

APPENDIX E

Potential Bird, Mammal, and Fish Species Found within the Project Area

Appendix E

Potential Animal Species within the Vicinity of St. Michael

Fish

Pacific sand lance (*Ammodytes hexapterus*)
whitefish (*Coregonus nasus*, *C. oidschian*)
Alaska blackfish (*Dallia pectoralis*)
burbot (*Lota lota*)
Pink salmon (*Oncorhynchus gorbuscha*)
Chum salmon (*O. keta*)
Silver salmon (*O. kisutch*)
Red salmon (*O. nerka*)
King salmon (*O. tshawytscha*)
arctic char (*Salvelinus alpinus*)
sheefish (*Stenodus leucichthys*)

Mammals

Moose (*Alces alces*)
Arctic Fox (*Alopex lagopus*)
Gray Wolf (*Canis lupus*)
Beaver (*Castor canadensis*)
Northern Red-Backed Vole (*Clethrionomys rutilus*)
River Otter (*Lutra canadensis*)
Singing Vole (*Microtus miurus*)
Tundra Vole (*M. oeconomus*)
Short-Tailed Weasel (*Mustela erminea*)
Least Weasel (*M. nivalis*)
Mink (*M. vision*)
Muskrat (*Ondatra zibethicus*)
Common Shrew (*Sorex cinereus*)
Dusky Shrew (*S. monticolus*)
Water Shrew (*S. palustris*)
Tundra Shrew (*S. tundrensis*)

Waterfowl

Northern Pintail (*Anas acuta*)
American Wigeon (*A. americana*)
Northern Shoveler (*A. clypeata*)
Green-Winged Teal (*A. crecca*)
Blue-winged Teal (*A. discors*)
Eurasian Wigeon (*A. penelope*)
Mallard (*A. platyrhynchos*)
Garganey (*A. querquedula*)
Gadwall (*A. strepera*)
Greater White-fronted Goose (*Anser albifrons*)

Lesser Scaup (*Aythya affinis*)
Redhead (*A. americana*)
Ring-Necked Duck (*A. collaris*)
Greater Scaup (*A. marila*)
Canvasback (*A. valisineria*)
Brant (*Branta bernicla*)
Canada Goose (*B. canadensis*)
Bufflehead (*Bucephala albeola*)
Common Goldeneye (*B. clangula*)
Barrow's Goldeneye (*B. islandica*)
Emperor Goose (*Chen canagica*)
Snow Goose (*C. caerulescens*)
Long-Tailed Duck (*Clangula hyemalis*)
Trumpeter Swan (*Cygnus buccinator*)
Tundra Swan (*C. columbianus*)
Harlequin Duck (*Histrionicus histrionicus*)
Surf Scoter (*Melanitta perspicillata*)
White-Winged Scoter (*M. fusca*)
Black Scoter (*M. nigra*)
Common Merganser (*Mergus merganser*)
Red-Breasted Merganser (*M. serrator*)
Spectacled Eider (*Somateria fischeri*)
Common Eider (*S. mollissima*)
King Eider (*S. spectabilis*)

Cranes

Sandhill crane (*Grus canadensis*)

Shorebirds

Ruddy Turnstone (*Arenaria interpres*)
Black Turnstone (*A. melanocephala*)
Surfbird (*Aphriza virgata*)
Sharp-tailed Sandpiper (*Calidris acuminata*)
Sanderling (*C. alba*)
Dunlin (*C. alpina*)
Baird's Sandpiper (*C. bairdii*)
Red Knot (*C. canutus*)
Western Sandpiper (*C. mauri*)
Pectoral Sandpiper (*C. melanotos*)
Least Sandpiper (*C. minutilla*)
Rock Sandpiper (*C. ptilocnemis*)
Semipalmated Sandpiper (*C. pusilla*)
Common Snipe (*Gallinago gallinago*)
Wandering Tattler (*Heteroscelus incanus*)

