

**APPENDIX C**

**WETLANDS AVOIDANCE AND MINIMIZATION CHECKLIST**



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

**Wetland Avoidance and Minimization Checklist**  
*Project Name: Aniak Airport Master Plan*  
*Project Number: 54740*

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

The DOT&PF recently prepared a draft update of the Aniak Airport Master Plan, which recommends improvements over the next 20 years to address safety and capacity deficiencies, identify facilities required to meet air traffic demand, and guide the orderly development of the Aniak Airport over the next twenty years. The Aniak Airport Master Plan recommends the upgrades to occur in three phases over the next 20 years; short-term (0 – 5 years), medium-term (5 – 10 years), and long-term (10 – 20 years). Only projects in the short-term and long-term phases impact wetlands. The U.S. Army Corps of Engineers has agreed to permit for projects over the next 7 years. Below are projects that impact wetlands.

1. Filling 1.1 acres fresh sedge marsh wetland with dike material. The fresh sedge marsh would be filled with approximately 40,000 cubic yards of earthen material.
2. Constructing a floatplane ramp and hardened access road at the Aniak Slough access point would impact 0.1 acres of riverbar wetland. This project would impact 0.1 acres of riverbar wetlands.
3. Extending the airport fence to completely enclose the airfield and apron. The current fencing is incomplete and safety issues have resulted from animals, four-wheelers, and trucks traveling across the runway. The completion of the fencing would require placing fence posts in 0.02 acres of pond wetlands.
4. After shifting the runway to the west, the constructing a service road would impact 0.1 acres of pond wetlands.
5. Constructing a full parallel taxiway would impact 0.6 acres of pond wetlands.

**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.)
  1. The 1.1 acres of fresh sedge marsh wetlands that would be filled during the short-term phase of the proposed action are former borrow sites that have accumulated water and hydrophytic vegetation over time. The community has identified these wetlands as a hazard to children, due

to a drowning in the past. Therefore, this project component cannot be located in a non-wetland area.

2. Vehicles loading and unloading floatplanes have damaged the top and side of the dike. Therefore, a hardened floatplane ramp has been proposed in the short-term phase in order to prevent erosion and further damage to the dike. This is a water dependent activity and would require filling 0.1 acres of riverbar wetlands. This project would include work below ordinary high water. The project would require 1-foot excavation that would extend approximately 100 feet water ward of the ordinary high water mark. The footprint of the hardened ramp has been minimized to accommodate an aircraft with 49-foot wingspan and a few feet for a person to walk the circumference of the aircraft.
3. In order to avoid impacting 0.02 acres of pond wetlands, the fence would have to be routed around the circumference of the pond. Routing the fence around the pond would require clearing large trees to provide room for 1,100 linear feet of fence and would have a larger impact on habitat and thus wildlife.
4. To avoid impacting 0.1 acres of pond wetland the service road would have to be routed into woodland habitat, further from the runway. The purpose of the service road is to provide access for maintenance vehicles to the runway. If the service road were routed into the woodland many large trees would have to be cleared and the function of the service road would decrease.
5. The long-term phase of constructing a full parallel taxiway would impact 0.6 acres of pond wetland. The wetland impact occurs in the eastern portion of the taxiway. If the taxiway were shortened, aircraft would have to back taxi and thus would be a safety hazard.

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.

N/A

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. For example, the road at the north end of the runway was designed to avoid wetlands. However, avoidance of all wetlands was not possible.

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

The footprint of the floatplane ramp was minimized by only allowing room for the wingspan of an aircraft and a person to walk around the aircraft. The slide slopes of the service road were minimized to 2:1 in wetland areas; however, the taxiway side slopes cannot be steeper than 4:1 due to safety reasons.

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

Refer to 2.a.

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

Refer to 2.a.

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

N/A (Incorporating other facilities into the design would not minimize wetland impacts.)

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

No fish streams would be crossed, however the floatplane ramp must be constructed within the Aniak Slough, a Tributary of the Kuskokwim River, which is an anadromous fish stream.

