

## 6 ENVIRONMENTAL EVALUATION

### 6.1 Evaluation Criteria

#### 6.1.1 Wetlands

The Preferred Alternative involves 1.3 ha (3.2 acres) of fill in the high quality Twister Creek wetlands complex for the secondary access road and in low-value palustrine wetlands for the taxiway to the CCP (**Figure 11**). The total volume of fill to be placed would be about 13 800 m<sup>3</sup> (18,000 yd<sup>3</sup>).

The No Action Alternative would not increase wetland fill or disruption beyond that already existing at the airport. None of the alternatives would result in beneficial impacts on wetlands.

#### 6.1.2 Floodplains

The Preferred Alternative will involve construction within the 100-year floodplain of the Susitna and Talkeetna rivers (**Figure 12**). Since the Talkeetna Airport is located within the designated floodplain, there is no practicable build alternative that will avoid construction within the floodplain.

The USACE has recently reevaluated the levels and extent of flooding in Talkeetna during the 100-year event (a flood that has a 1 percent chance of occurring in any given year). FEMA is currently in the process of revising the FIRM for Talkeetna. It is not known when the new FIRM will be adopted. Additionally, the MSB building code mandates that any development that occurs within a 100-year floodplain boundary must not impact the boundary or flood water elevation of the 100-year event. USACE's study indicates that the depth of flooding in the area of the existing commercial apron is greater than previously expected. The study also indicated that the area between the existing commercial apron and the ARRC embankment is a significant channel for flood conveyance.

The Preferred Alternative requires extensive construction within the floodplain and will affect floodplains; i.e., construction of the new secondary access road across the floodplain of Twister

Creek will affect the natural flood storage and desynchronization actions of surrounding wetlands. Development of the proposed commercial aprons and access roads will impact the depth and extent of the 100-year flood.

Avoidance will involve abandoning the existing commercial apron and relocating the landside facilities to the north end of the existing runway. This will involve abandoning significant public and private investment.

Minimization for impacts to the 100-year floodplain in Talkeetna is not practical or recommended. Minimization techniques would not be adequate to offset impacts that any of the build alternatives would have to the 100-year floodplain.

Mitigation of impacts to the 100-year floodplain will be addressed in a hydrologic study to be prepared by DOT&PF. DOT&PF will construct the selected floodplain mitigation either before or concurrent with proposed airport improvements.

### ***6.1.3 Water Quality***

The Preferred Alternative has potential for water quality degradation associated with the construction and use of a new secondary access road paralleling the ARRC tracks. The Best Management Practices (BMPs), developed by DOT&PF, will be implemented during construction to minimize impacts to water quality.

Construction of the secondary access road and lease lot development will require remediation of the old landfill west of the existing runway. The remediation of the landfill will result in less potential contamination to groundwater resources.

The No Action Alternative would maintain current conditions, and individual sewer and water systems would be maintained.

#### 6.1.4 Noise

Neither the Preferred Alternative nor the No Action Alternative will result in noise levels reaching the threshold of concern as defined by FAA 5050.4A. Noise levels from helicopters are expected to remain the same as existing conditions. The apron development under the Preferred Alternative will increase noise levels for the Denali Subdivision. These noise levels will be below the threshold of significance. In order to further reduce disturbances to residential areas from helicopter noise, DOT&PF will post signs restricting night-time operations. Compliance with the restricted hours will be voluntary and will not apply to emergency operations.

#### 6.1.5 Biotic Communities

##### 6.1.5.1 Fish and Aquatic Resources

The Preferred Alternative will impact fish and aquatic systems. Unless adequate flow past the road is assured, water could be expected to pond upstream of the road altering the nature of existing aquatic habitats. DOT&PF's BMPs will be implemented to minimize impacts to fish and aquatic resources. Measures will be taken to minimize the intrusion of silt and hydrocarbons into the stream and wetlands. However, contamination could continue from hydrocarbons washed off the road after construction is completed.

The No Action Alternative would not further impact fish and aquatic resources.

##### 6.1.5.2 Vegetation and Terrestrial Habitats

The Preferred Alternative will include the removal of existing vegetation and the loss of upland habitats and palustrine wetlands. Areas from which vegetation are removed will either be filled or excavated, or low-profile vegetation will be maintained through periodic clearing or vegetation control activities.

Some of the areas that will be impacted have been subjected to prior disturbance as part of ongoing construction and clearing by DOT&PF associated with the development of a new

taxiway along the west side of the existing runway, and the clearing of trees and shrubs to the runway BRL (152 m [500 ft] on either side of the runway centerline).

Vegetation west of the existing runway will be removed prior to placement of fill material for development of additional or modified-location aircraft parking and tiedown areas, commercial lease lots, and snow storage areas. Some Talkeetna residents have expressed a desire to retain the remaining mature birch trees near the existing commercial apron.