Short-billed Dowitcher (*Limnodromus griseus*)
Long-billed Dowitcher (*L. scolopaceus*)
Hudsonian Godwit (*Limosa haemastica*)
Bar-tailed Godwit (*L. lapponica*)
Whimbrel (*Numenius phaeopus*)
Bristle-thighed Curlew (*N. tahitiensis*)
Red Phalarope (*Phalaropus fulicaria*)
Red-necked Phalarope (*P. lobatus*)
American Golden-Plover (*Pluvialis dominica*)
Pacific Golden-Plover (*P. fulva*)
Black-bellied Plover (*P. squatarola*)
Greater Yellowlegs (*Tringa melanoleuca*)
Solitary Sandpiper (*T. solitaria*)

Jaegers, Gulls and Terns

Herring Gull (*Larus argentatus*)
Mew Gull (*L. canus*)
Glaucous-Winged Gull (*L. glaucescens*)
Glaucous Gull (*L. hyperboreus*)
Bonaparte's Gull (*L. philadelphia*)
Slaty-Backed Gull (*L. schistisagus*)
Long-Tailed Jaeger (*Stercorarius longicaudus*)
Parasitic Jaeger (*S. parasiticus*)
Pomarine Jaeger (*S. pomarinus*)
Arctic Tern (*Sterna paradisaea*)
Sabine's Gull (*Xema sabini*)

Raptors

Northern Harrier (*Circus cyaneus*)
Gyr Falcon (*Falco rusticolus*)

Gallinules

Willow Ptarmigan (*Lagopus lagopus*)

Perching Birds

Lapland Longspur (*Calcarius lapponicus*)
Common Redpoll (*Carduelis flammea*)
Hoary Redpoll (*C. hornemanni*)
Yellow Wagtail (*Dendroica petechia*)

Savannah Sparrow (*Passerculus sandwichensis*)
Tree Sparrow (*Spizella arborea*)

Corvids

Common Raven (*Corvus corax*)

APPENDIX F

Wetlands Avoidance and Minimization Checklist



State of Alaska
Department of Transportation
& Public Facilities
Statewide Design &
Engineering Services

Wetland Avoidance and Minimization Checklist

Project Name: *St. Michael Airport Improvements*

Project Number: **62652**

I. Project Scope: Provide a brief description of and reason for project.

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Federal Aviation Administration (FAA), are proposing the following improvements at the St. Michael Airport:

- Widen Runway Safety Area from 120 feet to 150 feet.
- Widen taxiway from 35 feet to 50 feet.
- Widen the Taxiway Safety Area from 79 feet to 118 feet.
- Expand the apron and aviation support area to approximately 230,000 square feet
- Realign and widen access road
- Flatten the slopes of the runway safety area, taxiway safety area, apron and access road to 4:1 slope
- Replace airport lighting
- Construct Precision Approach Path Indicator (PAPI) and Runway End Identifier Light (REIL) pads
- Add dust palliative
- Provide drainage improvements as necessary to maintain drainage around the Runway.

II. Avoidance Measures:

1. Can the proposed project or project components be located in a non-wetland area? If not, explain in detail why not? (Refer to preliminary jurisdictional wetland determination.)

No. In order to meet FAA Safety guidelines and current service needs, the above listed improvements must be made. A complete avoidance of wetlands is not feasible due to the fact that the project consists of improvements to an existing facility, which is surrounded on all sides by wetlands.

DOWL Engineers conducted a Wetland Delineation and Wetland Functional Assessment, Vegetation Classification, and Wildlife Habitat Evaluation (May 2005) for the St. Michael Airport. The U.S. Army Corps of Engineers (USACE) concurred with the delineation on June 30, 2006, as part of a permit modification for maintenance projects at the St. Michael Airport.

1.a. If yes, does this non-wetland area provide unique habitat to the area or contain other protected resources (e.g., cultural resource, federal listed or candidate species, bald eagles or other raptors)? Consult with the agency with jurisdiction or expertise if appropriate e.g., Corps, FWS, NMFS, ADF&G.

N/A

1.b. Are there other project related impacts to the non-wetland area that are considered substantial (e.g., subsistence use or other socio-economic factors)? Consult with the agency with jurisdiction or expertise if appropriate e.g., Corps, FWS, NMFS, ADF&G.

