.

Existing land use surrounding the airport is undeveloped and minimal conflict between noise and compatible land use is anticipated. The study area is located within the Yukon Delta NWR, a section 4(f) resource, where special consideration needs to be given to the evaluation of the significance of noise impacts in this area.

Analysis of noise levels may be required should any changes to aircraft fleet mix occur.

### **Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks**


According to the Alaska Department of Commerce, Community, and Economic Development (ADCCED) 2010 Census Data, 91.5% of the population in St. Mary's is Alaska Native with the average per capita income in St. Mary's being \$18,110 (ADCCED 2018). A socioeconomic evaluation will be completed during the project.

### **Water Resources**

#### ***Wetlands and Waters of the U.S.***

A review of the USFWS National Wetland Inventory (NWI) and existing aerial imagery indicated the presence of palustrine wetlands surrounding the St. Mary's Airport. Wetlands are present in all undeveloped areas where gravel fill is not currently present. The Yukon River is located adjacent to the study area. This river discharges into the Bering Sea and is therefore, defined as a water of the U.S. and subject the U.S. Army Corps of Engineers (USACE) jurisdiction.

#### ***Floodplains***

The proposed project is located in an unmapped area. Federal Emergency Management Agency (FEMA) has not completed a study  determine flood hazards in this area; therefore, a flood map has not been published (FEMA 2018).

### ***Surface Waters***

According to the ADNR Alaska Mapper - Navigable Waters website, the USACE, and the U.S. Coast Guard (USCG), the Yukon River is listed as navigable for its entire length (ADNR 2018, USACE 1995, USCG 2012).

### ***Ground Water***

A review of ADEC Drinking water Protection Areas did not identify any water rights within the project area. The ADF&G does maintain an instream water reservation for the Yukon River which starts at the Bering Sea and extends upstream to the confluence of the Innoko River, near the Village Holy Cross. An instream water reservation is a water right that protects specific instream water uses, such as fish spawning or recreation. It sets aside the water necessary for these activities and keeps later water users from appropriating water that may affect the instream activity (ADEC 2018c).

### ***Wild and Scenic River***

St. Mary's is located along the banks of the Andreafsky River. The proposed project area is located approximately 2 miles from the river.

The Andreafsky River, including the East Fork, was designated a National Wild and Scenic River by the Alaska National Interest Lands Conservation Act in 1980. The river received the designation due to its natural and free-flowing condition, water quality, wildlife, geology, and primitive setting. This designation covers approximately 265 river miles, of which approximately 198 miles are within designated wilderness (National Wild and Scenic Rivers System 2018).

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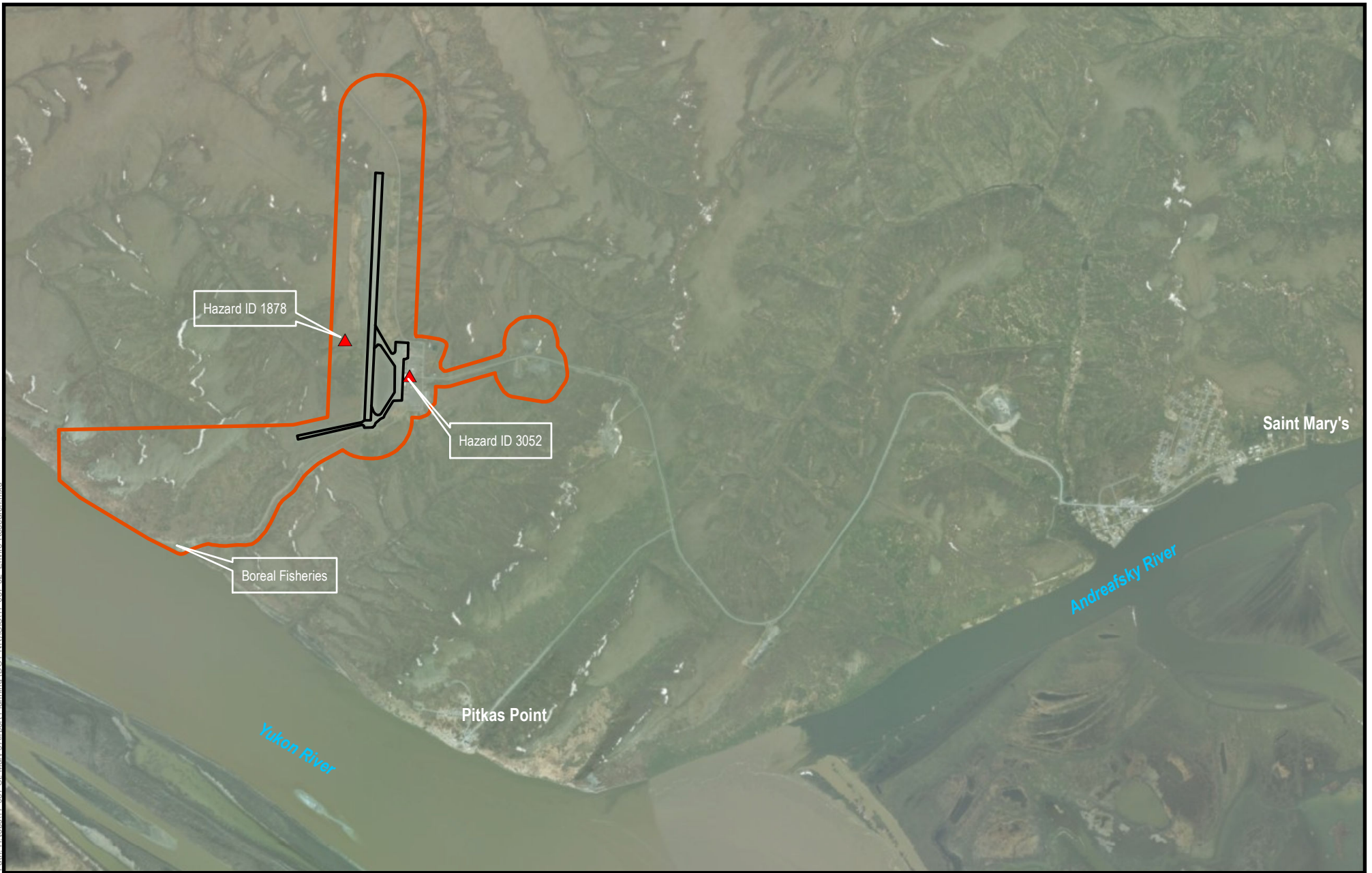
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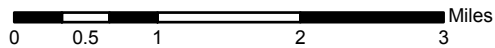
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-  Study Area
-  St. Mary's Airport
-  Contaminated Sites



State of Alaska  
Department of Transportation  
and Public Facilities  
Northern Region

St. Mary's Airport Improvements

AKSAS Project No: 60563

**Figure 1**

**Environmental Resources**