The Preferred Alternative requires clearing for the new secondary access road, small lease lots, and the government lease reserve near the existing runway end. Clearing is also required for the proposed CCP east of the runway end. The development will require clearing about 6.5 ha (16.3 acres) of land.

#### 6.1.5.3 *Terrestrial Mammals*

Development activities on the west side of the existing runway are not be expected to have significant adverse impacts on terrestrial mammals present in the area. Discontinuous wetland habitats east of the runway, likely provide only limited use habitat for terrestrial mammals. The seasonally saturated wetlands along the east side of the runway embankment do not provide habitat characteristics that are likely to attract any significant level of terrestrial mammal use.

The new secondary access road will impact the palustrine wetlands adjoining Twister Creek. Removal of this habitat is expected to have a negligible effect on beaver, moose, or the occasional black bear since the area of wetland disturbance is limited.

The No Action Alternative would have no adverse effects on the continued presence and use of project area habitats by terrestrial mammals.

#### 6.1.5.4 *Birds*

Development activities on the west side of the existing runway will not be expected to have significant adverse impacts on bird populations or use of habitats in the area.

Loss of mixed spruce/birch forest associated with development west of the existing runway will reduce some habitat available to birds; however, use of these areas is likely limited by the occurrence of discontinuous parcels of habitat in close proximity to airport activities and noise disturbance. Wetlands east of the runway which will be impacted likely provide only limited use habitat for waterfowl and passerines.

In addition to the impacts noted above, the new secondary access construction will eliminate some mixed spruce/birch forest and wetland habitats for birds, and will increase vehicle activity and traffic south of the existing runway along the east side of the ARRC tracks to the Talkeetna Spur Road intersection. The impact on bird use of the area will likely be minimal.

The No Action Alternative would have no adverse effects on the continued presence and use of project area habitats by birds.

#### ***6.1.6 Hazardous Wildlife Attractants***

A preliminary investigation into the proposed construction of a heliport on the northwest corner of the existing airport property with regard to bird hazard potential was performed by the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service, Wildlife Services (WS). The previously proposed heliport would be located approximately 305 m (1,000 ft) from an existing sewage lagoon, violating FAA's normal separation criteria. Three issues regarding the heliport's impact on aircraft operation were examined. The first issue was the heliport's own potential as a wildlife attractant. The second issue was the potential hazard that may be posed to heliport traffic due to the existing wildlife in the area. The third was the potential for helicopter traffic to inadvertently disturb and divert wildlife into the path of other air traffic at the airport. If the future heliport were properly designed and constructed at this site, the WS concluded that it should not create a perceivable increase in wildlife activity at the airport. Careful attention would need to be given to drainage, refuse disposal, and vegetation management, which could individually and cumulatively increase wildlife numbers. If permission to conduct wildlife deterrent efforts around the sewage lagoon could be obtained, efforts to exclude wildlife from these areas would need to be implemented. It is not anticipated that there would be substantial changes in the direction or volume of hazardous wildlife movement, provided the above management recommendations were followed.

The sewage lagoon is not a hazard to wildlife for the Preferred Alternative or the No Action Alternative.

### ***6.1.7 Endangered and Threatened Species of Flora and Fauna***

There will be no impacts to endangered or threatened species of flora and fauna. There are no endangered species in the vicinity of Talkeetna Airport.

### ***6.1.8 Historic, Archaeological, and Cultural Impacts***

There would be no impacts to historic, archaeological, or cultural resources. The NPS placed the Talkeetna Historic District on the National Register of Historic Places in April 1993. Included in the district are 13 buildings and the Talkeetna Village Airstrip. No historic, architectural, or archaeological resources have been identified at Talkeetna Airport.

### ***6.1.9 Construction Impacts***

Residents of Talkeetna and airport users can expect more traffic and activity during construction. Construction will require use of heavy equipment to remove overburden and place fill; gravel haul trucks will be present on the roads between the gravel source and the work site. Air quality will be degraded due to suspension of particulates caused by materials handling and increased traffic. Noise levels at the airport and in surrounding areas will increase due to the increased traffic and use of heavy equipment. Increased disruption in the vicinity of the airport may discourage use of the area by wildlife during construction. In addition, airport users may be inconvenienced by construction activities. Because the Preferred Alternative includes WIDs and SIDs; installation of water and sewer lines could be temporarily disruptive. None of the construction impacts will extend beyond the construction period which is expected to include one to two construction seasons. The No Action Alternative would have no construction impacts.

#### **6.1.10 Coastal Zone Management Program**

The MSB Coastal Zone Management Program is applicable to all land and water uses and activities within the district coastal area. In the vicinity of the Talkeetna Airport, the coastal area encompasses the 100-year floodplain. Some actions identified in the Preferred Alternative west of the existing runway are included within or could have spillover effects on areas within the 100-year floodplain. Therefore, applicable policies of the MSB Coastal Zone Management Program must be incorporated into the construction and operation activities. The No Action Alternative would result in no change in existing conditions.