No. DOT&PF consulted with the community throughout the design process. The St. Michael Community Association, St. Michael Native Corporation, and the Bering Straits Native Corporation do not object to the proposed action and did not mention any project related impacts to the non-wetland areas (i.e. material sites).

2. In consideration of forecast changes in aircraft use, future airport projects, expected community growth and maintenance considerations, have facilities been sited to avoid wetland impacts? Has this been applied to all individual components of the airport (e.g., runway, taxiways, aprons, lease lots, navigational aids)?

Yes, to the extent possible.

2.a. Can dimensions of facilities be traded off; i.e, length vs. width of the apron in order to lessen impacts?

No. The entire area surrounding the airport is predominantly wetlands.

2.b. Can the footprint of specific project components be reduced to avoid wetlands i.e., steeper side slopes on support facilities?

No. Currently the St. Michael Airport is experiencing slope erosion and instability issues due to the fact that the runway, runway safety area, taxiway, taxiway safety area and apron are too steep (2:1 slopes). As part of the improvements to the airport the slopes will be rehabilitated and flattened to FAA standards of a 4:1 slope to address these issues.

2.c. Can facilities be consolidated to avoid impacts?

No. The PAPI and REIL pads are sited to meet FAA standards. The apron and ASA need to be expanded to ease congestion.

2.d. Have existing roads, pads, runways and other facilities been incorporated into the design of the proposed project to avoid wetland impacts?

Yes. The proposed work is a rehabilitation of the existing airport; all current facilities are incorporated into the plan.

3. Have crossings of fish streams been avoided? (Consult the Anadromous Fish Catalog or contact ADF&G for information on fish bearing waters.)

N/A (There are no catalogued fish streams within the project area).

4. If the Regional Environmental Coordinator has determined that the project may adversely affect Essential Fish Habitat (EFH) list the preliminary EFH conservation measures.

N/A

5. Are bald eagle nest trees at least 330 feet from the project? If not, consult FWS.

N/A (According to USFWS, no bald eagle nests are in the vicinity of the project area).

6. Have abandoned pads, roads, runways and other fills associated with the airport project been considered for gravel re-use, rehabilitation, and/or restoration?

N/A

III. Minimization Measures (If the impacts can't be avoided continue):

1. Can the proposed project or project components be located in a lower value wetland area? If not, explain in detail why not? (Refer to appropriate resource mapping or functional value assessment.)

No.

There are four types of wetland types within the project area; Open water, seasonally open water, tall open shrub swamp, and wet tundra. All four wetland habitat types are abundant in the vicinity of St. Michael.

The majority of the airport is surrounded by the wet tundra (approximately 75%), which have a moderate functional ranking; most of the improvements are proposed within this habitat (23.4 acres).

Less than 1 acre of high functional ranking wetland would be affected by this project (0.03 acres of seasonally open water and 0.7 acres of tall open shrub scrub. This impacts are essentially unavoidable; widening the RSA, TSA or ASA to one side (or the other) would result in impacts to similar wetlands.

It should be noted that expanding the apron to the NE was not considered because of utility conflicts.

- 1.a. If yes, would construction affect other protected resources (e.g., cultural resource, federally listed or candidate species, bald eagles or other raptors)? Consult with the agency with jurisdiction or expertise if appropriate e.g., Corps, FWS, NMFS, ADF&G and SHPO.

N/A

1.b. Are there other project related impacts to this lower value wetland considered substantial (e.g., cultural resource, subsistence use or other socio-economic factors)? Consult with the agency with jurisdiction or expertise or expertise if appropriate.

No

2. In consideration of forecast changes in aircraft use, future airport projects, expected community growth and maintenance considerations, have facilities been sited to minimize wetland impacts? Has this been applied to all individual components of the airport (e.g., the runway, taxiways, aprons, lease lots, navigational aids)?

Yes; PAPI and REIL pads are sited based on FAA design criteria.

2.a Can dimensions of facilities be traded off; i.e., length vs. width of the apron in order to lessen impacts?

