

**APPENDIX D**

**Wetlands Avoidance and Minimization Checklist**



## Wetland Avoidance and Minimization Analysis

**Project Name:** *Tuluksak Airport Relocation*  
**Project Number:** *AK DOT&PF 51795*

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

The Village of Tuluksak is located in the lower Kuskokwim River 350 miles west of Anchorage and 50 miles northeast of Bethel, Alaska. The community is not connected to the state road or rail system. Residents depend on the airport as a year round means of transportation for transportation, air cargo, mail, and medical services. The Kuskokwim River is used as an alternative mode of transportation (travel by boat, dog sled, or snow machine) to other communities during the summer and winter. Although there are no docking facilities, heavy freight and cargo is delivered by barge during the summer.

The purpose of this project is to upgrade the Tuluksak Airport to meet the Alaska Aviation System Plan (AASP), Federal Aviation Administration (FAA), and the Alaska Department of Transportation and Public Facilities (DOT&PF) design standards for Community Class Airports. The proposed action is to construct a new airport approximately 1.0 mile east of the community.

### **The proposed project will:**

- Construct a runway 3,300 feet long by 60 feet wide on a runway safety area 120 feet wide by 3,780 feet long;
- Provide a runway object-free area at least 400 feet wide, and extending a minimum of 240 feet beyond the ends of the runway;
- Provide runway protection zones (RPZ) at each end of the runway by clearing beyond the embankments. The RPZ is trapezoidal in shape, measuring 500 feet at the inner width, 700 feet at the outer width, and 1,000 feet long. The RPZ begins 200 feet from the ends of the runway;
- Construct a taxiway 40 feet wide by 300 feet long, connected to an apron and aviation support area;
- Construct an apron, 200 feet by 300 feet, to provide for commercial aircraft loading and unloading areas for five aircraft tie-downs;
- Construct pads for FAA maintained Precision Approach Path Indicators (PAPI's), Runway End Indicator Lights (REIL's) and an Automatic Weather Observing Station (AWOS);
- Construct a 100 foot by 300 foot aviation support area, including a 100-foot by 100-foot maintenance and operation reserve for a State of Alaska, Department of Transportation and

Public Facilities snow removal equipment storage building;

- Construct a two bay Snow Removal Equipment Building;
- Install radio-controlled medium intensity runway lighting, reflective cones, threshold panels, a rotating beacon, and a lighted wind cone in a segmented circle;
- Construct a 5,500-foot-long by 20-foot-wide access road to the proposed site. This road will originate at the east end of the Tuluksak River Subdivision;
- Construct an overhead electrical extension from the community to the airport within the access road disturbed area;
- Purchase approximately 170 acres of land for the airport access road and airport;
- Excavate sand for use as fill material from on a sparsely vegetated sandbar at the confluence of the Tuluksak and Kuskokwim Rivers, approximately 2 miles southwest of the community and the current airport property;
- Construct a temporary material haul route that will be removed upon completion of the project and
- Clearing runway approaches of tree obstructions. Approximately 106 acres of clearing will be required to protect the runway protection zones, safety areas and approaches.

## **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.)

Yes, the proposed project is located almost entirely in uplands. A wetland delineation concluded the access road, airport, runway, apron, lease tie downs, navigational aids, and the north RPZ are located entirely in uplands. Only a small portion (2.3 acres) of the south RPZ is located in palustrine scrub/shrub and emergent wetlands. Wetlands avoidance within the southern RPZ is not possible due to the co-location of the RPZ in relation to the runway. Additionally, it is anticipated that areas adjacent to the wetlands will require mechanized clearing; no clearing is anticipated to take place in the wetlands. It is also anticipated that clearing will take place during winter months which will additionally minimize/eliminate unintentional impacts to the wetlands.

1.a. If yes, does this non-wetland area provide unique habitat to the area or contain 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, Service, NMFS, ADNR/OHMP).

No, the upland forested habitat does not provide unique habitat or contain protected resources.

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, Service, NMFS, ADNR/OHMP).

There are no projected related impacts to non-wetlands which are considered substantial.

1.c. Can impacts to active nests of migratory birds be avoided through adherence to construction timing windows (as identified in the USF&WS guidelines “Advisory: Recommended Time Periods for Avoiding Vegetation Clearing in Alaska to Protect Migratory Birds”)? If not, consult the Service.

Yes, Clearing will take place during the winter months. Clearing will not take place from May 5 through July 25.

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., the runway, taxiways, aprons, lease lots, navigational aids)?

Yes, the facilities have been sited to avoid wetlands. The airport and all individual components are sited in uplands. Only the south RPZ is located in wetlands.

Describe the alternatives addressing the project purpose and need that have been evaluated to avoid wetland impacts. (Describe below or reference the applicable section in the NEPA document). If alternatives that avoid wetland impacts are not practicable, explain technical, financial, maintenance or other environmental reasons, and address the following:

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

There is no need to change the dimensions of the facilities because the current design has no substantial impacts to wetlands or other impact categories.

The proposed construction of the runway, access road taxiways, apron lease lots and navigation aids will not impact wetlands.

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

The proposed construction of the runway, access road taxiways, apron lease lots and navigation aids will not impact wetlands.

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

No reason to consolidate the facilities, the proposed action does not impact wetlands.

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

Yes, all elements of the project have been designed and sited to avoid wetland impacts except for the clearing of vegetation in the south RPZ.

2.e. Can the runway location or alignment be adjusted to avoid wetland impacts?

Construction of the runway location or alignment will not adversely impact wetlands in the area.