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

Construction will require consumption of energy and natural resources, but will not overtax existing energy supplies during either construction or operation; nor would the No Action Alternative have energy requirements beyond the available supplies.

Gravel and other fill materials will be required but will not exhaust the supply of gravel or other similar materials in the area. The No Action Alternative would have no change on existing conditions.

#### **6.1.12 Light Impacts**

The Preferred Alternative will keep the white MIRL (45 watts each) at 61-m (200-ft) intervals along the length of both sides of the existing runway area. Six lights (30 watts each) are at each end to delineate the runway threshold. Lighting on the taxiway consists of blue medium intensity lights (45 watts each). This lighting will have minimal impact on residential areas surrounding the airport.

The buildings along the commercial apron and on the proposed lease lot areas will have outside lighting to illuminate the aircraft parking apron area. The relocation of the airport rotating beacon could have an adverse impact on residential areas surrounding the airport unless a shield is used to block the light beam from residential areas. Shielding the airport rotating beacons is recommended at Talkeetna Airport.

Lighting facilities at the airport will have a negligible adverse impact to residents and will increase the safety to users, both in the air and on the ground. The No Action Alternative would result in no change to existing lighting conditions.

#### **6.1.13 Social Impacts and Induced Socioeconomic Impacts**

It is expected that the economy of Talkeetna will remain based on tourism and will grow in the coming years. Enhancement of the facilities at the Talkeetna Airport will aid in economic growth of the region, not only during the short term (construction phase), but in the long term as well. The Preferred Alternative will provide more lease lot and aircraft parking space, space for future public services and facilities, and will allow the airport to meet future demands.

#### **6.1.14 Hazardous Materials**

The Preferred Alternative does not consolidate fuel dispensing at the airport. The 1997 *Talkeetna Airport Master Plan Preliminary Site Assessment* presented information concerning the extent of potential hazardous materials at the Talkeetna Airport. That report indicated the potential for contamination at the old DOT&PF maintenance facility, which is listed by the U.S. Environmental Protection Agency (EPA) as a Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) site. At one point, there was a diesel leak from an underground storage tank at the old FSS site. This fuel spill was cleaned up by FAA; however, EPA approval of the cleanup is pending.

An old landfill site, located southwest of the airport, may also contain hazardous materials. The *Preliminary Site Assessment* determined that the contents of the landfill are unknown. The report recommends that sampling be done to determine the contents before any action is taken at the site. In addition, it is necessary that a determination of the actual landfill boundaries be established. The Preferred Alternative includes complete remediation of this landfill in accordance with an Alaska Department of Environmental Conservation (ADEC)-approved corrective action plan (CAP) developed during design.

### **6.1.15 Current Land Use**

The Talkeetna Airport was built in 1941 by the federal government and was transferred to the DOT&PF in 1965. The airport property comprises 270 ha (667 acres). Land at the airport is used for location of government facilities; aircraft runways, taxiways, and aprons; and lease holder facilities including hangars and commercial services. The land occupied by the airport is owned by the State of Alaska, which is the major landowner in the Talkeetna area. Other landowners in the Talkeetna area include the federal government, the MSB, CIRI, and private individuals.

The Denali Subdivision adjacent to the airport to the northwest is designated as an RLUD by the MSB. Some residences have been built in this subdivision, although the land is not intensively developed. The Talkeetna Heights Subdivision lies to the west of the Denali Subdivision; the Talkeetna River Subdivision is located to the north, away from the airport and adjacent to the Talkeetna River.

The ARRC tracks and ROW are located south of the airport roughly parallel to the Talkeetna Spur Road in this area. The ARRC station is located to the west of the south end of the existing airport runway along the ARRC ROW.

### **6.1.16 Land Availability**

The proposed development with the exception of the following will be located on airport-owned property and will be consistent with aviation activities identified for the land. Construction of the GA apron will require that 115 m<sup>2</sup> (138 sy) of land be purchased from the owner of L11, B2 of Denali Subdivision. This portion of the lot is currently undeveloped. Unknown parcels south of airport property are also necessary to construct the Secondary Access Road.

### **6.1.17 Public Input**

The opportunity for public involvement and the distribution of information about the project were provided through community meetings and the distribution of newsletters. Newsletters

were mailed in February 1996 at the beginning of the project and in May 1997 at the conclusion of the 1997 *Talkeetna Airport Master Plan Phase 1 Report*. Community meetings were held in Talkeetna in March 1996, June 1997, April 1998. Agency scoping meetings were held in March 1996 and November 1998. A fourth public meeting held on August 23, 2000, presented Alternative 5 which was revised in response to public and agency comments. A fifth public meeting was held on March 14, 2001, to present Alternative 6. Based on significant opposition to any of the proposed heliport locations, Alternative 7 was chosen as the Preferred Alternative. In addition, agency personnel were contacted directly to determine any concerns.

Input from air taxi operators at Talkeetna Airport was solicited using a user survey asking for information on airport use and conditions. Completed surveys were received from several operators.