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

It is anticipated that EFH may be adversely affected, however impacts would be minimized through conservation measures and certain stipulations that would be followed as outlined in the DOT&PF Alaska Storm Water Pollution Prevention Plan Guide (June 2004).

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

USFWS has not survey the project area for bald eagle nests. However, due to the type of vegetation, presence of cliffs, and nearby fishery resource, USFWS indicated there is a potential of bald eagle nests to be in the area. USFWS recommended a survey for nests be done prior to any construction. If any are located, USFWS should be contacted.

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

Yes, the dike material would be used to fill the fresh sedge marsh wetlands.

**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.)

None of the project components can be located in lower value wetlands. ABR, Inc conducted a wetland function and value assessment for Aniak in June 2004. The order of the rankings from highest to lowest value is lower perennial stream and riverbars, ponds, fresh sedge marsh, and wet sedge meadow. The floatplane ramp cannot be located in lower value wetland, as one of the purposes of the project is to stop erosion and sedimentation along the riverbar. The purpose of filling the fresh sedge marsh is for safety reasons and therefore this project cannot be located in lower value wetlands. Completing the fencing of the airport property, relocating the roads, and constructing the parallel taxiway cannot impact lower valued wetlands because only pond wetlands are near the proposed action.

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.

N/A

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)?

Impacts have been minimized to the extent possible, as explained in previous sections (refer to II.2.a.). Impacts to wetlands from airport projects over the next 20 years are minor (2.12 acres) and cannot be avoided.

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

The floatplane ramp, roads, and taxiway have been consolidated to the extent practical (refer to II.2.a.).

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

The floatplane ramp, roads, and taxiway have been consolidated to the extent practical (refer to II.2.a.).

2.c Can facilities be consolidated to minimize impacts?

The floatplane ramp, roads, and taxiway have been consolidated to the extent practical (refer to II.2.a.).

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

N/A (Incorporating airport facilities into the design would not minimize wetland impacts.

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.)

There are no crossings of fish streams. The floatplane ramp is not located in an area of particularly important fish habitat (i.e. spawning or rearing), and in fact, will probably improve fish habitat by reducing erosion and sedimentation. Construction of a hardened floatplane ramp would prevent further erosion and sedimentation from vehicles driving on the bank to pull their floatplane out of the water.

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

No affects to fish spawning habitat are anticipated. The ADF&G has not mapped spawning habitat in the immediate area of the project, however spawning locations are mapped just north and south of Aniak. The construction of the floatplane ramp would not occur during the pink salmon (*Oncorhynchus gorbuscha*) spawning period.

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

No crossings of fish streams would occur, however the floatplane ramp must be constructed within the Aniak Slough, a tributary of the Kuskokwim River, which is an anadromous fish stream.

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

It is anticipated that EFH may be adversely affected, however impacts would be minimized through conservation measures and certain stipulations that would be followed as outlined in the DOT&PF Alaska Storm Water Pollution Prevention Plan Guide (June 2004).

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

Yes, dike material would be used to fill the fresh sedge marsh wetland.

#### **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 material would be contractor supplied. An existing, permitted material site has been identified for the Proposed Action located in an upland area just north of Aniak. It is operated by the Calista Native Corporation and is the City of Aniak's local gravel source. Should the Contractor decide not use this designated material source, the Contractor would have to obtain all necessary permits and clearances for a different material site.

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?

This is an existing material site.

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?

There is an existing access road to the material site. No wetland impacts are associated with the material site.

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.)

A mine site reclamation plan has been developed for the existing material site. The material site would continue to be used by the City of Aniak as such and therefore it would not be reclaimed to provide 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 geotechnical report was prepared for Calista. The material site does not impact wetlands.

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?

This is an existing long-term material 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?

The overburden will be stockpiled in uplands and may be available for later use as topsoil.

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

There is a permanent access road to the material site.

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.)

The existing material site is located in uplands and will not affect spawning or migration. The USFWS recommended time period (May 5 to July 25) for avoiding vegetation clearing in Yukon-Kuskokwim Alaska to protect migratory birds would be adhered to.