3. Have crossings of fish streams been avoided? (Consult the Anadromous Fish Catalog for anadromous streams and contact ADNR/OHMP for information on resident fish bearing waters.)

Yes, the proposed access road and airport does not cross any water bodies containing resident and/or anadromous fish.

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

DOT&PF has determined that the proposed action will not cause an adverse impact on the EFH.

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

There are no expected impacts from the Proposed Action, on bald eagles or nest sites. No nest sites were observed during the bald eagle survey conducted in May 2006 (Appendix G).

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

Not considered. There are no abandon pads, roads, or runways in Tuluksak. The existing runway will remain in operation until the new airport is completed. Gravel from the old runway could become available for other uses after the new airport becomes operational.

The geotechnical investigation has determined that gravel material will likely need to be imported from commercial material sites in western Alaska.

### **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.)

Not applicable, the proposed action is sited in uplands and the construction of the runway, access road, apron, and taxiways will not adversely impact wetlands. A small portion of the south RPZ is located in wetlands and no vegetation will be removed. The runway cannot be realigned to avoid this area without impacting higher value wetlands with a larger footprint than proposed for the RPZ.

1.a. If yes, would construction affect other protected resources (e.g., cultural resource, federally listed or candidate species, bald eagles or other migratory birds)? Consult with the agency with jurisdiction or expertise if appropriate (e.g., Corps, Service, NMFS, ADNR/OHMP, and SHPO).

Not applicable.

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 if appropriate.

Not applicable.

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.

Describe the alternatives addressing the project purpose and need that have been evaluated to minimize wetland impacts. (Describe below or reference the applicable section in the NEPA document). If alternatives that minimize wetland impacts are not practicable, explain technical, financial, maintenance or other environmental reasons, and address the following:

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Yes.

2.e. Can obstruction removal for FAR Part 77 purposes be accomplished by methods that do not disturb the root mass or soil surface to minimize vegetation loss? [Note: Any associated chipping of stumps and limbs may result in a regulated discharge if the wood chips are "piled" in waters of the U.S. including jurisdictional wetlands.]

Part 77 obstructions, which in this case are trees, will be cleared leaving the rootwads. Additionally clearing will be done during the winter months to minimize impacts to the adjacent wetlands.

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.)

Yes.

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

Yes. Work will be performed in accordance with a Title 41 Fish Habitat Permit and a USACE Section 404 permit. All activities below the OHW such as the ice road and material extraction will occur during the winter outside the time period for spawning salmon.

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

No stream crossings involved with this project.

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

DOT&PF has determined that the proposed action would not cause an adverse impact on the 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?

There are no sources of existing fill within Tuluksak area that are appropriate for the project. The geotechnical investigation has determined that embankment material will be excavated from a sandbar south of the community and gravel imported from commercial material sites in western Alaska.

#### **IV. Material Site Considerations:**

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

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

Several alternative material sites have been considered for the project. The preferred alternative is the development of a new, 52-acre borrow site (MS-5). This site is located on a sparsely vegetated sandbar at the confluence of the Tuluksak and Kuskokwim rivers southwest of the community and approximately 2.0 miles from the airport property (Figure 1). Vegetation consists of small willows and unidentified grasses. Material will be excavated during the winter to at least 3 feet below existing grade. This elevation is below ordinary high water (OHW).

The surface estate and subsurface estate is owned by the State of Alaska, Department of Natural Resources (ADNR). The State claims ownership of the sandbar above and below the OHW as they consider the sandbar an accretion to submerged land within the river channel, and not an accretion to lands owned by Calista Native Corporation. The sandbar is separated from the Calista Native Corporation property by an active river channel of the Kuskokwim River. The sandbar does not appear on the Master Title Plats for lands conveyed to the Native Corporation (ADNR, 2006).

The environmental consequences of using Material Site 56 include impacting 52 acres of sparsely vegetated sandbar below the OHW; excavation of material from the sandbar during the winter when resident and anadromous fish use of the river is limited and is not expected to affect EFH; the development of a material site on the sandbar is not expected to impact energy supply and natural resources, wildlife, or vegetation; and no measurable adverse impact to fresh water, runway, taxiway, apron, and access road.

Base course and crushed surfacing of the road will need to be imported from an existing commercial material site located in western Alaska. Effects to these sites are expected to be those customary for commercial quarry operations. Material would be barged to Tuluksak and stockpiled at the staging area near the existing airport.

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?

Yes, the proposed material site will be reclaimed prior to the end of winter before the increase in river stage. Sediments from upriver sources will be deposited in the area of the existing sandbar (aggradation).

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?

All material extraction will occur during the winter and the material will be transported to the project site, using established roads and an ice road or one of two temporary ice haul roads on the frozen Tuluksak River and overland to the project site. No new roads are needed to use the proposed 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? 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.)

Yes, the natural geomorphological processes – sediment transport from the upper Tuluksak watershed will reclaim the sandbar probably during the open water season.

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 investigation was performed to evaluate the suitability of borrow material from Material site #5. Material would be mined during winter months and hauled across the Tuluksak River on an ice road to an upland stockpile located near the existing airport.

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?

No, this is a temporary material site for embankment material only. Surfacing material would be contractor supplied from commercial borrow sources in western Alaska.

#### **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 proposed material site is devoid of overburden. No overburden will be removed or stockpiled for reclamation of disturbed areas.

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

Borrow material from material site Alternative 5 will be transported to the stockpile area by ice road. Gradual grades from ice to land will be constructed to allow access to the ice road without disturbing riverbanks. All spilled material will be removed before spring thaw.

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)

Material site Alternative 5 will be developed and excavated during winter months, well outside spawning, migration, and nesting periods.