No, facilities have been consolidated to the extent practical while still meeting FAA safety standards.

2.b. Can the footprint of specific project components be reduced i.e., steeper side slope on support facilities?

No. The slopes at the existing airport are currently too steep causing erosion and instability issues. Under the proposed activity the slopes will be flattened to a 4:1 slope.

2.c Can facilities be consolidated to minimize impacts?

No, facilities have been consolidated to the extent practical while still meeting FAA safety standards.

2.d Have existing roads, pads, runways and other facilities been incorporated into the design of the proposed project to minimize wetland impacts?

Yes, all facilities have been incorporated into the new design.

3. Have crossings of fish streams been located to minimize adverse impacts to the extent practicable? (Contact agencies with jurisdiction or special expertise as appropriate.)

No catalogued fish streams have been identified on the project area.

3.a. Have adverse affects to fish spawning habitat been minimized?

N/A

3.b. Have stream crossings been designed in accordance with the ADOT&PF/ADF&G culvert design and construction memorandum of agreement?

N/A

4. If the Regional Environmental Coordinator has determined that the project may adversely affect Essential Fish Habitat (EFH) list the preliminary EFH conservation measures.

N/A (This project will not impact EFH).

5. Have abandoned pads, roads, runways and other fills associated with the airport project been considered for gravel re-use, rehabilitation, and/or restoration?

All existing embankments at the airport will be incorporated into the new development. No abandoned fill exists.

IV. Material Site Considerations

Contractor supplied and commercial material sites are not subject to an avoidance and minimization review.

1. Has a material site been designated for this project? If yes continue, if no go to V.

The proposed material site, Halfway Mountain Material Site, is an existing disturbed material site. The material site is privately owned and operated by the St. Michael Village Corporation.

- 1.a. If a new material site is required, have you considered locating and accessing material an adequate distance from the airport so that it can be reclaimed as wetlands or other wildlife habitat?

N/A

- 1.b. Would a new site, located a safe distance from the airport, require a new road, resulting in additional wetland resource or community use impacts? Are there means to avoid a new access road? Would development of this new site result in more or less wetland impacts than a new or existing material site located closer to the airport?

N/A

- 1.c. If a new or existing material site has been selected that would be located a safe distance from the airport and requires minimal additional road building, has a mine reclamation plan been developed? If located an appropriate distance from the airport can the material site be reclaimed to provide open water habitat such as shallows, islands, and irregular shorelines? (Consult agencies with jurisdiction or special expertise.)

This material site is located approximately 5.5 miles from the community of St. Michael. A mining reclamation plan has been developed. At this time, there are no plans to develop the material site into open water habitat.

- 1.d. Has geotechnical and hydrological information been collected and used to maximize gravel exploitation while minimizing wetland impacts (e.g., mining deeper, adjusting material site boundaries, and using portions of the pit for temporary stockpiling of material)?

A material source investigation was conducted during the summer of 2005. The mining and reclamation plan proposed to minimize the footprint of excavation by mining only in areas that have

been previously developed. Portions of the developed areas will also be used to stockpile material.

1.e. Has a long-term material site been considered? If so, can a portion of the site be closed and reclaimed at the end of this project?

The Halfway Mountain material site is an existing site that has been used for various public works projects. This site is considered a long-term site.

V. Additional Material Site Considerations:

1. Will project overburden be stockpiled (preferably in uplands) for use as “top soil” or in reclamation of material sites or previously disturbed areas?

Project overburden is not expected at the material site, due to selective mining at previously developed and cleared areas.

2. How will access roads and other fills associated with the material site be restored upon project completion?

There is an existing access road to Halfway Mountain Material Site. The Contractor performing work on the project will be required to maintain haul routes for the duration of the project. Upon project completion, all access routes will be restored to original or better condition.

3. Can development of the material site be timed to avoid or minimize affects during spawning, migration and nesting periods? (Consult agencies with jurisdiction or special expertise.)

Yes, the USFWS recommended migratory bird clearing window (May 5 – July 25) will be adhered to. There are no spawning areas near the identified potential material sites.